'Pinching' German Military and Economic Knowledge:

British Targeted Intelligence Capture 1942 – 1947

By

Angus Creighton

A Thesis Submitted for Degree of Doctor of
Philosophy in the University of Buckingham

September 2025

Student No. : 1707714

Abstract

'Pinching' German Military and Economic Knowledge:
British Targeted Intelligence Capture 1942 – 1947

To Pinch: To take or steal something without permission.
A euphemistic term applied by British code breakers for the plan and successful capture of cryptographic code books or keys and later synonymous with the stealing of any targeted knowledge or equipment.

This dissertation will analyse how and why British intelligence target collation, capture and ultimately dissemination adapted in response to changing military, operational and political needs between 1942 and 1947. In 1942, the pressing need to 'pinch' German cryptographic knowledge influenced the formation of the first permanent Intelligence Assault Unit in September of that year. Factors influencing their creation and how their role evolved from deployment in the Mediterranean, through Western Europe and finally to Germany in 1945, will be analysed. The evolution of Intelligence target research and collation will be analysed from early plans drawn up ahead of the capture of Tunis, to those prepared by Anglo-US teams preparing for the fall of cities in Sicily and Italy. In the latter, intelligence target list compilation was undertaken on a city by city basis, while targets identified in Western Europe were collated from the entire continent. Here target collation was undertaken in anticipation of the sudden collapse of German forces, whose departure would necessitate a swift Anglo-US occupation of vacated research sites. This eventuality influenced target analysis before, during, and long after the landings in Normandy in June 1944. Collating such target lists was initially a British endeavour, though US experts soon joined the research groups to pool expertise and reduce duplication. Sites of military interest were published as a 'Black List' that defined target capture from Normandy to the end of the War. By early 1945, the attention of Anglo-US governments was slowly redirected to the exploitation of Germany's commercial

intelligence, with Anglo-US teams collaborating on targets to be investigated after hostilities ended. Post-war investigations were undertaken along national lines, though findings were disseminated through published reports for sale in the UK and US. Investigation of German industry ceased after 1947 which is where the analysis of this dissertation ends. Research has been supported by extensive use of contemporary primary source documentation, accessed from multiple archives and provides an accurate evolution of the nomenclature and chronology, often misrepresented in secondary sources.

Acknowledgements

Table of Contents

Abbreviations

30AU	30 Assault Unit (Western Europe, Jan 1944 to Jul 1945) (UK)
30AU	30 Advanced Unit (Western Europe, Oct 1944 to Jul 1945) (UK)
AAI	Allied Armies Italy (Formerly Fifteenth Army Group to March 1944)
ACO	Adviser Combined Operations (UK)
	(revised to Chief of Combined Operations from March 1942)
AFHQ	Allied Forces Head Quarters (Allied, North Africa and Italy)
AK	*Abwehr Kommando* [Intelligence Commando] (DE)
ALSOS	Field team investigating German atomic research (US)
AMSSO	Air Ministry Special Signal Office (UK)
ANCXF	Allied Naval Commander Expeditionary Force (UK / US)
ATI	Air Technical Intelligence (US)
AVKO	*Altenwald Versuchs Kommando* (German unit under UK, July 1945)
AWCC	Allied War Crimes Commission (UK / US)
BAMS	British and Allied Merchant Ships Code (UK / US)
BOT	Board of Trade (UK)
BIGOT	British Invasion of German Occupied Territory (Security Rating) (UK)
BIOS	British Intelligence Objectives Sub-Committee (UK)
BISEC	Bipartite Board Secretariat (UK / US)
BOAR	British Army of the Rhine (UK)
BP	Bletchley Park - GC&CS (UK)
CAFT	Consolidated Advance Field Teams (UK)
Cap Doc	Captured Documents – GC&CS intelligence target type (UK)
CAS	Chief of the Air Staff (UK)
CCG(Br)	Control Commission for Germany (British Element) (UK)
CCO	Chief of Combined Operations (UK)
CCS	Combined Chiefs of Staff (UK / US)
C-in-C	Commander in Chief (UK, CINC US))
CIC	Combined Intelligence Committee (UK/US – unofficial / Tom Betts)
CIC	Combined Intelligence Committee (UK/US – official body formed 1943)
CIC	Counter Intelligence Corps (US security equivalent to British FSS/FSP)
CIOS	Combined Intelligence Objectives Sub-Committee (UK / US)
CIPC	Combined Intelligence Priorities Committee (UK / US)
CIU	Combined Interpretation Unit (RAF - formerly PIU) (UK)

COHQ	Combined Operations Headquarters (UK)
COIS Med	Chief of the Intelligence Staff, Mediterranean (UK)
COS	Chiefs of Staff (UK)
COSSAC	Chief of Staff to the Supreme Allied Commander (UK / US)
CSDIC	Combined Services Detailed Interrogation Centre (UK)
CSIR	Council of Scientific & Industrial Research (UK)
CROWCASS	Central Registry of War Criminals and Security Suspects (US)
CSWS	Civilian Shore Wireless Service (UK)
DAF	Desert Air Force (UK)
D/F	Direction Finding (not to be confused with RDF or RADAR) (UK)
DDMI	Deputy Director Military Intelligence (UK)
DMI	Director Military Intelligence (UK)
DNI	Director Naval Intelligence (UK)
DCOS	Deputy Chiefs of Staff Committee (UK)
D/COSSAC	Deputy Chief of Staff to the Supreme Allied Commander (Allied)
DDMI	Deputy Director Military Intelligence (UK)
DDNI	Deputy Director Naval Intelligence (UK)
DDOD	Deputy Director Operational Division (UK)
DDSR	Deputy Director Scientific Research (UK)
DGGD	Director General of Ground Defence (RAF Regiment) (UK)
DSIR	Department of Scientific & Industrial Research (UK)
DTM	Director of Torpedoes and Mining (UK)
EAB	Economic Advisory Branch (GED after October 1945) (UK)
EEAS	Eastern European Area Sub-Committee (UK / US)
EIPS	Economic and Industrial Planning Staff (UK)
EPS	Enemy Planning Section (UK)
EPES	Enemy Personnel Exploitation Section (UK / US)
ETO	European Theater of Operations
ETOUSA	European Theater of Operations, United States Army (See USFET)
ERDS	Enemy Research and Development Sub-Committee (UK)
EWD	Economic War Department (US)
FDU	Foreign Document Unit (UK)
FIAT(Br)	Field Information Agency; Technical (British Element) (UK)
FIAT(US)	Field Information Agency; Technical (US)
FIU	Forward Intelligence Unit (US)

FEA	Foreign Economic Administration (US)
FO	Foreign Office (UK)
FOPS	Future Operations Planning Section (UK)
FSP	Field Security Police (Intelligence Corps, FSS after July 1940) (UK)
FSS	Field Security Section (Intelligence Corps, FSP prior to July 1940) (UK)
FSRD	Field Security Reserve Detachments (UK)
GC&CS	Government Code & Cypher School, Bletchley Park (UK)
GCHQ	Government Communication Headquarters (GC&CS post-war) (UK)
GAF	German Air Force (British term for the Luftwaffe)
GED	German Economic Department, amalgamation of MEW and EAB (UK)
GHQHF	General Headquarters Home Forces (UK)
GLP	Grey List Panel (UK / US)
GSGS	General Staff Geographical Service (UK, War Office)
G(T)&CW	T Force (UK, Gas (Technical) & Chemical Weapons)
G1	(GS 01) Staff Branches - Personnel
G2	(GS 02) Staff Branches – Intelligence
G3	(GS 03) Staff Branches - Operations
G4	(GS 04) Services (Quartermaster and Movement)
G5	(GS 05) Civil Affairs and Military Government
G6	(GS 06) Psychological Warfare
HNS	Head of Naval Section (GC&CS, Frank Birch) (UK)
HMSO	His Majesty's Stationary Office (UK)
HWWI	*Hamburgisches Welt-Wirtschafts-Institute* [*sic*] (DE) [Hamburg Institute of International Economics]
IAU	Intelligence Assault Unit (proto-term for 30 Cdo) (UK)
ICU	Intelligence Collection Unit (Italian Campaign) (UK / US)
IOS	Intelligence Objectives Sub-Committee (proposed May 1944) (UK)
IOSS	Intelligence Objectives Sub-Section (Formed June 1944) (UK)
IPC	Intelligence Priorities Committee (UK)
IS(O)	Intelligence Service (Operations) (UK)
ISIS	Inter Service Information Service (NID 5) (UK)
ISTD	Inter-Service Topographical Department (NID 6 Oct 1942 to 1945) (UK)
ISTS	Inter-Service Topographical Section (NID 6 1941 to Oct 1942) (UK)
ITS	Intelligence Targets Sub-Committee (Proposed May 1944) (UK / US)
JCS	Joint Chiefs of Staff (US)

JIC	Joint Intelligence Committee (London) (UK)
JIC(Washington)	Joint Intelligence Committee (Washington DC) (UK / US)
JIC(AF)	Joint Intelligence Committee, Allied Forces (Algiers) (UK / US)
JIC(ME)	Joint Intelligence Committee, Mediterranean (Cairo) (UK)
JIC(CCG)	Joint Intelligence Committee, Control Commission for Germany (UK)
JIOA	Joint Intelligence Objectives Agency (US)
JIS	Joint Intelligence Staff (UK)
JPS	Joint Planning Staff (UK)
LST	Landing Ship Tank (UK / US)
LSI	Landing Ship Infantry (UK / US)
MAAF	Mediterranean Allied Air Forces (UK / US)
MAC	Mediterranean Air Command (UK)
MAP	Ministry of Aircraft Production (UK)
MARES	*Marine Einsatz Kommando* (refer AK) (DE)
MEW	Ministry of Economic Warfare (UK, termed GED October 1945)
MIRS	Military Intelligence Research Section (UK / US)
MI 1	Military Intelligence – Administration and Personnel (UK)
MI 5	Military Intelligence - Civilian Intelligence, Domestic (UK)
MI 6	Military Intelligence - Civilian Intelligence, Overseas (UK)
MI 8	Military Intelligence - Signals (UK)
MI 10	Military Intelligence – Technical Intelligence (UK)
MI 14	Military Intelligence – German Intelligence (UK)
MI 17	Coordination and Secretarial Services, War Office (UK)
MoS	Ministry of Supply (UK)
NATAF	Northwest African Tactical Air Force (UK)
NCAP	National Collection of Aerial Photographs (UK)
NCXF	Naval Command, Expeditionary Force (UK)
NID	Naval Intelligence Division (UK)
NID 6	Early designation for ISTD (UK)
NID 30	Naval Intelligence Division 30 (UK)
NISD	Naval Intelligence Sub-Division (UK / US)
NOIC	Naval Officer in Command (UK)
NS	Naval Section (GC&CS) (UK)
OI	Operational Intelligence (SHAEF OI Target Lists) (UK / US)
OKH	*Oberkommando des Heeres* [High Command of the Army] (DE)

OKM	*Oberkommando der Marine* [High Command of the Navy] (DE)
OKW	*Oberkommando der Wehrmacht* [High Command of the Armed Forces] (DE)
OMGUS	Office of Military Government (US)
OPB	Office of the Publication Board (US)
OSRD	Office of Scientific Research & Development (US)
OTS	Office Of Technical Service (US)
OUP	Oxford University Press (UK)
PA	Personal Assistant
PIU	Photographic Interpretation Unit (RAF - later CIU) (UK)
PRU	Photographic Reconnaissance Unit (RAF) (UK)
PWB	Psychological Warfare Branch (UK / US)
PWE	Political Warfare Executive (UK)
RAF	Royal Air Force (UK)
RDF	Range and Direction Finding (UK, technology later named RADAR)[1]
RM	Royal Marines (UK)
RN	Royal Navy (UK)
RNVR	Royal Navy Volunteer Reserve (UK)
S Branch	Prime Minister's Statistical Branch (UK)
S Force	Security Intelligence Force (US / UK - North Africa and Italy)
SACMED	Supreme Allied Commander, Mediterranean (UK)
SBU	Special Boat Unit (subordinate to SSG) (UK)
SD	*Sicherheitsdienst* [SS Security Service] (DE)
SCAEF	Supreme Commander Allied Expeditionary Force (UK)
SCIU	Special Counter Intelligence Unit (UK)
SEU	Special Engineering Unit (UK)
SHAEF	Supreme Headquarters Allied Expeditionary Force (UK / US)
SIAS	Scientific Intelligence Advisory Section (UK)
SIM	*Servizio Informazion Militare* (I)
SIS	Secret Intelligence Service (UK)
SOE	Special Operations Executive (UK)
SO Y	Senior Officer Y (Allon Bacon - GC&CS) (UK)
SPOG	Special Projectile Operations Group (UK)

---

[1] RADAR – acronym from Radio Direction and Ranging – first coined by the US Signal Corp in 1939, with Radar in lower case, replacing RDF as the generic term for radio location equipment in the UK.

SS	*Schutzstaffel* (DE)
SSB	Special Service Brigade (subordinate to Combined Operations) (UK)
SSG	Special Service Group (subordinate to SSB - SS Brigade) (UK)
SSRF	Small Scale Raiding Force (subordinate to Special Boat Unit) (UK)
TAF	Tactical Air Force (UK)
TCH	Topographical Clearing House (NID 6, Oct 1940 – Aug 1941) (UK)
TIDU	Technical Information and Document Unit (Merged FDU & TIS) (UK)
TIIC	Technical Industrial Intelligence Committee (US)
TIS	Technical Intelligence Section (UK)
TO	Table of Organisation (equivalent to British WE) (US)
T Force	Target Force (UK, see also G(T) & CW)
USSBS	United States Strategic Bombing Survey (US)
USFET	US Forces European Theater (Successor to ETOUSA)
USSTAF	United States Strategic Air Force (US)
V-1	*Vergeltungswaffe Eins* [vengeance weapon one], Fi-103, FZG-76 (DE)
V-2	*Vergeltungswaffe Zwei* [vengeance weapon two], Aggregat-4, A-4 (DE)
WAAF	Women's Auxiliary Air Force (RAF) (UK)
WE	War Establishment (British equivalent to US TO) (UK)
WRENS	Women's Royal Naval Service (Navy) (UK)
W/T	Wireless Telegraphy (UK)
Y	Wireless signals interception and transcription (Y)
Y Stations	W/T and D/F, Listening stations (UK)

University of Buckingham

Angus Creighton

Declaration

I hereby declare that my theses entitled

'Pinching' German Military and Economic Knowledge:

British Targeted Intelligence Capture 1942 – 1947

is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text, and is not substantially the same as any that I have submitted, or, is concurrently submitted for a degree or diploma or other qualification at the University of Buckingham or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my theses has already been submitted, or is concurrently submitted for any such degree, diploma, or other qualification at the University of Buckingham or any other University or similar institution except as declared in the Preface and specified in the text.

Signature: Date: 26 September 2025

Chapter I
Introduction, Historiography and Methodology

> Military intelligence is not in fact the spectacular service of the common imagining
> but a smaller more prosaic affair…the art is to sift the wheat from the chaff and
> then lay before the commander a short clear statement. This is equally true of any
> organisation with intelligence at the top.

Field-Marshal Viscount Alexander[1]

1.01   Introduction

This dissertation analyses the evolution of British targeted intelligence capture during and after the Second World War and how the process was adapted to respond to changing military, operational and political needs between 1942 and 1947. Targeted intelligence capture is conveniently bookended by these two dates. The formation of the first permanent Intelligence Assault Unit (IAU) tasked with the capture of specific intelligence takes place in 1942, with the ending of targeted intelligence exploitation by BIOS in the second half of 1947. Political influences include the close collaboration with the US from 1943 and working in parallel with the US after the termination of the combined command SHAEF in July 1945. Analysis will not extend to intelligence capture by the Soviet Union or other Allies such as the French. Targeted intelligence includes captured cryptographic artefacts that would be employed to decipher intercepted communications between Germany's Atlantic U-boat fleet or forces in Europe or North Africa, and their HQ. After the landings in Italy in 1943 and France in 1944, captured military equipment revealed Italy and Germany's technological developments, while investigation of captured research establishments and manufacturing centres revealed advances that were yet to be encountered in Europe or in the Far-East. Utilising Axis technology would also enhance the ability of the Anglo-US military to defeat Imperial

---

[1] Sir Kenneth Strong, *Intelligence at the Top: The Recollections of an Intelligence Officer* (London: Cassell, 1968), p. xii, Major-General Kenneth Strong quoting from the memoirs of Viscount Alexander.

Japan. Once the outcome of the European War was clear, the decision was made by the British and US governments to acquire German industrial and commercial know-how once hostilities ended. Later, these two governments agreed to disseminate this captured knowledge in a proactive measure aimed at stimulating the post-war economies in Britain and America and smoothing the transition to peacetime industrial expansion.

The creation of the first permanent British Intelligence Assault Unit (30 Commando), who were trained to identify, capture and handle cryptographic intelligence, is analysed and placed in context alongside established intelligence gathering formations. Charting the deployment of this force illustrates the success of their independent operation. After a year in the field, 30 Commando were split up, with the army contingent - largely forgotten in secondary literature - becoming an integral part of the larger Anglo-US intelligence gathering S Force and serving in the Mediterranean theatre till war's end. The remaining naval contingent would return to the UK to prepare for deployment in France. S Force is analysed in detail from their first use in Tunis, to later deployment in the liberation of Rome and other Italian cities. Dismissed in secondary literature as merely ad-hoc formations assembled for the capture of each conurbation, analysis will show that the troops that made up S Force remained surprisingly consistent, with units remaining in the country purely to undertake S Force duties at a later date.[2] It will also be questioned whether the experience gained during the Italian campaign, making consistent use of veteran formations, influenced similar intelligence target capture in France and the Low-Countries.

---

[2] Sean Longden, *T-Force: The Race for Nazi War Secrets, 1945* (London: Constable, 2009), pp. 9-40. The Italian S Forces were not created on an ad-hoc basis, with units allocated in 1943 and remaining within the S Force for the remainder of the conflict.

During 1943, COSSAC were planning for the eventual assault on Western Europe, were also preparing for a sudden German collapse on the Continent. Staff were instructed on 22 May 1943 to prepare plans was "a return to the Continent in the event of German disintegration at any time from now onwards with whatever forces may be available at the time".[3] Preparations for such an event were named operation RANKIN and would influence target collation in western Europe for the remainder of the War. Analysis in this dissertation will show that targets were listed covering the whole of Western, Northern and Eastern Europe. Special attention was paid to Axis research and development centres and manufacturers of cutting-edge weaponry with many sited deep into what would become Soviet occupied territory. A Black List detailing all targets identified up to by the end of July was published in early August 1944, with a geographically sorted supplement following a few weeks later.

In the final months of 1944, attention turned to mitigating the prospect of a post-war economic recession, with the pragmatic decision to expand intelligence gathering to include German commercial know-how. Although CIOS, the established target research committee was consulted, a new Anglo-US subcommittee supported by multiple working parties was created to research and list commercial targets. This Grey List Panel (GLP) prepared targets to be investigated once peace was achieved. The Grey list would be merged with the remaining Black List after the end of the German War and before the end of May 1945. Investigating targets would be undertaken by US and British teams, with their findings compiled in printed reports to be returned to the commissioning government departments. In June, it was mutually agreed that the reports that condensed the findings of the investigation teams would be made available for purchase by the public. Disseminating the captured German trade secrets became the priority throughout the next few years,

---

[3] History of COSSAC, 1943-1944, The Historical Sub-Section, SHAEF May 1944, p. 21, Historical Manuscripts Collection, 8-3.6A CA, <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023].

although misleading indexes and a lack of staff in the UK willing to improve these indexes resulted in a mixed reception from report distributors.

The many years of research that are distilled in this dissertation are the result of a chance conversation with an archivist at the RAC Tank Museum in Wareham, Dorset. While considering potential research subjects, the author questioned whether there were any sections in their archive that were never requested or searched. The archivist quickly suggested 'the BIOS reports'. Reviewing these documents in their archive revealed multiple booklets compiled by British investigators after the Second World War following detailed examination of manufacturing facilities in occupied Germany. Of the few hundred reports provided by the Tank Museum, many discussed weaponry, while others included transcripts of interrogations or interviews with German manufacturers. Most included text, photographs, technical drawings and graphics. All were a uniform size - approximately six by eight inches - A5 in new money, with page counts ranging from five to a few hundred. Though generically termed 'BIOS reports' by Tank Museum staff, most were titled BIOS, others CIOS and a few marked FIAT. Emblazoned on each cover was a security rating: Confidential; Secret; Open; Restricted. All appeared to date from investigations undertaken from 1945 to 1947. Although numerous secondary sources refer to the committees and formations in these reports, the following historiography will show that they are often mislabelled, misidentified or have conflicting or inaccurate timelines. Therefore, a key aim of this dissertation is to provide clarity and chronological accuracy when charting naming conventions and precise timelines in the body text, supplemented by detailed appendices.

1.02   Primary and Secondary Research Questions

The research aims of this dissertation will be to analyse British intelligence target research, targeted intelligence list compilation, target capture, commercial investigation and information dissemination between 1942 and 1947. The list compilers, capture teams,

investigators and dissemination of know-how will be analysed through the following

research question:

> How and why did British intelligence target collation, capture and dissemination
> adapt between 1942 and 1947, in response to changing military, operational and
> political needs?

The multiple topics within this question will be analysed through the next five chapters -

each divided thematically - accepting that timeframes will in some instances overlap. It is

hoped that this thematic approach will make the arguments within each chapter, and thus

the dissertation, easier to follow.

Chapter II

This chapter provides a brief analysis of how intelligence capture was achieved before the

creation in 1942 of 30 Commando – the first permanent inter-service intelligence assault

unit. Why was the creation of this unit proposed in March 1942, when the enemy team that

inspired their formation was observed nearly a year earlier? Why was the responsibility for

inter-service intelligence capture not already provided by the army's existing Intelligence

Corps? Why was the first deployment of the new dedicated intelligence assault unit

deemed to be a failure by some, but a resounding success by cryptographers and the

Admiralty?

Chapter III

30 Commando continued to expand and evolve during their deployment in the

Mediterranean, being absorbed by larger Security Intelligence Forces – S Forces – for the

capture of larger cities in North Africa and Italy. Why was staff continuity believed to be

of great importance within the target researchers and list compilers of S Force and is this

reflected by the secondary literature? Why were 30 Commando, who were an integral

member of S Forces in the Mediterranean, split up at a key moment in the Italian campaign with the majority returning to the UK in 1944?

Chapter IV

The Anglo-US integrated COSSAC planning staff brough together in the Spring of 1943, were tasked by the Combined Chiefs of Staff (CCS) to prepare for a return to Western Europe. This would either be by direct assault (operation NEPTUNE and OVERLORD) or in response to a general German withdrawal from France or Norway with troops used to bolster the eastern or southern fronts (operation RANKIN). How and why did the anticipated withdrawal or collapse of German forces in Western Europe influence the collation of intelligence targets before, during and long after the landings in Normandy? Why were the British organisations tasked with collating intelligence target information keen to evolve during the last year of the War and collaborate with US intelligence teams? 30 Commando were the only intelligence assault unit deployed in France at the time of the landings in Normandy. Why did the Anglo-US SHAEF not create a permanent equivalent to S Force in Western Europe until March 1945?

Chapter V

From early 1944, British committees were assembled to compile intelligence regarding German manufacturers and research facilities who were urgently developing military technology that would be used against Allied forces or be shared with Imperial Japan. In late 1944, the remit of intelligence target collation was widened to also consider commercial and industrial intelligence. Why this change and what was the reaction of CIOS members? The teams set up in 1945 to research Germany's commercial secrets for later exploitation represented a diverse spectrum of British and US industry and government departments. If CIOS epitomised Anglo-US cooperation and proved their

flexibility by adapting to changing requirements politically and in the field, why did the international exemplar not endure in the wake of the termination of the combined command SHAEF in July 1945?

Chapter VI

British and US intelligence gathering bodies separated along national lines in the summer of 1945, often operating in parallel to investigate German Industry. It was decided by the Anglo-US governments to disseminate the findings of the investigation teams to the public. How was the targeting and investigation of German military, industrial and commercial intelligence achieved by the British in the years following the War and why was it decided that captured commercial know-how would be disseminated to any UK manufacturer? In what ways were the processes chosen to disseminate commercial intelligence flawed, restricting access to the recent enemy's secret industrial know-how?

1.03   Historiography

30 Commando, proposed in March 1942 and assembled in September of that year, were the first British Intelligence Assault Unit (IAU) to be created. The multilingual operatives were trained to seize the most sensitive and secret intelligence items, with targets defined by Britain's code breakers and Naval Intelligence. The unit represents the genesis of targeted intelligence capture and was maintained as a permanent asset, to be deployed to any theatre during the Second World War. The creation and deployment of this unit is addressed by two modern authors with *The History of 30 Assault Unit* by Craig Cabell and *Ian Fleming's Commandos* by Nicholas Rankin. Cabell provides a light overview of the unit with the emphasis on their deployment in Normandy. Unit terminology is confused with Cabell choosing to refer to the unit as 30CU – presumably his contraction of '30

Commando Unit' – a term that does not appear in any primary sources. [4] He correctly

refers to 30AU in 1944. Cabell incorrectly suggests that the first deployment of 30

Commando was Dieppe in August 1942. It is correct that a few members of the Dieppe

raiding force would join 30 Commando when it was formed in September. With the return

of the naval Troop in December 1943, Cabell notes that the army Troop remained active in

Italy but provides no further detail. Cabell's narrative for the rest of the war is superficial

but appears to be largely accurate.

The second author Nicholas Rankin provides far greater detail in *Ian Fleming's*

Commandos, though like Cabell, he starts with the raid on Dieppe. [5] Rankin offers a more

nuanced assessment of the evolution of the unit, although the involvement of DMI Godfrey

or Chief of Combined Operations Mountbatten are not covered in the detail their

involvement deserves. Credit for the unit's creation remains firmly with Ian Fleming. The

presence Major Cave in 1942 and his championing of the army Troop is ignored, though

this Troop's deployment during 1943 is mentioned. The events surrounding the splitting of

30 Commando towards the end of 1943 is not covered accurately with Rankin merely

stating the army Troop were 'scrapped' and makes no further comment. [6] Ignoring any

further operations in Italy, both books then focus on deployment of the naval contingent in

Normandy and Germany. The fact that the army Troop became an integral member of the

Italian S Force, serving in theatre till the end of the War is not explored by either author.

Neither book attempts to position 30 Commando or 30AU (the naval contingent was

renamed in January 1944) in context with other Allied intelligence gathering units such as

the FSS. It is a broader research aim of this dissertation to more accurately define the

---

[4] Craig Cabell, *The History of 30 Assault Unit: Ian Fleming's Red Indians* (Barnsley: Pen & Sword Military, 2009).

[5] Nicholas Rankin, *Ian Fleming's Commandos: The Story of 30 Assault Unit in WWII* (London: Faber & Faber, 2011).

[6] Rankin, *Ian Fleming's Commandos*, p. 220.

formation of this pioneering inter-service unit and establish an accurate chronology and evolution of nomenclature. It will also be questioned whether Ian Fleming should retain sole credit for the creation of this unit. A third publication should be mentioned – *The Official History of 30AU* by Guy Allan Farrin.[7] This book is, as far as the author of this dissertation can establish, a verbatim copy of Admiralty history file TNA ADM 223/214 with an added introduction and list of abbreviations added by Farrin.

Having stated that 30 Commando were not formed until one month after the Dieppe raid, it is important to establish the identity of the actual commando team landing at the French port under the instruction of Combined Operations. Two books have been published that examine the German speaking Commandos at Dieppe. Nick Van der Bijl, *Commandos in Exile: No. 10 (Inter-Allied) Commando 1942-1945* methodically explores the creation and deployment of the 'Inter-Allied' commando who included Norwegian, French Dutch, Austrians, Sudeten Czechs and Poles.[8] The action at Dieppe is discussed along with later operations undertaken in Normandy, Walcheren and Arnhem. The narrative is clear and appears to be well researched, with reference to associated units that operated with 10 Commando. The second book, *X Troop: The Secret Jewish Commandos of World War II* published in 2021, by Leah Garrett narrows its focus to just 3 Troop of 10 Commando that is sometimes referred to as the 'Jewish Commando' or 'X Troop'.[9] Garrett writes about Dieppe, focusing on the probability of an Enigma pinch and questions the role played by Fleming in the entire operation. 10 Commando will re-join the analysis of targeted intelligence capture in June 1944 in Normandy when the Douvre radar station is discussed as one of 30AU's targets. Helen Fry provides a nuanced assessment of the varied

---

[7] Guy Allan Farrin, *The Official History of 30AU* (Independently published, 2007).

[8] Nick Van der Bijl, *Commandos in Exile: No. 10 (Inter-Allied) Commando 1942-1945* (Barnsley: Pen & Sword, 2008).

[9] Leah Garrett, *X Troop: The Secret Jewish Commandos of World War II* (Boston: Houghton Mifflin Harcourt, 2021).

roles of German speaking refugee soldiers in her book '*Denazification*'. [10] She explores

their participation with 3 Troop, 10 Commando at Dieppe, and other foreign 'listeners'

within the Combined Services Detailed Interrogation Centre (CSDIC) explored briefly in

this dissertation as part of a wider analysis of interrogation during and after the War.

Researching 30 Commando inevitably involves researching Commander Ian

Fleming, credited by many as the creator of 30 Commando. He was the highly competent

Personal Assistant to two Directors of Naval Intelligence during the Second World War -

Rear-Admiral Godfrey and his replacement from 1943 Rear-Admiral Rushbrooke. The

earliest biography was written by Fleming's friend John Pearson who published *The Life of

Ian Fleming* less than two years after Fleming died in 1964.[11] Pearson offers a sweeping

history of Fleming's wartime service, including the creation 30 Commando. The book

enjoys a good pedigree with input from Fleming's widow and other close friends, yet the

history of 30 Commando withstands little rigorous analysis with certain elements pure

fantasy. Pearson had worked with Fleming in Fleet Street, and it is likely that Fleming

embellished his wartime experiences, giving little thought to their eventual inclusion in

print. Several Pearson's fanciful anecdotes reappear in the writings of Fleming's later

biographers. As an example, Naval Intelligence drew inspiration for 30 Commando, from

the observed operation of a German intelligence Kommando who in 1941 were operating

in the Balkans under a Kapitänleutnant Obladen. Pearson provides detail of an SS officer

Otto Skorzeny who headed the intelligence team and later ransacked the British

headquarters in Crete. Pearson talks of Fleming's personal interest and admiration for

Skorzeny, relating that Fleming assembled a small group of commandos inspired by this

SS officer and sent them into Dieppe as 'intelligence scavengers' - with disastrous

---

[10] Helen *Fry, Denazification: Britain's Enemy Aliens, Nazi War Criminals and the Reconstruction of Post-war Europe* (Stroud: The History Press, 2010).

[11] John Pearson, *The Life of Ian Fleming* (London: Jonathan Cape, 1966).

consequences.[12] Verifying the whereabouts of Skorzeny is straight forward with *Otto Skorzeny: The Devil's Disciple* by Smith confirming he was positioned at the rear of the Balkans advance in March 1941. [13] An extract from Skorzeny's MI 6 file dated 6 December 1944 confirms that as far as British Intelligence were concerned, his first acknowledged appearance was in early 1943 training men of a unit for special operations.[14] Why therefore include this questionable source in this this historiography? Because it has greatly, and often inaccurately, influenced many subsequent histories. Skorzeny's inclusion and other Pearson tales provide an indicator of the quality of later writer's research.

Andrew Lycett, author of *Ian Fleming* provides a solid history of Fleming's life, though his wartime experience fills around fifty pages out of well over four hundred.[15] He questions the veracity of Pearson's biography, suggesting that Pearson was too close to Ian and his widow to write objectively. He also acknowledges that Fleming would likely have been the source for many of Pearson's questionable anecdotes, quoted by the biographer verbatim. Pearson still influences Lycett as Crete is incorrectly given as the location for the German Kommando operation instead of Greece. Lycett's research proves useful with details of Flemings liaison between NID and GC&CS, as well as his input preparing target lists for Normandy.

Simmons book *Ian Fleming's War* shares 'Pearson' inaccuracies though does not mention Crete or Skorzeny. Simmons relates that the German intelligence Kommando were spotted in 1941 by a Naval Intelligence operative who passed their details to Godfrey

---

[12] The reality in 1941, in contrast to Pearson's storytelling, Skorzeny was a lowly SS-Untersturmführer in the second SS Division 'Reich', serving in the baggage train in the Balkans, before heading north for the invasion of the Soviet Union.

[13] Stuart Smith, *Otto Skorzeny: The Devil's Disciple* (Oxford: Osprey, 2018) p. 36.

[14] TNA WO 204/12365, German Sabotage Organisation Brandenburg Regiment 1942 to 1946, The German Intelligence Services, VFZ /34, Copy 23, dated 6 December 1944, Source MI 6, p. 1.

[15] Andrew Lycett, *Ian Fleming* (London: Weidenfeld & Nicholson, 1995).

to review. He then incorrectly states that Fleming created his Intelligence Assault Unit by July 1942, with their first deployment at Dieppe.[16] He proposes the Marines present were 33 Troop of 30AU – they were in fact 3 Troop, 10 (Inter-Allied) Commando along with other Marines from 40 Commando. Again, Pearson is sowing confusion with his inaccurate references to Dieppe.

Working with Fleming is described by Harling, who wrote a compelling memoir that remained unpublished at the time of his death. *Ian Fleming, A personal Memoir*, was completed and published by his children in 2015. His text offers an intimate view of Naval Intelligence, Fleming, ISTD and 30AU operations in Normandy. Reviewing his observations, Harling's text concurs with primary sources making his writings a valid addition to the historical narrative. His close friendships with Fleming and 30AU Commander Curtis provide an intimate view of the commando and offers insights that are unavailable to previous biographers. Harling's close relationship with Fleming offers clues as to why and when 30 Commando were formed, ideas that have not been presented by other authors. Harling's comments will be analysed in this dissertation.

Harling headed NID 21, the ISTD Contacts Section which will feature on a number of occasions in this dissertation. The unique data he assembled would prove invaluable to the many compilers of intelligence target lists. He transferred from the Contacts Section in 1944 providing liaison between 30AU, ISTD and the OIC in the Citadel.[17] His style of writing, with sections written in the first person is direct, accurate and factual. Serving with Harling in Normandy is Patrick Dalzel-Job who writes an autobiographical account of

---

[16] Mark Simmons, *Ian Fleming's War: The Inspiration for 007* (Cheltenham: The History Press, 2020), p. 172.

[17] ISTD was based at Hertford College, Oxford while the navy's Operational Intelligence Center or OIC was built under the Admiralty building in Whitehall in the heavily protected 'bunker' known as the Citadel.

30AU in Normandy, Belgium and Germany in *From Arctic Snow to Dust of Normandy* and is one of the few contemporary accounts in print. The text compares well with archive accounts indicating his writing is authentic. It also details actual occurrences that were the basis for some of Pearson's more elaborate anecdotes. [18]

This dissertation will argue that a major driving force behind intelligence target identification and target list collation throughout 1944 was not the impending landings in Normandy, but the anticipation that the German forces were close to collapse or soon to be withdrawn from Europe. The planning team gathered to prepare for events in Western Europe during 1943 and 1944 were titled the 'Chief of Staff to the Supreme Commander' or COSSAC. They were charged with preparing for a return to the continent in three ways. Firstly landings in France – operation RUDGE (renamed OVERLORD in June 1943), secondly a campaign of deception to mislead the German high command about where and when the landings would take place – operation FORTITUDE and thirdly, preparing for landings across the continent in the wake of the German Military pulling out of France, or Norway and Denmark – operation RANKIN. It will be argued in this dissertation that preparations for RANKIN during 1944 resulted in the many teams frantically researching target data for the whole of Europe including eastern states.

The role of the COSSAC planning team and RANKIN are assessed by Stephen Kepher in his eponymous book published in 2020, where Kepher correctly asserts that the

---

[18] Patrick Dalzel-Job, *From Arctic Snow to Dust of Normandy* (Barnsley: Pen & Sword Military, 1991, 2002 edition), pp. 144-150. Pearson writes of Fleming observing a German midget submarine washed up on a French beach, commenting that this was one of Fleming's favourite and oft repeated anecdotes. Commenting the submarine was too small to accommodate a full grown man, Fleming looked into the periscope to reveal the dead German staring back, Pearson, *The Life of Ian Fleming*, p. 132. The reality was the capture of a German *Biber* [Beaver] midget submarine and torpedoes that had been evacuated north from their French coastal base into Belgium. They were discovered by Dalzel-Job abandoned on trailers at the side of the road.

Chiefs of Staff placed RANKIN as more important than OVERLORD.[19] Kepher devotes an entire chapter to RANKIN, assessing both British and US views as well as analysis why Germany did not collapse in early 1944. His research is corroborated by the official history of COSSAC written by SHAEF in May 1944 and available from the US Army Centre of Military History.[20] The original COSSAC directive is included in full, drawn up by the British Chiefs of Staff, and enacted by Morgan and later receiving US approval. The influence of RANKIN on target analysis and list collation throughout 1944 will be analysed and compared to similar target assessment carried out in Italy.

Operation FORTITUDE - the deception element of the landings in Normandy is briefly examined, referring to books on the subject by Hesketh and Lavine. Hesketh's history of FORTITUDE recalls his own planning of the operation, though publication was prevented on security grounds until 2000.[21] An alternative history of FORTITUDE is provided by Levine in 2011 and is useful to this dissertation as it offers information regarding David Strangeways, commander of the Tunisian S Force.[22] Strangeways returned to the UK after the Tunisian battles, joining the FORTITUDE planning team in 1943 and promptly 'improved' many of Hesketh's original ideas. Though these changes were successful, Strangeways is completely ignored in Hesketh's manuscript. These two books provide details of the S Force (Force S) that formed a key component of FORTITUDE NORTH and would eventually land troops on SWORD beach in Normandy as part of operation NEPTUNE.

---

[19] Stephen Kepher, *COSSAC: Lt. General Fredrick Morgan and the Genesis of Operation Overlord*, (Annapolis, Naval Institute Press, 2020), p. 122.

[20] History of COSSAC, 1943-1944, The Historical Sub-Section, SHAEF May 1944, Historical Manuscripts Collection, 8-3.6A CA. <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023].

[21] Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, (New York: The Overlook Press, 2000).

[22] Joshua Lavine, *Operation Fortitude* (London: Harper Collins, 2011), p. 201.

Biographies assessing the input the personalities involved in British Intelligence gathering although dated, add to the understanding of the individuals involved and often add nuance to more up-to-date texts. Howarth examines the Chairman of the JIC throughout the war – 'Bill' Cavendish Bentinck in *Intelligence Chief Extraordinary*.[23] Howarth worked Bentinck after the War in Poland. Although he was a long-term acquaintance, his writing does not appear constricted by being close to his subject - apparent earlier with Pearson's writings regarding Fleming. Sir Kenneth Strong's 1968 autobiography *Intelligence at the Top*[24] provides useful insight into Strong's motivations during his time working as General Eisenhower's Intelligence Officer in Italy and Northern Europe. He also expands on his great efforts to nurture the close relationship between British and US Intelligence staff . To this end, there are personal reflections regarding his championing of Brigadier General Tom Betts, appointed his Deputy from the summer of 1944 as well as Chairman of CIOS until the termination of this committee and SHAEF in July 1945. Having a greater understanding of his contact with both the Army's Intelligence Corps and 30 Commando adds to the understanding of his support for the naval commando in Italy. His subsequent publication *Men of Intelligence*[25] adds similar detail to operating alongside Cavendish Bentinck and the JIC. Both books suffer from their dates of publication predating the relaxation on writing about Bletchley Park, yet this does not detract from the relevance of Strong's narrative.

The memoirs of Ivone Kirkpatrick, *The Inner Circle* provides useful background detail to his views on operating with the Soviets, that would influence his advice regarding

---

[23] Patrick Howarth, *Intelligence Chief Extraordinary: The Life of the Ninth Duke of Portland* (London: The Bodley Head, 1986).

[24] Strong, *Intelligence at the Top.*

[25] Sir Kenneth Strong, *Men of Intelligence: A Study of the Roles and Decisions of Chiefs of Intelligence from World War I to the Present Day* (London: Cassell, 1970).

the perpetuation of CIOS.[26] Kirkpatrick was a government minister who acted as translator for Prime Minister Neville Chamberlain at the Munich talks in 1938, thereafter holding various government posts and ending the war working with Eisenhower in SHAEF. Kirkpatrick is relevant to this dissertation as he advised on the continuation of CIOS after the termination of SHAEF in July 1945. Other combined body's such as FIAT - formed in May 1945 - survived the termination of SHAEF by separating into matching halves along national lines and offering mutual support. CIOS did not, being eventually replaced by the British run BIOS until 1947. Not all dated biographies have proved useful. Harrod's 1959 biography *The Prof* examining the life and work of his colleague Lord Cherwell has proved an interesting read, but thin on anything useful for this dissertation while fat with hero worship on the part of the book's author.[27]

Analysing the Combined Intelligence Objectives Subcommittee (CIOS) in secondary literature reveals a conflicting array of descriptions that fail to accurately describe the Anglo-US committee with accuracy. No definitive history of the targeted intelligence compilers has been written and often when they are mentioned in passing by historians, the chronology is confused or incorrect. No history of the Grey List Panel or the post-war BIOS have been written either, or the deployment of the Consolidated Advanced Field Teams (CAFT) in Europe. Reviewing how CIOS and associated committees are described in secondary literature will illustrate why their purpose and function needs to be defined and a clear chronology established. These will be provided by this dissertation.

John Gimbel's 1990 seminal work *Science, Technology, and Reparations,* analyses technology transfer and intellectual reparations extracted from Germany, with the contents repeatedly quoted by subsequent writers. Although Gimbel writes from a US perspective,

---

[26] Ivone Kirkpatrick, *The Inner Circle: The Memoirs of Ivone Kirkpatrick* (London: Macmillan, 1959).

[27] R F Harrod, *The Prof: A Personal Memoir of Lord Cherwell* (London: Macmillan, 1959).

his research on reparations is still useful to the study of the British targeted intelligence capture. Regretfully, this book fails to correctly identify the positioning and chronology of CIOS, BIOS and TIIC – possibly due to the book's publication prior to relevant files being released by TNA. Gimbel correctly states that the 'Technical Industrial Intelligence Committee' (TIIC) was set up in the US to process commercial and industrial target information. Incorrectly, he states that TIIC - a 'Washington based feeder-organisation for CIOS' - would forward requirements to CIOS to collate into the burgeoning master target list in a role that parallels the 'British Intelligence Objectives Sub-Committee' (BIOS) 'which functioned similarly for the British'.[28] TIIC were certainly based in Washington, but would liaise with TIIC members posted to the UK who sat within the Grey List Panel 'working parties' dealing with commercial intelligence. BIOS was never a subordinate element of CIOS being formed one month after CIOS was terminated in July 1945. TIIC never worked alongside BIOS as it had been subsumed by JIOA one month before BIOS first met in August 1945. The continuation of FIAT after the demise of SHAEF is another area where Gimbel's narrative does not match the archive records. From its creation in late May 1945, it was preordained that FIAT would separate along national lines when SHAEF was terminated. The British and US elements would continue operating in support of each other as two parallel agencies governed separately by the British and US authorities. Gimbel's text is obtuse, suggesting that FIAT continued only as a US organisation. These discrepancies mislead those using his work as the definitive reference.

Gimbel's errors are reproduced by O'Reagan in *Taking Nazi Technology* published in 2019. He asserts incorrectly that CIOS was subdivided into TIIC and BIOS with

---

[28] John Gimbel, *Science, Technology, and Reparations: Exploitation and Plunder in Postwar Germany* (Stanford: Stanford University Press, 1990), p. 6.

carefully created graphics emphasising this incorrect hierarchy.[29] Later TIIC are shown as a parallel organisation to JIOA whereas cabinet files held by TNA state that JIOA subsumed TIIC in the middle of July 1945 after SHAEF termination. O'Reagan analyses post war exploitation of German science and technology, but expands his investigation to encompass French, US and Soviet investigations. His reproduction of other authors errors can be forgiven with an otherwise good interrogation of post-war exploitation.

Astrid Eckert writes of the quest for the return of the captured German Foreign Office archive, captured by US forces after it was hidden in the Haas Mountains in 1945. *The Struggle for the Files*, devotes four pages to describe the activities of CIOS, with additional references to FIAT and later BIOS.[30] Eckert accurately covers the functions of CIOS but fails to precisely define the relationship between CIOS and FIAT and later BIOS, implying that FIAT were the US successor to CIOS rather than facilitators for teams wishing to gain entry to the US or British zones. TNA files state that the Washington based JIOA were the US successor to CIOS.

Martin Lorenz-Meyer investigates the potential hiding of Nazi assets in neutral countries in his 2007 book *Safehaven*.[31] The creation of the CIOS is discussed (citing Gimbel as the source material), in relation to investigating Germany's foreign assets and whether CIOS is the right body to investigate neutral country's German holdings. The fear that assets deposited in neutral could be used to fund a resurgent Germany greatly troubled

---

[29] Douglas O'Reagan, *Taking Nazi Technology: Allied Exploitation of German Science After the Second World War* (Baltimore: John Hopkins University Press, 2019), pp. 26-29.

[30] Astrid Eckert, *The Struggle for the Files: The Western Allies and the Return of German Archives after the Second World War*, trans. by Dona Geyer (New York: Cambridge University Press, 2012), pp. 30-33.

[31] Martin Lorenz-Meyer, *Safehaven: The Allied Pursuit of Nazi Assets* Abroad (Columbia: University of Missouri Press, 2007).

the Allies, whose paramount aim was to ensure security against renewed German aggression.

Anne Jacobsen in her 2014 *Operation Paperclip*, names FIAT as the US successor organisation to CIOS.[32] She implies CIOS was a large formation of multi-talented assessment teams based on the continent, racing from one intelligence target to another, trying to out manoeuvre rival intelligence teams. She further suggests CIOS 'worked in concert' with Fleming and 30 Assault Unit, without making reference that Fleming coordinated much of 30 AU's activity and sat on the CIOS committee at the same time. What is certainly not made clear is that CIOS were a permanent London based committee of limited size, with associated working parties who processed targets proposed by US and UK service or Government departments. CIOS also worked in parallel with teams such as ALSOS, sharing and disseminating information when appropriate. Jacobsen does not attempt to analyse CIOS or target identification, keeping on track describing the quest to exploit German Scientists, investigate the chemical weapon advances and initiate the transfer of Germany's scientists to the US under operation PAPERCLIP.

The Security Intelligence Force (S Force) assembled to secure intelligence targets in Tunisia and Italy between 1943 and 1945 receives practically no coverage in secondary literature. 30 Commando participated in the S Force commanded by Lieutenant-Colonel Strangeways that advanced into Tunis on 12 May 1943, yet only receives a few lines in both the Rankin and Cabell books mentioned earlier. Little more is available regarding the other participants - the RAF Regiment and Army Intelligence Corps. For the RAF, Oliver's *Through Adversity: The History of the Royal Air Force Regiment, 1942 – 1992*, provides a good account of the fighting in Algeria and Tunisia and identifies the squadrons that

---

[32] Anne Jacobsen, *Operation Paperclip: The Secret Intelligence Program that Brought Nazi Scientists to America* (New York: Back Bay Books, 2014; repr. 2015), p. 36.

participated, but only a single paragraph providing scant details of the Strangeways S Force. The book does confirm the three squadrons of the regiment were involved, enabling further research to be carried out.[33] No mention is made of the far larger S Force Rome, or the participation of multiple RAF Regiment squadrons. For the Intelligence Corps and the Field Security Sections, Clayton's 1993 history *Through Adversity*, provides a good overall view of FSS operations, but does not offer a detailed chronological account of every operation in every theatre. Accordingly, Clayton includes little about the Tunisian S Force, other than to confirm FSS were in the region when the Axis surrendered. Personal anecdotes are available in Bob Steers 1996 *FSS: Field Security Section*, published on behalf of the Intelligence Corps association.[34] Included are a collection of memoirs drawn from forty three members of the Intelligence Corps, with a few anonymous entries, all adding personal experience to the many theatres where the FSS served and including the Tunisian S Force.

The far larger S Force created in readiness for the capture of Rome garners equally little page space in any secondary publication, yet when it entered the capital in June 1944, over one thousand troops participated including the army Troop of 30 Commando, three RAF Regiment Squadrons, multiple FS Sections, ALSOS and a sizable army presence. Longden correctly looks at the Mediterranean S Forces as a progenitor for T Forces used in Western Europe but incorrectly suggests that 'ad-hoc S Forces was not the solution to the problem' by 'relying on whoever was available in the area did not provide the required continuity or experience'.[35] US Colonel Budge Smith who commanded S Force from the

---

[33] Kingsley Oliver, *Through Adversity: The History of the Royal Air Force Regiment, 1942 - 1992* (Rushden: Forces Corporate Publishing, 1997), p. 89.

[34] Steers, *FSS*, p. 56.

[35] Sean Longden, *T-Force: The Race for Nazi War Secrets, 1945* (London: Constable, 2009), pp. 9-40. The Italian S Forces were not created on an ad-hoc basis, with units allocated in 1943 and remaining within the S Force for the remainder of the conflict.

end of 1943, established the permanent Intelligence Collection Unit (ICU) to retain the experience gained over many months. The chapter devoted to the S Force operations, both in Tunisia and later the Italian mainland, will be almost entirely assembled from the remaining archives held at TNA. This dissertation will offer a more balanced view of the Strangeways and Smith S Forces, establishing that continuity was the key to their successful deployment.

The deployment of S Force in Italy had established the necessity of securing intelligence sites immediately after capture to prevent destruction or looting by locals or Allied troops. In Western Europe, special T Force operations were carried out on an ad-hoc basis, using 'Operational Intelligence' target lists issued by SHAEF to Army Groups during September.[36] In December the decision was made to create a permanent T Force, with the staff element assembled in Brussels during November. Veteran Airborne intelligence officer Brian Urquhart in his book *A Life in Peace and War*, describes the group forming around the underutilised chemical weapons staff within Twenty-First Army Group.[37] They had no field presence till March when Fifth Battalion, King's Liverpool Regiment were allocated and deployed after the Rhine crossings in March.

Sean Longden details this unit's involvement in *T-Force - The Race for Nazi War Secrets.* The unit's movement through Germany is laid out chronologically and mirrors much of the official history preserved in TNA. Longden's strength lies in his anecdotal stories gleaned from veteran interviews making this element of the book a solid foundation

---

[36] TNA FO 1050/1424, SHAEF G2 HQ, OI Brief for Germany, Colonel E Foord, G2 (OI), 15 September 1944.

[37] Brian Urquhart, *A Life in Peace & War* (London: Wiedenfeld & Nicholson, 1987), pp. 77-79. Major Sir Brian Urquhart, 1919-2021, An officer in the Dorsetshire Regiment, he became chief intelligence officer for the First Airborne Division though transferred out after his pessimistic prognostication regarding the air-drop on Arnhem in September 1944 was ignored. He became a senior officer in T Force and was one of the first British officers to enter Bergan Belson in April 1945.

for further research. The weaker areas of the book echo earlier concerns with other publications where the organisational structure surrounding CIPC and its replacement CIOS. Longden implies both committees were contemporary, with mutually supporting roles which is incorrect. The purpose of CAFT teams in 1945 is also confusingly represented with target investigators and CAFT teams incorrectly merged. Seven CAFT teams were created in early 1945 by CIOS, to operate with Army Groups in liberated Europe and improve target assessment efficiency. Specialist teams would only be requested to investigate sites once CAFT members had advised the site merited investigation. T Force would guard the site from interference by retreating enemy forces, Allied troops or local civilians.

The second unit to be assigned to T Force was the First Battalion, Oxford and Buckinghamshire Light Infantry. Their involvement is detailed in *Otherwise Occupied* written by T Force member Michael Howard which includes his personal letters sent from Germany after the War.[38] Howard collaborated with Longden, with this book released to compliment Longden's work. It provides useful background information regarding surviving T Force documentation. Most documentation was destroyed in Germany between 1948 and 1956 leaving over two hundred tons to be returned to the UK. By 1986, a mere two tons remained with the foreign and commonwealth office to be passed to TNA. The last files were declassified in 2007.[39]

Charlie Hall's *British Exploitation of German Science and Technology* published in 2019 expands on his earlier PhD on the same subject published by University of Kent in

---

[38] Michael Howard, *Otherwise Occupied: Letters Home From the Ruins of Nazi Germany* (Tiverton: Old Street, 2010).

[39] Howard, *Otherwise Occupied,* p. 354.

2016.[40] Like O'Reagan , Hall provides an outstanding analysis of British exploitation of

German science and technology after the war, with reference to the support provided by T

Force.[41] Their activities are analysed in detail with T Force events portrayed accurately

compared to appropriate National Archive records. Although it was the intention that this

dissertation post-war T Force activities, duplication of Hall's research appears unnecessary

meaning T Force will be mentioned in the briefest terms. It is worth noting that even an

excellent researched as Hall, when briefly discussing 30 Commando, he quotes Pearson

with his erroneous references to Skorzeny.[42]

1.04   Methodology and Sources

Reviewing the historiography, it is apparent that inaccurate research published in older

secondary sources has resulted in erroneous statements being made by subsequent authors.

Instead of a linear chronology, committees such as the IPC, CIPC, CIOS, BIOS are

incorrectly represented as concurrent rather than following an iterative evolution.

Likewise, with 30 Commando, the first permanent Intelligence Assault Unit (IAU),

previous authors have considered the formation in isolation, often confusing the unit's

evolving nomenclature to the extent that Cabell created his own with 30CU.[43] Certain

subjects such as S Force in the Mediterranean or operation RANKIN in Western Europe

have been barely considered in secondary literature. With the primary research question to

analyse how British intelligence target collation and capture adapted between 1942 and

1947 to meet evolving military, operational and political needs. Without copious secondary

sources, this will be achieved through the analysis of mainly primary sources, with

---

[40] Charlie Hall, 'British Exploitation of German Science and Technology, 1943-1949' (PhD, Kent University, 2016) <https://kar.kent.ac.uk/60242/1/84PHD%20THESIS.pdf> [accessed 8 February 2022].

[41] Charlie Hall, *British Exploitation of German Science and Technology, 1943-1949* (London: Routledge, 2019).

[42] Hall, *British Exploitation of German Science and Technology,* p. 22.

[43] Cabell, *The History of 30 Assault Unit.*

compelling arguments constructed throughout five thematically separated chapters. The primary research aim will also provide a precise evolution of units and committees, detailing nomenclature, timeline, purpose and who was subordinate to whom. This information will be reinforced by detailed appendices. Units such as the navy's 30AU will not be discussed in isolation, instead their training and deployment will be analysed in conjunction with the existing intelligence structure of the British army's Intelligence Corps and US equivalent units. Early in the research phase preparing this dissertation, the decision was made to photograph the entire contents of archival files rather than just relevant pages or sections. This has proved to be a wise decision, as much has been revealed by carefully reviewing documents whose pertinence has only become apparent as the research has progressed.

The Churchill Archive at Churchill College, Cambridge, retain a full copy of Rear-Admiral John Godfrey's memoirs. These cover his career from 1903 to 1950, with three volumes detailing the period 1939 to 1945 when Godfrey was involved with NID and the JIC as DNI. A detailed account of the formation of ISTD, ISIS and the involvement of the Oxford University Press is also included, along with the introduction of Lieutenant Harling and Commander Fleming as key personalities involved with the contacts registry and later the deployment of 30AU. A second set of Godfrey's memoirs are held at the National Maritime Museum in Greenwich.

The archive of Fredrick Linderman, Lord Cherwell, is held by Nuffield University Oxford.[44] Linderman was Paymaster General, Churchill's close friend and primary scientific adviser. Linderman also advised on post-war planning and was involved in

---

[44] Frederick Linderman, The Viscount Cherwell (1886-1957), scientific adviser and close friend of Churchill

forming the 1942 Malkin Committee that grappled with the issue of German reparations.[45]
He also worked with the Economic and Industrial Planning Staff (EIPS) who debated reparations and the economic rehabilitation of Germany. The archive was searched in the hope of discovering discussion relating to the expansion of the CIOS remit to include commercial and scientific intelligence. The archive contains useful information regarding post-war planning and the conflict over receiving material reparations from Germany, weighed against the need for British industry to manufacture products that could be sold to revitalise her export markets and bring urgently needed revenue into the country. Around one hundred and fifty files were photographed and carefully reviewed, yet there are surprisingly few references concerning commercial intelligence exploitation or the value of tacit knowledge and know-how.

The archive of the Bletchley Park Trust was consulted to establish if it held files pertaining to targeted intelligence identification or capture. It transpires it only holds personnel details of the staff who worked on the site. According to Dr David Kenyon, Research Historian for the Bletchley Park Trust, the recording of much of the surviving history of GC&CS in the TNA HW series folders, was organised within weeks of the end of the war by Frank Birch – head of the Naval Section assisted by Monica Zambra.[46] Birch created his team to compile history dossiers before GC&CS staff were demobilised, meeting for the first time on 12 June 1945.[47]

---

[45] TNA FO 942/52, Report of the Interdepartmental Committee on Reparation and Economic Security, 57 page report, 31 August 1943.

[46] Monica Zambra was Birch's assistant, collating filing systems supporting Birch and Nigel de Grey who wrote much of the history of GC&CS. For further reading, please refer to <https://www.gchq.gov.uk/person/monica-zambra> [accessed 15 March 2025].

[47] TNA, HW 50/2, Naval Section's Historical Tasks, Meeting Minutes 12 June 1945.

Imperial College London was approached regarding access to the archives of Patrick Linstead, chairman of CIPC, CIOS and for a period after the war – BIOS. They did not provide access, insisting their archive relates to his tenure with the university as Professor of Organic Chemistry and later Rector of Imperial College, but not to his wartime activities. Reviewing the list of papers deposited in the Archives of Imperial College in 1975 and assuming nothing is held in addition to this list, the University's statement regarding the contents of the archive would appear to be accurate.[48]

Research at The National Archives has revealed the major part of the primary source literature used in this dissertation, with the contents of over five hundred files photographed and later analysed. Only pertinent files ended up being used. Many were located using the 'Discovery' search interface, a powerful search tool that relies on keywords; however, it is limited by the file description held within the dataset. TNA staff confirmed that file descriptions were uploaded from the original physical card index system and can contain spelling errors or reflect the first few pages of a file but fail to describe the remainder of their contents. Imaginative searches have been necessary to access all available files on certain subjects. For example, reviewing the files cited by Rankin and Cabell when researching their histories of 30 Commando, reveals Admiralty files containing 30 Commando , 30 Assault Unit and 30 Advance Unit in their Discovery searches.[49] The commando existed from September 1942 to the summer of 1945 and in that time they operated under five different titles, with a further three used during their formation.[50] Using these different titles in Discovery will return a number of different

---

[48] Linstead,-Professor-Sir-Patrick-FRS-catalogue-of-papers.pdf, list of papers deposited with Imperial College in 1975 < https://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/records-and-archives/public/Linstead,-Professor-Sir-Patrick-FRS-catalogue-of-papers.pdf> [accessed 18 September 2025].

[49] Rankin, *Ian Fleming's Commandos* and Cabell, *The History of 30 Assault Unit*.

[50] For a fill list and evolution of the titles used for 30 Commando, please refer to Appendix II.

folders. For example, the most balanced view of the unit's creation is not found in the Admiralty files, but Ministry of Defence DEFE files returned after searching 'Intelligence Assault Unit'. A search for 'Special Engineering Unit', the unit's cover name in Italy will return War Office WO files that are pertinent to operations in the Mediterranean.

By manually transferring the file 'tree' and descriptions from Discovery into a spreadsheet program, it is possible to build a visual map of the way files are grouped in the physical storage facility at Kew and potentially highlight useful files that are poorly described. For example, the HW 50 series of ninety-five files detail aspects of GC&CS history and are broken down into twenty-two sub-groups. Mapping the ninety-five files reveals HW 50/15 noted as 'GC&CS Sections, GC&CS European Naval Section Extracts and Dossiers collected apparently for historical purposes and/or research' would not be returned by Discovery searches for Enigma pinches or 30 Commando, yet the file is an excellent resource for these subjects. The file's pertinence is revealed by the sub-group of historical files. Mapping file trees was undertaken on twenty or so file groups, though some file trees are simply too big to attempt this analysis. For example, a Discovery search of War Office file group WO 204 includes nine files randomly scattered detailing S Force out of a total of 13051 files. Reviewing this procedure with TNA staff, they confirm the limited ability to interrogate the folder grouping structure is a flaw in the Discovery search function and processing data into a spreadsheet program is the only reliable method to build a picture the groupings. They also confirm that there is no automated way to download this 'tree' from Discovery.

Cabinet Office papers of the British Chiefs of Staff (COS) and the Joint Intelligence Committee (JIC) include appreciations and memoranda circulated by these

two bodies between 1940 and 1945.[51] These documents provide an almost complete

timeline illustrating when operations were first mooted, or committees formed. Only a few

documents have been redacted from the preserved record. Raids on the French coast were

proposed from 1941 onwards, with the CAB files revealing in what way the Chiefs of Staff

and JIC responded to requests from the Defense Minister – Winston Churchill - to harry

the Germans on the continent. Transcripts of the Anglo-US conferences held throughout

the war, were circulated by the Chiefs of Staff and are preserved in CAB 80. The US

transcripts from the same conferences are available through a number of learned sources

on-line, providing an alternative US perspective of the same meetings. These resources

have revealed much about the anticipated withdrawal of German troops from Western

Europe and the activation of operation RANKIN from late 1943 onwards. Preparing for

this eventuality, the JIC were tasked with providing a monthly assessment of Germany's

fighting capability in Western Europe, looking for any signs of imminent collapse and

preparing for RANKIN or later ECLIPSE. These appreciations are preserved in CAB 81.

Concurrent CAB 80 and 81 records were accessed from 1941 to 1945, though only those

that have been directly cited in the text are included in the bibliography.

The research period for this dissertation has been dogged by delays and

unavoidable changes of research direction resulting in an unusually extended gestation

period. Covid-19 lockdown prevented unrestricted access to the archives, with very limited

entry to TNA between lockdowns offering a maximum of six files per day, no more than

one visit per week and only if a slot could be booked - which was not possible as TNA was

heavily oversubscribed due to social distancing. Nuffield Oxford were closed for eighteen

months, yet graciously ensured priority access once they reopened. Imperial college

---

[51] Throughout this dissertation, the abbreviation JIC will apply to the Joint Intelligence Committee based in London, unless it includes a suffix denoting a specific command or location such as JIC(Washington) or JIC(AF).

remained closed for over two years and only then confirmed by email that their archive was probably inappropriate for my needs.

It was intended that this dissertation would analyse the operation of T Force, reparations, deindustrialisation and post-war human and material exploitation of Germany. After recording much archive material covering the operation of T Force and post war reparations, an outstanding book and PhD by Dr Charlie Hall became available, mirroring much of my research and proposed structure of the initial dissertation. Following discussions with the dissertation supervisor, it was decided to redirect research to areas not covered in detail by Hall. Sadly, this meant discarding a major part of the completed research covering T Force, Reparations, the Paris Agreement, the Council of Foreign Ministers (CFM), the Inter-Allied Reparation Agency (IARA), the Darwin Panel and the Committee for Liquidating War Potential (CLWP) in all, just under one hundred and fifty TNA folders and numerous secondary publications. New subject areas had to be researched and files sourced from TNA adding to the delays. T Force were heavily involved in targeted intelligence capture and the commercial exploitation of Germany from March 1945 to their termination in 1947, yet they are only mentioned in passing in this dissertation. This decision was made to prevent unnecessary duplication of Hall's excellent research.

1.05   Terminology

A number of terms have been used throughout this dissertation that merit comment.

The term 'Joint' was a universal term applied to any committee or body that represented the army, air force and navy.[52] Examples would include the Joint Intelligence Committee and the Joint Planning Staff.

The term 'Combined 'was a universal term applied to any committee or body that represented Anglo-US affairs.[53] Examples would include Combined Command (SHAEF), Combined Intelligence Priorities Committee CIPC and Combined Intelligence Objectives Sub-committee CIOS. An exception would be Combined Operations that was a British inter-service command set up in 1940 before the 'Combined' convention was agreed. The more correct 'Joint Operations' was never adopted as the official title.

The British army Intelligence Corps was divided into subordinate Field Security Sections (FSS). This title officially replaced the previous Field Security Police (FSP) in July 1940. However, the abbreviation FSP continued to be used when referring to the FSS throughout the war, appearing in many contemporary documents. For consistency FSS has been used throughout this dissertation, unless FSP appears in a direct quotation.

The German Enigma encryption machine is mentioned throughout this dissertation and in the appendix. Configurable *Walzen* [rollers] were fitted to this machine, forming part of the mechanical encryption process. For consistency, instead of using the term

---

[52] TNA FO 1082/1, Control Commission for Germany, Glossary of Abbreviations, Contractions, Code Names, Etc., published by the Foreign and Commonwealth Office, 1984, p. 23.

[53] TNA FO 1082/1, Control Commission for Germany, Glossary of Abbreviations, Contractions, Code Names, Etc., published by the Foreign and Commonwealth Office, 1984, p. 50.

walzen or *roller*, the term *wheel* has been chosen, as this was the term commonly used by British cryptographers and appears in direct quotes by GC&CS staff.

The notation G1, G2, G3 etc. will be used throughout this document, referring to the 'G Divisions' within army headquarters. The letter G is an abbreviation for General Staff Officer, sometimes also noted as GSO or GS. The following number denotes the officer's role or function and does not denote rank, importance, or imply any hierarchy. The British general staff adopted this system from their American Allies as more US officers were integrated into the HQ staff. Using the Anglo-US COSSAC staff as an example, four G Divisions had been created by late 1943 - G1: Personnel, G2: Intelligence, G3: Operations and G4: Services (Quartermaster and Movement). [54] G5: Civil Affairs, Publicity and Military Government and G6 Psychological Warfare were created in early 1944 before COSSAC evolved into SHAEF.[55]

British and US titles of rank follow the contemporary 1940s convention of using hyphens, for example Lieutenant-Colonel, Rear-Admiral. For consistency, all ranks are capitalised and hyphenated. Abbreviations have not been used unless present in book titles.

The term 'Soviet' has been used intentionally throughout this document when referring to the Union of Soviet Socialist Republics (USSR) or the Russian state. Although the term Russian appears in most contemporary documents, it has only been used in this dissertation in direct quotes, or when referring to the titles of archive files.

---

[54] TNA FO 1082/1, Control Commission for Germany, A Glossary of Abbreviations, Contractions and Code Names, Foreign and Commonwealth Office, 1984.

[55] History of COSSAC, 1943-1944, The Historical Sub-Section, SHAEF May 1944, p. 9, Historical Manuscripts Collection, 8-3.6A CA. <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023].

When referring to the German *Vergeltungswaffe* [Vengeance Weapon or Reprisal Weapon], the hyphenated Allied nomenclature has been adopted. This applies to German usage during the War when the non-hyphenated reference would have been correct. Thus, the Fieseler Fi-103 (FZG-76) is referred to using V-1, not the original German V1 and the Aggregat-4 A-4 long range rocket is referred to using V-2, not the original German V2.

Finally, operations code names such as RANKIN or OVERLORD are shown in uppercase in line with the convention adopted during the War. This enabled a document to be visually scanned, with operational codewords instantly apparent.

Chapter II

Cryptography and Targeted Intelligence Capture:

Formation of the 30 Commando and First Deployment in Algeria,

1942

> the most important factor arising out of the Torch operations, was the setting up of
> the organisation known as the 30AU [30 Commando].

Frank Birch, HNS, Head of Naval Section, Hut 4,
Government Code and Cypher School, GC&CS, summer 1945.[1]

The Intelligence Assault Unit (IAU), operated under the title 30 Commando when first deployed in Algiers in 1942, with the military contingent remaining in Italy into 1945. The naval members returned to the UK in 1944, were renamed 30 Assault Unit (30AU) and operated in Western Europe for the remainder of the War. Whether in North-West Africa, Sicily, Greece, Sardinia, Italy, or Western Europe, the IAU forged a lasting reputation for locating and securing the most valuable cryptographic and military intelligence from cypher machines and code books, to torpedoes and midget submarines. This unit is credited for being the first specialist IAU, maintained as a permanent unit throughout the War and trained to locate, identify and capture intelligence of the highest security rating and facilitate its fast return to authorities in the UK. Targeted Intelligence Capture starts with 30 Commando.

The inspiration to create the IAU was a German Intelligence Kommando operating in the Balkans in April 1941. This small team successfully moved through Yugoslavia in the vanguard of the German invasion, finally infiltrating the British HQ in Athens and capturing sensitive intelligence that influenced combat in the eastern Mediterranean. The

---

[1] TNA HW 50/15, Naval Sections Share in the Organisation for capturing Documents, New Phase of Pinching as Result of the Invasion of North Africa, p. 19.

role of this enemy formation will be scrutinised, along with how they were brought to the attention of British Naval Intelligence. If the inspiration to create the IAU is beyond dispute, what motivated Naval Intelligence to propose forming the IAU in 1942 – nearly a year after the German unit had been observed – is less clear.[2] Possible factors will be analysed, such as the need to capture cryptographic intelligence on behalf of British code breakers at Bletchley Park. The problems facing Britain's cryptanalysts, what cryptographic intelligence they needed and how it could be obtained will also be analysed. It will be argued that an urgent demand in 1942 to obtain enemy cryptographic intelligence following a change in German encryption, was the primary motivation to create the IAU. Though forming this unit was first proposed in March 1942, it was not formally created until September 1942 following months of planning meetings and procrastination.

Although assembled by Naval Intelligence Division, the IAU was to be under the command of Combined Operations with the rank and file drawn from men who had successfully completed their commando training. The unit was envisaged to be 'inter-service' with personnel drawn from the navy, marines, army and air force in the hope of making efficient use of Britain's limited manpower. In addition to commando training, all officers and ordinary ranks received highly specialised training in intelligence target location, identification and capture. Their remit was to reveal and offensively secure intelligence targets while an enemy facility was being seized and without the adversary being aware. Any items successfully captured were to be swiftly despatched to the UK for appropriate distribution. Crucially, the unit was not bound to a single operation, but formed as a permanent asset to be utilised in all theatres and for the remainder of the War.

---

[2] TNA ADM 223/214, History of 30 Commando (Latterly Called 30 Assault Unit and 30 Advanced Unit), paragraphs 1 and 2.

The army already operated the Intelligence Corps with its subordinate Field Security Sections (FSS), constituted in 1940 and embedded at divisional and Corps level. Their role will be investigated along with the reason the FSS was unable to provide the navy's inter-service intelligence needs. The FSS will be scrutinised to enable the IAU to be placed in context with the army's intelligence gathering apparatus. The chapter will conclude with the first deployment of elements of the SEU in Algiers alongside the FSS, where cryptographic intelligence was successfully acquired and expedited back to the UK.

2.01   IAU - Intelligence Assault Unit, Creation and Motivation

On 20 March 1942, a formal proposal document was circulated by the Personal Assistant (PA) to the Director of Naval Intelligence (DNI), suggesting that Naval Intelligence Division (NID) should form their own Naval Intelligence Commando Unit, later titled the Intelligence Assault Unit (IAU).[3] According to the one page document, this permanent unit would undertake intelligence capture tasks for multiple Admiralty departments, be organised and trained by NID and fall under the operational control of Combined Operations.[4] The unit would be deployed when the British military 'reassume the offensive on the Continent, in Norway or elsewhere.', seizing predetermined intelligence targets before they were destroyed by the enemy. This new NID commando would emulate a German *Abwehr Kommando* [intelligence commando] or AK - acknowledged by the DNI as 'One of the most outstanding innovations of German naval intelligence'.[5] The writer of

---

[3] The title of Intelligence Commando Unit only appears on the proposal document dated 20 March 1942. For a timeline charting the evolution of this unit's titles, please refer to Appendix II. The Abbreviation ICU is not being used here as this could cause confusion with the Intelligence Collection Unit or ICU, formed after the liberation of Rome in June 1944 and analysed Chapter III.

[4] Combined Operations was formed in July 1940 and subordinated to the British War Office. Commanded by Admiral of the Fleet, Roger Keys until October 1941, they utilised a combined force of naval and army personnel to undertake raids against German forces with air units utilised with transport. Unlike the use of 'combined' later in the war, there was no involvement of US forces or personnel. Keyes was replaced by Lord Louis Mountbatten in October 1941, who was in turn replaced by Major-General Robert Laycock in October 1943.

[5] TNA ADM 223/500, Proposal for Naval Intelligence Unit, 20 March 1942, signed by Commander Ian Fleming, NID 17.

the proposal document suggested the commando would have 'various other intelligence duties which are described in the attached memorandum' but sadly this supplementary document is not preserved in TNA. The eventual mustering of volunteers for this unit in September 1942 and its experimental deployment in November in Algeria, would inaugurate targeted intelligence gathering – a concept that was to be emulated by subsequent formations. These successors would base much of their craft on the operational methodology of this elusive 'Royal Naval Party'.[6]

The proposal document raised several interesting questions that merit analysis. Could the army's Intelligence Corps, who were trained to accompany forces in action, be utilised to retrieve the targeted intelligence required by the Admiralty? The Director of Military Intelligence (DMI), Major-General Frances Davidson writing to Lord Mountbatten, Chief of Combined Operations (CCO), certainly believed they could.[7] Referring to the creation of a 'special intelligence unit', Davidson stated 'as you know, the War Office and Home Forces have always held that this work should be done by field security personnel who are trained specially for such work'.[8] The Intelligence Corps had been constituted on 19 July 1940, with thirty Field Security Sections (FSS) deployed to France accompanying the British Expeditionary Force.[9] By the time the DNI was debating

---

[6] TNA WO 204/6992, S Force Operational Instruction No 1, Appendix B1, S Force Movement Order, Lieutenant-Colonel David Strangeways, 24 April 1943. During operations in Tunisia, security meant the unit's title of 30 Commando was omitted from movement orders, using the innocuous title of 'Royal Naval Party' instead.

[7] Major-General Francis Henry Norman Davidson, 1892-1973. Director of Military Intelligence (DMI) 1940-1944. Colonel Commandant of the Intelligence Corps 1952-1960.

[8] TNA DEFE 2/955, DMI to CCO, Major-General F H N Davidson, 20 August 1942. The War Office were responsible for all military matters, while naval affairs were the responsibility of the Admiralty. Home Forces were the body that provided training and equipment for formations before their overseas deployment and included forces for the defence of the UK against enemy invasion or incursion.

[9] Anthony Clayton, *Forearmed: A History of the Intelligence Corps* (London: Brassey's, 1993), p. 78. Authorisation for the creation of the Intelligence Corps was issued on 19 July 1940, Army Order 112. All former members of the Field Service Police (FSP) were transferred to the Corps, with new sections titled Field Security Sections (FSS). Although the term 'Police' was officially discarded, FSS units were regularly referred to as FSP throughout the War.

the formation of an IAU in June 1942, FSS units were nearly two years old and had joined

raids on the continent. Five members of 89 FSS participated in operation BITING, the

airborne raid near the French town of Bruneval carried out in February 1942.[10] FSS were

deployed to capture strategic intelligence.[11] Clayton states that the FSS were primarily

concerned with intelligence for the army, although if appropriate, could assist the other two

services.[12] It was unlikely that the army would transfer command of FSS units to the

Admiralty or sanction the autonomy of command NID required.

What motivated the PA to the DNI to propose the formation of an IAU on 20

March 1942 and not before. The Admiralty history is clear that the inspiration to create the

unit stemmed from observations of the German intelligence assault unit operations in the

Balkans in April 1941. There is no comment included in the Admiralty narrative however,

suggesting why NID chose to propose the creation of the unit in March 1942. The DNI

approved the formation unit in April – twelve months after the German Unit was deployed

in the Balkans.[13] Could the anticipation of raids on France and Norway provide the

motivation to propose the IAU? Reviewing the memoranda issued by the Chiefs of Staff

from January 1940, raids on the continent were being discussed by Churchill and the

Chiefs of Staff from the summer of 1941.[14] These discussions coincided with the period

when NID first learned of the German Kommando deployed in Yugoslavia and Greece, yet

---

[10] Operation BITING, carried out on the night of 27-28 February 1942. British parachutists landed near Bruneval on the French coast. Their target was a German *Würzburg* radar, which was to be inspected and if possible, disassembled to remove key parts for analysis. RAF radar expert Cox was able to remove items from the radar before the raiding party disembarked by sea for England. For further reading, please refer to R. V. Jones, *Most Secret War: British Scientific Intelligence 1939-1945* (London: Hamish Hamilton, 1978), p. 236 and Max Hastings, *Operation Biting, The 1942 Parachute Assault To Capture Hitler's Radar* (London: William Collins, 2024).

[11] Steers, *FSS*, pp. 82-93.

[12] Clayton, *Forearmed*, Prologue, p. xv.

[13] TNA ADM 223/214, Chapter 1, Early History of Unit, Origins.

[14] TNA, CAB 80/25 through to CAB 80/38 and CAB 80/56(O) through CAB 80/66(O). These files hold most of the memoranda issued by the British Chiefs of Staff between 1940 and 1945. A small number of individual memoranda have been removed from public access on security grounds. Memoranda with suffix '(O)' denoting 'Operational', were issued with a restricted circulation.

no proposal to emulate the German AK was made throughout 1941. Following the German invasion of Russia on 22 June 1941, Churchill reasoned that raids on Europe were now feasible due to the eastern focus of the Wehrmacht. Writing to his senior staff on 23 June, he called for a raid on western France stating that he 'has in mind' mounting a 'raid with twenty-five to thirty thousand men, perhaps with commandos, plus one of the Canadian divisions'. Objectives were to be the destruction of gun batteries, shipping, stores, and 'the killing and capturing a large number of Germans'.[15] Churchill stated, 'Now the enemy is busy in Russia is the time to 'make hell' while the sun shines.' Churchill clearly liked this phrase, as in addition to using it to close his memo to senior staff, it was also noted by Churchill's Private Secretary John Colville in his diary entry for 23 June 1941.[16] A few weeks later, Foreign Secretary Anthony Eden met with the Soviet Ambassador Ivan Maisky on 16 July. The Ambassador requested that while his country was fighting 'two hundred and forty German divisions, could the UK not land armoured forces in France and battle the Germans there?'. Maisky insisted that this action would be 'immensely encouraging to the Soviet armies.'[17]

The Chiefs of Staff issued a directive on 7 November 1941 to all service ministries and in consultation with the newly appointed Advisor Combined Operations (ACO) – Commodore Lord Louis Mountbatten. This directive called for a plan to be prepared for 'a large scale raid of some duration', to be mounted in the spring of 1942 and with the object

---

[15] TNA CAB 80/58, COS (41) 116 (O), Winston S Churchill to General Ismay, the Chief of Staff Committee, and the War Cabinet, on 23 June 1941.

[16] John Colville, *The Fringes of Power: Downing Street Diaries 1939-1955*, rev. edn (London: Weidenfeld & Nicolson, 2004; Hodder & Stoughton, 1985), p. 352. Diary entry for 23 June 1941. Sir John R Colville, 1915-1987, Private Secretary to Chamberlain, Churchill and Atlee in 1945.

[17] TNA CAB 80/58, COS (41) 140 (O), Minutes of meeting between Anthony Eden and Ivan Maiskey, Soviet Ambassador to the UK 16 July 1941, regarding the Soviet request to invade France to relieve pressure on the Soviet armies.

of effecting considerable destruction and inflicting maximum casualties'.[18] General Paget, Commander-in-Chief Home Forces, responded on 25 January 1942, issuing a detailed review entitled 'Raids on the Continent'.[19] He asserted that raiding the continent with the object of killing Germans was not worthy of a large scale raid as 'they are in good supply and of comparatively low propaganda value'. Destruction of material objectives could be less expensively destroyed by aerial attack or naval bombardment, by minor sea or airborne raids or by local patriots. Paget predicted the result of a large raid, would be heavy air and naval losses, loss of landing craft, probable loss of the bulk of the equipment and of a large proportion of the personnel - perhaps one armoured division and one infantry brigade. He noted that all these losses must be accepted. He continued that if any large raid were to be contemplated before 1 September 1942, considerable preparations by all three services must be undertaken immediately. He pessimistically emphasised that without such preparation, the operation would be 'impossible - with preparation, the chances of success were uncertain'.[20] From 7 November 1941, the Admiralty and Combined Operations were involved in discussions regarding this raid, yet NID did not propose forming the IAU till 20 March the following year. This is surprising given the gestation period to form and train an Assault Unit .

The US had entered the War in December 1941 and within weeks, Churchill and the Chiefs of Staff were meeting with their US counterparts at the ARCADIA Conference in Washington. It is probable that raids on the continent were discussed between 24

---

[18] TNA CAB 80/60, COS (41) 248 (O), Action in Spring 1942, Directive to the C-in-C Home Forces, signed Dill (Army), Pound (Navy) & Portal (RAF), 7 November 1941.

[19] General Sir Bernard Charles Tolver Paget, 1887-1961, replaced Sir Alan Brooke as C-in-C Home Forces in 1941 and later commanding Twenty-First Army Group before handing command to General Bernard Montgomery.

[20] TNA CAB 80/61, COS (42) 26 (O), Raids on the Continent, 25 January 1942. COS memo enclosing a report by General Sir Bernard Paget entitled 'Conclusions Reached in the Study of a Major Raid on the Continent', 24 January 1942.

December 1941 and 14 January 1942, even if unofficially. Surprisingly, reviewing the

US[21] and British transcripts of ARCADIA, raids were not officially discussed.[22] Whittel in

his book assessing operation CHARIOT, the successful raid on St Nazaire, states that

Churchill promised President Roosevelt that the British would carry out raids on the

French coast, and Combined Operations staff were to be reorganised to ensure these raids

happened as pledged.[23] Combined Operations, the planning body that were to orchestrate

numerous raids on the Continent, had been created in 1940 to utilise army, air and naval

commandos and undertake amphibious attacks on targets on the European mainland. In

late October 1941, the Director of Combined Operations, Admiral of the Fleet Roger

Keyes was replaced by Commodore Lord Louis Mountbatten who accepted the role of

ACO.[24] Early successes under Mountbatten's dynamic leadership were operation BITING

- the raid on Saint-Jouin-Bruneval to capture RADAR components in February 1942 and

operation CHARIOT where British commandos crippled the huge Normandy dry dock at

St Nazaire in March.[25] Rankin's history of 30 Commando, suggests that the success of

operation BITING may have been the motivation for NID to propose forming the IAU.[26]

The Prime Minister called a meeting with the Chief of the Imperial General Staff

Sir Alan Brooke on 5 March 1942 to discuss organisational changes to Combined

Operations. Churchill advised that Mountbatten had been promoted to Chief of Combined

---

[21] ARCADIA Conference, Papers and Minutes of Meetings, US Department of Defence, <https://www.jcs.mil/Portals/36/Documents/History/WWII/Arcadia3.pdf> [accessed 27 November 2023].

[22] TNA CAB 80/61, COS memos, COS (41) 15 (O) and COS (42) 16 (O), Minutes of discussions at the ARCADIA conference.

[23] Giles Whittel, *The Greatest Raid: St Nazaire, 1942: The story of Operation Chariot*, (Dublin: Viking Penguin, 2022), p. 20.

[24] Vice-Admiral Lord Louis Mountbatten, 1900 - 1979, later Earl Mountbatten of Burma, Advisor Combined Operations (ACO) from October 1941 and Chief of Combined Operations (CCO) from March 1942.

[25] James Dorrian, *Storming St Nazaire*, (London: Leo Cooper, 1998), pp. 14-18. The plans were prepared by the Inter-Servicer Planning Committee headed by Captain John 'Jock' Hughes-Hallett, later Vice-Admiral Hughes-Hallett. After ramming and mounting the Normandie lock gates at St Nazaire, explosives hidden on board the ship were later detonated, devastating the dry dock.

[26] Rankin, *Ian Fleming's Commandos*, p. 131.

Operations the day before and would now to attend the meetings of the Chiefs of Staff twice a week.[27] Brooke noted that Mountbatten attended his first Chiefs of Staff meeting on 10 March, where the problems of organising 'a large raid or lodgement' were discussed. It was proposed by the attendees, that the only practical option to help the Soviets was to try and draw the German air force westward by mounting raids on the Calais front - a proposal proffered again by the Chiefs of Staff on 17 March.[28] The ambitious 1942 plan for Anglo-US landings on the Cotentin Peninsular in Normandy codenamed operation SLEDGEHAMMER, was being discussed during March. While this operation is mentioned as 'typical example of an objective which might yield valuable fruit if tackled by such a unit' in the NID proposal document, it is not suggested that the unit is integral to this major operation.[29] Had this been the case, it is likely that the document would make this clear.

Later when this operation was cancelled in May, there would probably have been comment on file regarding the future deployment of the IAU, but there is none. This would suggest that SLEDGEHAMMER is mentioned in passing as an example of where the proposed unit could be utilised, yet this raid was not the motivation for the unit's creation. Could Combined Operations or the new Chief of Combined Operations Lord Mountbatten have requested that NID form the IAU? After Fleming circulated his proposal document dated 20 March, Mountbatten's secretary issued a brief reply on 1 April that stated that Chief of Combined Operations 'likes the idea and suggests a conference should be called at

---

[27] Lord Alanbrooke, *War Diaries 1939-1945: Field-Marshal Lord Alanbrooke* (London: Weidenfeld & Nicholson, 2001), p. 236, entry for 5 March 1942. At the same meeting, Brooke was advised he was to replace the First Sea Lord, Sir Dudley Pound as Chairman of the Chiefs of Staff (COS).

[28] Alanbrooke, *War Diaries 1939-1945*, pp. 238-240, entries for 10 and 17 March 1942.

[29] TNA ADM 223/500, Proposal for Naval Intelligence Commando Unit, point 6, 20 March 1942.

his Headquarters under his chairmanship to discuss the matter fully.'[30] This response suggests Fleming's document was Mountbatten's introduction to the formation of an IAU.

2.02   Intercepted Communications and Cryptographic Intelligence

From the start of February 1942, the German navy, fundamentally changed the way they encrypted their signals communications with their Atlantic U-boat fleet. Messages transmitted using this new cypher protocol, code named SHARK by British cryptographers, proved impossible to decrypt.[31] The Royal Navy was now blind to the movements of the Atlantic U-boats, with a commensurate rise in the tonnage of Allied ships sunk. By the middle of March 1942 when the IAU was proposed by NID, the urgency to acquire examples of daily key settings or the new Enigma encryption device grew with each passing week. It will be argued in this chapter that it was this change in German cryptography that motivated the proposal to form the intelligence commando in March. This assertion is reinforced by the training the unit received, the targets assigned during early deployment and by a definition of 30 Commando's remit found in the Admiralty official history preserved at TNA:

> from its inception was the capture of current German and Italian cypher material, including specimens of the wheels used on the Enigma cyphering machine, particulars of daily settings for wheels and plugs, code books and all documents relating to signals and communications.[32]

The intelligence commando was eventually formed in mid-September 1942, adopting the official title of Intelligence Assault Unit (IAU). This was changed to the Special Engineering Unit (SEU) at the request of the first commanding officer of the unit

---

[30] TNA ADM 223/500, Letter to Fleming from Commander Combine Operations, 1 April 1942, responding to Proposal for Naval Intelligence Unit, 20 March 1942.

[31] F. H. Hinsley, *British Intelligence in the Second World War*, 5 vols (London: Her Majesty's Stationary Office, 1981), II, p. 179.

[32] TNA ADM 223/213, History of SIGINT Operations Undertaken by 30 Commando / 30AU, point 1.

Commander Ryder.[33] Later still, the unit adopted the more familiar cover title of 30 Commando. Before analysing the formation of this unit, it is important to understand the types of intelligence they would be expected to recover and for whom. How were the German communications encrypted, transmitted and then intercepted by the British? Who were the cryptanalysts attempting to penetrate the encoding and assuming this was achieved, how were the messages translated into tangible English with the meaning of contracted and euphemistic language fully recognised? Understanding these many challenges will provide an appreciation of the codes, documents, manuals and encryption components 30 Commando were expected to recover.

From the start of the Second World War, Great Britain's merchant navy sailed under the constant threat of attack by the enemy U-boats. The German navy attempted to blockade the UK, isolating her from overseas supplies. In the last four months of 1939, one hundred and fifty-five ships were sunk and a further ten damaged by U-boats in the Atlantic and Mediterranean. The following year a further one hundred and ninety-one ships were destroyed, totalling over one million tons lost to the German submarines.[34] The British knew that by decrypting the German navy's coded naval communications, it would be possible to track the movements of the U-boat packs and counter German operations. Since the occupation of French and Norwegian territory, the German navy relied oven more on encrypted wireless communications to coordinate their U-boat and surface fleets.[35] Penetrating these German communications was urgently required, yet unlikely without the capture of the German encryption machines or associated daily machine

---

[33] Commander Robert E D 'RED' Ryder VC, 1908-1986, veteran of raids on St Nazaire and Dieppe in 1942.

[34] 1939 ship losses: 155 sunk, 571,574 tonnes, 10 damaged, 124,057 tonnes. 1940 ship losses: 191 sunk, 1,033,850 tonnes, 31 damaged, 193,497 tonnes. Source <https://uboat.net/allies/merchants/losses_year.html> [accessed 27 March 2024].

[35] Clayton, *Forearmed*, p. 88.

settings. Securing examples of these items became an essential part of the battle to decrypt the German communications.

Encrypted German naval messages were intercepted by listeners based at 'Y' stations around the country – sites developed from the Civilian Shore Wireless Service (CSWS) under Commander Humphrey Sandwith RN.[36] In 1939, the Army's equivalent Y station was manned by members of the Royal Signals, based at the old naval base at Chatham, while the RAF listening station was located near Cheadle in Staffordshire.[37] As the war progressed, all three services and the Foreign Office expanded Y coverage by creating listening sites across the Country, with Beaumanor Hall in Leicestershire used as an inter-service training centre. Listening operations were overseen by the Y Board comprising Major-General Menzies, 'C' – the head of the Secret Intelligence Service (SIS), the three service directors of intelligence that included DNI Rear-Admiral Godfrey, the Head of the Government Code and Cypher School (GC&CS) and a chairman.[38] The group would meet every six weeks and prioritise cryptographic activity and other matters of high policy. In 1939, the Admiralty had decided that intercepting U-boat transmissions was top priority, funding the expansion of Y stations throughout the UK and abroad.[39] By 1942 the naval Y Service was retitled Naval Intelligence Department 9 (NID 9) with Sandwith now a captain, at its head.[40]

---

[36] TNA HW 41/137, The Naval Y Service in Wartime 1939 to 45, p. 2. Historians at Bletchley Park suggest that the etymology of the term 'Y' could have referenced the phonetic sound of the letters 'WI' or Wireless Interception. It may also refer to 'procedure Y', the navy's pre-War parlance for their ship-based system for intercepting enemy radio traffic. Either way, the term Y Service was subsequently adopted by the other services and foreign office.

[37] Sinclair McKay, *The Secret Listeners: How the Y Service Intercepted German Codes for Bletchley Park* (London: Aurum Press, 2012)), p. 32.

[38] TNA ADM 223/464, NID 9, Wireless Intelligence, by C. Morgan, p. 126. Major-General Sir Stewart Graham Menzies 1890-1968, head of MI 6 - the Secret Intelligence Service (SIS) 1939 to 1952. Rear-Admiral John Henry Godfrey, 1888 to 1970, Director of Naval Intelligence DNI January 1939 to September 1942. Promoted from Vice-Admiral to Rear-Admiral 22 February 1939.

[39] TNA HW 50/15, Coverage Control, The Broad Outline.

[40] TNA ADM 223/464, NID 9, Wireless Intelligence, by C. Morgan, pp. 126-129.

The navy's land-based Y stations fulfilled two functions. The first was to establish the radio-frequency of German transmissions, details of which were passed to eight naval Direction Finding (D/F) stations from Shetland to Cornwall.[41] Each D/F station recorded a direction bearing as long as the U-boat transmitted, feeding the data to the Admiralty's Operations Intelligence Centre (OIC) based in the Citadel in Whitehall.[42] The different bearings were plotted on a map of home waters with the point where they intersected indicating the location of a transmitting U-boat. Donald McLachlan, of NID 17 based in Room 39 of the Admiralty, described the accuracy of the OIC triangulations as astonishing, although concedes that accuracy varied, depending on the weather and atmospheric conditions.[43] Signals operator Peter Mathews provides clarity, stating a transmission from a few miles away could be accurate to a few hundred yards. In the North Sea, accuracy could reduce to within ten miles, while triangulating a transmission way out in the mid-Atlantic might be accurate to, at worst, thirty miles.[44] The Kriegsmarine signals men knew they were vulnerable to wireless tracking so ensured radio silence whenever possible.[45] During the periods when enemy codes could not be decrypted, during much of 1942 for example, the triangulation service was the only way to locate U-boats other than by visual means. Y Stations also worked with the D/F stations to triangulate land based

---

[41] David Kahn, *Seizing the Enigma: The Race to Break the German U-boat Codes 1939-1943* (London: Frontline 1991; repr. 2023), pp, 250-252.

[42] TNA HW 41/137, The Naval Y Service in Wartime 1939 to 45, p. 9, Operational Control. The Operations Intelligence Centre (OIC) was established in June 1937 as the Movements Section or NID 8, monitoring worldwide ship traffic and under the command of Lieutenant-Commander Norman Denning. For further reading, please refer to Boyd, *British Naval Intelligence* and Patrick Beesly, *Very Special Intelligence: The Story of the Admiralty's Operational Intelligence Centre 1939-1945* (London: Hamish Hamilton, 1977).

[43] Donald McLachlan, *Room 39: Naval Intelligence in Action 1939-45* (London: Weidenfeld & Nicholson, 1968), p. 32. Funkspruchbuch

[44] Peter Matthews, *SIGINT: The Secret History of Signals Intelligence in the World Wars* (Stroud: The History Press, 2013; repr. 2018), p. 73. These figures are based on First World War statistics. Matthews implies until technological improvements that account for the planet's magnetic deviation were introduced in modern D/F equipment, D/F accuracy remained little changed during the First or Second World War.

[45] Matthews, *SIGINT*, p. 210, before the end of the War, the Germans had developed a device to be fitted to U-boats called KURIER that would burst fire a transmission in a few microseconds to deprive the Allied D/F stations any opportunity to secure a directional plot. This device was a prime target for TICOM in the last months of the War. The Technical Intelligence Committee (TICOM) instigated by GC&CS will be discussed in Chapter IV.

enemy transmissions, enabling the location of permanent transmitter sites to be established, while providing target intelligence should future IAU raids be proposed. Of note, the RAF operated a chain of D/F stations with listeners tuned to Luftwaffe frequencies. The Luftwaffe often transmitted *en-clair*, so RAF listeners conversed in German when on duty, ensuring their reactions were at one with the enemy.[46]

The second function of the Y Service was to intercept enemy messages transmitted using Morse code. In home waters these were usually German communications, but international listening stations also intercepted Italian and Japanese traffic. Y Service listeners underwent intensive training to read Morse and instantaneously convert the dots and dashes to letters of the alphabet. The transcribed messages would end up at the traffic analysis section at the Government Code and Cypher School (GC&CS) in the hope the signal could be decrypted. To preserve the anonymity of GC&CS, transcribed messages were forwarded to an innocuous property in North London – Arkley View in Barnet – before being despatched to Bletchley by courier rider. Ideally, the cryptanalysts preferred to receive the same message from multiple Y Stations as a cross reference. Once the messages were decrypted, the 'Special Intelligence' was transmitted by teleprinter to the OIC for the Admiralty to act upon, usually by cryptographer Harry Hinsley.[47] The importance given to Y Stations as the War progressed is illustrated by their increase in numbers of naval ratings when compared to the navy overall. At the start of the War, Y Service employed under two hundred operatives manning around fifty receivers in twenty stations – about 1 in 800 naval staff. By 1945 there were over five thousand operatives

---

[46] McKay, *The Secret Listeners*, pp. 11-16. German speaking female volunteers were often allocated to the Y Service as WRENS – Women's Royal Naval Service or WAAF, Women's Auxiliary Air Force.

[47] Sir Frances Harry Hinsley, 1918-1998. Employed at Bletchley Park, Hinsley studied 'traffic analysis' of German communications, frequencies; times of transmissions etc. trying to establish anomalies that might suggest changes in the enemy's routine. His observations were passed to the OIC.

with four hundred and fifty land based receivers and hundreds more afloat - roughly 1 in 140 naval staff.[48]

2.03   GC&CS – Decrypting SIGINT and Targeted Intelligence Capture

The messages received by GC&CS were of little value, until they could be decrypted, translated from German to English, and their contents fully appreciated. Commander Denniston commented to cryptanalyst Frank Birch, Head of Naval Section (HNS) 'You know, the Germans don't mean you to read their stuff, and I don't suppose you ever will'.[49] On another occasion, Birch pessimistically noted 'At the outbreak of the War in Sept 1939, no German signal had been read for 20 years', continuing '95% [of] all worthwhile German Naval traffic was enciphered'.[50] It was thus recognised early in the war that 'there was little hope of breaking the German Naval Enigma without a pinch'[51]. Pinch was the official codebreaker's euphemism for a piece of cryptographic material that could be targeted and stolen from the enemy to assist decryption. The cryptanalysts put pressure on the Admiralty 'both to stimulate H.M. Ships by advising the importance of obtaining a pinch and suggesting "special operations" from which valuable captures could be made'.[52]

---

[48] TNA HW 41/137, The Naval Y Service, The Author notes that during the same period, the navy had swollen from 160,000 to 790,000 listings, thus 1 in 800 Naval personnel were in 'Y' service in 1939, increasing to 1 in 144 in 1945. The author of this history, Commander G.E. Hughes RNVR writing in November 1945 comments 'At the beginning of the war we needed desperately every scrap of intelligence we could get; at the end we could have reduced intelligence staffs by nine tenths, and still have won'.

[49] Kahn, *Seizing the Enigma*, p. 138. Frances Lyall 'Frank' Birch, 1889-1956, Room 40 during the First World War and GC&CS Head of Naval Section (HNS) throughout the Second World War. Also, a successful film and stage actor before and after the war.

[50] David O'Keefe, *One Day in August: Ian Fleming, Enigma and the Deadly Raid on Dieppe* (London: Faber & Faber 2013; repr. London: Icon Books, 2020) p. 60.

[51] TNA HW 50/71, document dated 1942 and headed 'Question of pinching documents, during raids – fear of compromise – policy'.

[52] Mavis Batey, *Dilly: The Man Who Broke Enigmas* (London: Dialogue, 2009), p. 218.

The British men and women tasked with deciphering the German coded messages were part of the Government Code and Cypher School (GC&CS) based at Bletchley Park (BP) in Buckinghamshire. The location was chosen as a secluded evacuation site, having been purchased in June 1938 by Admiral Sir Hugh Sinclair, then Chief of the SIS.[53] The abbreviation 'BP' appears in many contemporary documents and will be used to refer to the cryptographers or code breakers based at Bletchley Park during the War. These men and women faced three main obstacles. Firstly, decryption - how to reverse the encryption of enemy's communications by developing an understanding of the encryption process. Secondly, elucidation - once decrypted, how to fully translate the technical vocabulary or abbreviations and appreciate the full meaning of decrypted messages. Thirdly, daily keys – with the settings of the encryption machine changed every day, capturing the daily settings would save days of trial and error and ensure the decrypts were timely and remained relevant.

.

The first problem for the BP cryptographers was how to decrypt German cyphertext, or 'Ship Intelligence' as it was called by the BP Naval Section (NS).[54] All departments of the German Government and armed forces encrypted their transmitted communications using versions of the commercially produced Enigma machine. This machine had been designed and patented by Arthur Scherbius after the First World War, adopting the trade name of 'Enigma' from the Latin 'aenigma' meaning 'riddle'. The machine enabled the operator to input individual characters of a message using a mechanical QWERTZ keyboard and by combining mechanical components and electric

---

[53] Boyd, *British Naval Intelligence*, p. 329. Admiral Sir Hugh Francis Paget Sinclair was the Chief of the SIS 1923 to 1939. He purchased the site for £6000 using his own funds, from a property developer who had acquired the land to build a housing estate. Sinclair chose the site as it was relatively private and safely away from London and the threat of Luftwaffe bombing.

[54] TNA HW 50/15, Captured Documents Dossier, The Origin of Technical Intelligence, p. 2.

circuitry, a random character would be illuminated on a QWERTZ lamp panel.[55] The

Enigma operator's assistant would then record this new 'encoded' character, which would

be separately transmitted using Morse code. The machine settings were changed each day,

with the following day's settings configured at midnight - Berlin time, adjusted by the duty

signals officer.[56] Although encyphering, transmitting, receiving then decrypting messages

was a laborious process, the German authorities believed the Enigma encryption to be

unbreakable throughout the War.[57]

Building on the research of Polish mathematician Marian Rejewski, British

cryptographer Dilly Knox decrypted the first German three wheel Enigma M3 coded

message in October 1939.[58] Understanding the settings and construction of the German

encryption machines enabled BP engineers to build mechanical computing machines titled

'Bombes', that effectively reversed the Enigma scrambling operations. Each Enigma

machine was supplied with five encoding wheels, increased to eight by the navy, of which

three were fitted at any time.[59] Over time, successful pinches enabled the cryptanalysts at

BP to collect all eight Enigma wheels. The ultimate prize for an intelligence assault unit

---

[55] The QWERTZ keyboard layout was the standard adopted in German speaking counties by the beginning of the nineteenth century, with the characters Z and Y swapped due to the increased usage. The English QWERTY keyboard reflects the rarity of the letter Z in English and the common use of the letter Y. Observing decrypted Enigma transmissions, the three German umlaut letters - ä, ö, ü and the eszett character – ß, were not catered for by the Enigma machine or used in encrypted signals.

[56] Kahn, *Seizing the Enigma*, p. 227. Later in the war, the change of settings was carried out at noon Berlin time. Although Kahn states the settings were changed every two days, the *tagesschlüssel* charts included daily settings for each day of each month.

[57] F. H. Hinsley, *British Intelligence in the Second World War*, 5 vols (London: Her Majesty's Stationary Office, 1979) I, p. 487. Increasing security of the encryption, the machine was modified by incorporating a *Steckerbrett* [plug board] to increase the complexity of the encryption - a feature adopted for use by the navy in 1926, the army in 1929 and finally the air force in 1934.

[58] Wylie, *The Codebreakers*, p. 302. Alfred Dillwyn 'Dilly' Knox 1884 – 1943, Papyrologist and Fellow of Kings College Cambridge, worked in Room 40 of the Admiralty during the First World War and helped break the Zimmermann Telegram that brought America into the conflict. He spent the inter-war years working at GC&CS breaking the US codes before working on Enigma into the 1940s.

[59] The user configurable encoding 'rollers' fitted to the German Enigma encryption machine are referred to as 'wheels' throughout this dissertation. This term has been used to provide consistency with contemporary quotes written by staff at Bletchley Park during the War.

would be to capture examples of the Enigma machine and return them to BP for analysis. Even damaged machines or components could reveal secrets of the mechanism to the cryptographers so were important captures.[60]

The second problem facing BP was to fully understand the decrypted and translated messages with interpretation of jargon and technical terms, a problem NS referred to as 'Technical Intelligence'.[61] GC&CS separated the decryption and translation of German Signals Intelligence (SIGINT) into different teams, each housed in dedicated buildings. Hut 6 decrypted Axis army and air force messages after which the plain text was passed to Hut 3 to be translated into meaningful English. Hut 8 focused on Naval SIGINT, with naval translations carried out in Hut 4. GC&CS did not possess detailed dictionaries of current Wehrmacht terminology, abbreviations, contractions or technical jargon - instead relying on information obtained from interrogation of prisoners of war and captures of axis documents.[62] This dearth of definitive terminology meant the BP staff that sought to make sense of their newly translated signals needed:

> a rigorously academic understanding of grammatical niceties and precise shades of meaning and a knack of divining the correct expansion of novel German abbreviations with a trained mechanic's repertory of technical terms.[63]

The *Report of British Procedures for Capturing and Exploiting Enemy Naval Documents* held at TNA, discusses this problem in great detail and the efforts that were involved to overcome the lack of reference resources at the start of the war.[64] Having access to all captured documents was key, ideally as soon as they fell into British hands. The capture of

---

[60] TNA HW 50/71, List of Captured Machines, 3 October 1944. The list if Enigma and Haglin machines held at BP in 1944 included five 3-wheel and three badly damaged 4-wheel Enigma machines.

[61] TNA HW 50/15, Captured Documents Dossier, The Origin of Technical Intelligence, p. 2.

[62] Wehrmacht – a lateral translation would be 'defence power' although the term refers to the three primary arms of service during the German Third Reich: Kriegsmarine (navy), Heer (army) and Luftwaffe (air force).

[63] Clayton, *Forearmed* p. 89.

[64] TNA HW 8/103, Report on British Procedures for Capturing and Exploiting Enemy Naval Documents, Part III. Captured Naval Documents at GC&CS, pp. 20-31.

U-boat U-13 in June 1940 is a good example. The large haul of manuals and documents

provided a significant boost to BPs library of terminology, component references,

abbreviations and contractions. The manuals from U-13 included a copy of the

Allgemeines Funkspruchbuch [General radio message book] that listed terms that were

likely to be used in naval traffic.[65]

Phrases and abbreviations were recorded by the 'Elucidation Department' under

Lieutenant-Commander Tandy.[66] The Hut 4 translation team were titled 'Naval Section VI'

(NS-VI) and were the only department that had access to all captured and previously

translated documents and ideally placed to arbitrate with translations if dispute arose. [67]

Unfamiliar words, unrecognised technical terms, military idioms and abbreviations were

marked by translators and passed to the elucidation department, who consulted a growing

card index of translated terms, hoping to find a good English synonym. Abbreviations were

commonly used by the German Signals teams using Enigma, to reduce the laborious task

of inputting each letter while also making the translated message more obscure to the

uninitiated. Once the team had identified a new phrase or expansion of an abbreviation, it

was added to a special NS-VI dictionary, mimeographed and circulated in a regular

supplement to all translating teams.[68] Words or abbreviations that defeated the translators

---

[65] TNA HW 50/15, The Origins of Technical Intelligence, Part 1, The Need for Captured Docs, for the Provision of Equivalents and Abbreviations, p. 3.

[66] Michael Smith, *The Secrets of Station X: How Bletchley Park Helped Win the War* (London: Biteback, 2011), p. 104. Lieutenant-Commander Geoffrey Tandy RN, 1900-1969, graduate of Oxford and Birkbeck, he worked at the Natural History Museum specialising in the biology of algae. He was reputedly posted to Bletchley Park as a cryptogramist – someone who specialises in deciphering coded messages. In fact, he was a cryptogamist – an expert in non-flowering plants such as mosses and ferns – and algae. He had specialised in the collection and preservation of Algae from around the world, with his specimens still held at the Natural History Museum in London. His skill in preserving aquatic specimens made him the expert in preserving captured naval code documentation that had been waterlogged when captured and were believed by others at BP to be beyond recovery.

[67] TNA HW 8/103, Part III. Captured Naval Documents at GC&CS, p. 29. Additional staff at NID 24 could offer translation services when NS-VI was overloaded.

[68] TNA HW 8/103, Captured Naval Documents at GC&CS, p. 24. NS-VI was a document translation body that liaised closely with BP and answerable to the Foreign Office.

were recorded on a separate cardex system, with reference to the rest of the translated text. If the problem text reappeared, by comparing different messages using the same word, a meaning may be implied and the NS-VI updated.

With a successful process established, the Admiralty decided that all captured documents were to be vetted by NS-VI in the hope that more mundane documentation might unlock obscure references in decrypted signals. To this end, it was decided between NID and BP that intelligence capture should not differentiate between general intelligence and purely cryptographic documentation. For the IAU being proposed in 1942, the importance of identifying and recovering all enemy documentation including handbooks and manuals in addition to codes and daily keys was emphasised. To ensure all IAU troops understood this, Lieutenant-Commander Tandy of NS-VI was appointed to tutor all commandos, covering what printed intelligence to identify and return to the Admiralty. NS-VI would disseminate captured information to the many departments within the Admiralty, though code and cypher documents were withheld. Dr David Kenyon, Research Historian, Bletchley Park Trust suggests this may account for the lack of information regarding cryptographic captures remaining in TNA. Reviewing the accession lists of the German naval archives captured by 30AU at Tambach Castle and documentation seized by British authorities at Flensburg in June and July 1945, numerous decrypted SIGINT messages are present, but no examples of code or cypher documents.[69]

The third problem facing the cryptanalysts was how to continue to decrypt the intercepted SIGINT quickly enough to keep translated messages relevant, while at the same time the Germans changed the Enigma settings and the transmitting frequency each

---

[69] TNA HW 8/116, PU Series Accession Lists, PU/G/1-62 German Documentation, 237 pages.

day at midnight.[70] It was possible for the mechanical Bombes used at BP to decrypt a

message without the daily key settings, but this might take days. Access to the Enigma

tagesschlüssel [daily key] if it could be captured would ensure timely decryption. For a

breakdown of the daily key figures and a brief overview of the operation of a typical M3

Enigma machine, please refer to Appendix III. This *tagesschlüssel* was prepared in

advance with a complete month on a single sheet titled *Sonder-Maschienschlüssel* [special

machine keys]. These sheets were printed using water soluble ink where the page would be

rendered unreadable by wetting the page. This ensured pages were unreadable if recovered

from a flooded ship or submarine. *Tagesschlüssel* were unique to each types of Enigma so

naval machines could not be set using army codes. For the IAU being proposed in 1942,

the capture of code documents and cribs was as important as seizing the physical Enigma

machine.

GC&CS were aware that the RAF might occasionally seize code books from

captured aircraft but knew they could not rely on chance captures of cryptographic keys.

Since Dunkirk, most of the army was UK based while BP felt it a waste of time for forces

in North Africa to attack an isolated HQ to capture code books as the enemy would

probably revise their *tagesschlüssel*.[71] The Italians would automatically change their codes

as a precaution, after headquarters were attacked.[72] BP believed that the British army in

Africa could not be relied upon to forward captured code books to army HQ intelligence as

was agreed protocol. In 1943 for example, BP learned of the loss of German code books to

the British from decrypted Enigma messages, yet the British army units involved could not

---

[70] Ronald Lewin, *Ultra Goes to War: The Secret Story*, (London: Hutchinson, 1978), p. 116.

[71] TNA HW 8/103, p. 17.

[72] TNA HW 50/15, Change in Pinch Policy as a Result of Cryptographic Successes, p. 18. Writing on 6 June 1943, it was noted that the Italians would automatically change codes when an HQ was attacked or captured. The Germans did not for much of the war, confident that if the Allies successfully acquired examples of the Enigma machine, Allied cryptanalysts would still be unable to break the German code.

trace the missing items. Sir Edward Travis, Director of GC&CS wrote on 21 July to the British Brigadier Strong, Assistant Chief of Staff for Intelligence G2, Allied Forces Headquarters (AFHQ) advising that GC&CS would send officers familiar with such documents to North Africa to review captured German papers.[73] Travis despatched Wing Commander Oeser, fluent German speaker and head of the Hut 3 translation team to investigate the disappearance.[74] Oeser failed to locate the missing documents, though did receive useful cypher documents from the Desert Air Force (DAF) and other cryptographic paperwork from the Sicilian region of Comiso – but two months after their capture.

With the army and air force unable to provide targeted cryptographic intelligence, BP looked to the Admiralty and Naval Intelligence Division. German naval code books were changed less frequently due to the time vessels were at sea. This meant that if codes could be successfully captured, they might provide weeks or months of decryptions. Boarding a ship or U-boat in isolated waters could potentially allow the communications equipment and supporting code books to be seized, without the German high command being aware of the enemy incursion. BP requested that Naval Intelligence should organise pinches, targeting U-boats, and lightly defended weather ships. GC&CS wad enjoyed a very close working relationship with Naval intelligence since the First World War. Cryptanalysts based in Whitehall flourished under the leadership of the DNI 'Blinker' Hall, who recognised the importance of code breaking and sought to maximise the

---

[73] Sir Edward Wilfred Harry Travis, 1888-1956, Alastair Dennison's deputy until he assumed the role of operational head of GC&CS in February 1942. He retired from the position in 1952.

[74] Wing Commander Oscar Adolph Oeser, 1904 - 1983, Born in Pretoria, South African born Oeser volunteered for the RAF at the outbreak of the Second World War but was deemed too old for active service. He was instead posted to Bletchley park, where, as a fluent German speaker, he headed Section 3L in Hut 3, whose task was to translate and categorise the decrypted messages generated in Hut 6. He would lead TICOM, the Targeted Intelligence Committee discussed in Chapter 4. For further reading, please refer to <https://pursuit.unimelb.edu.au/articles/the-secret-life-of-the-professor> [accessed 9 December 2023].

importance of the naval code-beakers in Room 40, renamed ID25 in 1917.[75] ID25 had

amalgamated with Military Intelligence - MI 1 in 1919 with the new inter-service

formation re-branded as the Government Code & Cypher School (GC&CS). Two thirds of

the staff were naval ex-Room 40 or ID25.[76] Although the Admiralty relinquished

operational control of GC&CS to the Foreign Office in April 1922, by 1939, the

relationship was firmly re-established due to the pressing need to decrypt enemy SIGINT.

      The close relationship between the code breakers and NID is discussed in detail in a

candid history of Naval Intelligence commissioned by the DNI Godfrey in the summer of

1942. Unusually, the use of GC&CS cypher decrypts is discussed, although the document

is a record and not intended for distribution.[77] The need for BP and the navy to operate

seamlessly together resulted in a proposal in January 1939 to base GC&CS Naval Section

(NS) cryptographers in the Admiralty in Whitehall. Undoubtedly this would have enhanced

communication with the OIC, yet it was quickly realised that there was insufficient space

to accommodate all NS cryptographers in Whitehall. There was also an appreciation that

the codebreakers would benefit from working alongside teams from other services, rather

than become isolated in Whitehall. It was decided that cryptographers would remain at BP

and any communication issues with the OIC accepted.[78] HNS Frank Birch who ran Hut 4

---

[75] James Wyllie & Michael McKinley, *The Codebreakers: The Secret Intelligence Unit That Changed the Course of the First World War* (London: Ebury, 2015), p. 287. Admiral Sir William Reginald Hall, known as 'Blinker' Hall, 1870 – 1943 and Director of Naval Intelligence DNI 1914 to 1919.

[76] Boyd, *British Naval Intelligence*, p. 258. The anodyne sounding GC&CS suggested a passive educational establishment while secretly, staff worked to break cyphers of foreign powers including the USA.

[77] TNA ADM 223/464, D.N.I. Minute 26 July 1942, John Godfrey writes 'What is written is for most secret record alone and will have no distribution at any time unless, in the distant future, an expurgated version should be given narrow distribution by my own or my successors' decision'.

[78] TNA ADM 223/464, p. 13.

and Dilly Knox were among a select few BP staff who liaised directly with Naval Intelligence, while only two NID officers were indoctrinated and could liaise with BP.[79]

2.04   Naval Intelligence Division, Commander Fleming, and the Perfect Pinch

The Director of Naval Intelligence Rear-Admiral Godfrey was made aware of the issues faced by BP, through his regular Y Board meetings that included the head of GC&CS Commander Denniston.[80] The necessity for close liaison prompted Godfrey's personal assistant, Commander Ian Fleming to meet regularly with the cryptanalysts at Bletchley Park.[81] Godfrey had appointed Fleming as his PA after receiving staff recommendations from retired DNI 'Blinker' Hall on the 22 March 1939. Hall extolled the advantages of having contacts in the 'City', as this would offer access to the leaders of industry who could provide valuable intelligence when required. Hall counselled Godfrey to appoint an assistant who was not a career navy man who would be too concerned with long-term career prospects to bend rules to get things done. He recommended a 'City' businessman with connections within the London elite, echoing his own appointment of London stockbroker Sir Claud Serocold as his PA during the First World War. Taking Hall's advice, Godfrey met with the Governor of the Bank of England, Sir Montagu Norman, on 12 May 1939 in the hope that he might recommend a suitable candidate. According to his diary entry, Norman gave the matter little thought, delegating the request to Sir Claud Serocold, a private contact. Serocold proposed Ian Fleming, a personal family friend, to

---

[79] Batey, *Dilly*, p. 218. The Hut system focused on different aspects of the German intercepts. Hut 3 issued reports on German army and air force decrypts following decryption in Hut 6 while Hut 4 issued Naval reports with Naval Enigma decryption in Hut 8.

[80] Commander Alexander 'Alastair' Denniston, 1881-1961, The first head of this newly created GC&CS who along with two thirds of the staff, was ex-Room 40 from the First World War.

[81] Ian Lancaster Fleming, 1908 - 1964 correspondent for Reuters, Stock broker and officer in Naval Intelligence Division 17 (NID 17) 1939-1945. Post-war, a successful writer of children's classic Chitty-Chitty-Bang-Bang:The Magical Car and a series of popular spy stories. Ian Fleming had joined the Royal Navy Volunteer Reserve (RNVR) with the rank of Lieutenant-Commander after meeting John Godfrey in May 1939. By the late summer he was promoted as Commander and accepted the position of Personal Assistant to the DNI.

Montagu who passed the name to Godfrey.[82] Fleming's connections in society coupled

with his broad and varied interests beyond the navy (including collecting historical,

industrial and scientific first editions), made him the ideal polymath to be Godfrey's PA.[83]

Fleming and NID 17 were tasked with proposing feasible pinches to capture the

current Enigma *tagesschlüssel* and equipment. Though chance captures of U-boats or

surface ships with their code books was possible, a more proactive plan was required. BP

reviewed what pinch options they saw available and in 1940 issued a report entitled '*The

Activities of German Naval Units in the Channel*' based on practical knowledge of the

vessels being operated by the Germans.[84] They listed a number of appropriate vessels that

carried Enigma equipment, proposing a scheme that could secure the pinch they needed –

operation RUTHLESS.[85]After meeting with HNS Birch, Fleming saw the potential in this

BP plan and presented it to DNI Godfrey in a memo dated 12 September 1940. It involved

British troops masquerading as a Luftwaffe crew that had ditched in the English Channel

after sending a distress message. Hoping to lure a rescue vessel to their location, the

masquerading troops would eliminate the rescue ship's crew before the British boarded the

ship. The ruthless despatch of the German crew was necessary to prevent the offloading of

the Enigma machine and *tagesschlüssel* documents – giving the title to the operation. If

successful, the British would seize the code books and encryption machine and return to

---

[82] Sir Montagu Norman, personal diary May 1939, <https://www.bankofengland.co.uk/-/media/boe/files/archive/montagu-norman-diary/1939/may-1939.pdf > [accessed 24 September 2022]. According to his Diary, Norman notes for the 24 May, 'I am to leave Godfrey alone: CS [Claud Serocold] to deal with him one way or another'. He met with Godfrey at the Admiralty later that day and advised 'Fleming is your man', but with no reference to Serocold's recommendation.

[83] Rankin, *Ian Fleming's Commandos*, p. 40. Fleming had a fascination for scientific innovation collecting first editions on every subject and scientific innovation in many countries and languages. Covering every conceivable subject from communist manifesto, to physics, manufacturing to machine guns. First editions by Humphrey Davey and Marie Currie were included. His huge library of first editions and journals was sold in 1970 after his death for US $150,000 to Indiana University.

[84] TNA HW 8/46, The Activities of German Naval Units in the Channel, 10 September 1940.

[85] TNA HW 50/15, Naval Section's Share in the Organisation for Capturing Documents, p. 14. BP listed numerous craft in the Channel including: Schnellboote (S-boats); Sperrbrecher (minesweeper); Torpedo Boats and Aircraft Security Boats that were used to recover downed GAF crew.

England.[86] Birch stressed that for the team undertaking the pinch, the capture was to be as complete as possible. If artefacts were destroyed by the crew, or the enemy suspected codes had been captured, the Enigma keys could be changed, and a further pinch would be required. The Operation gained support from Rear-Admiral Clayton of the OIC, while Godfrey used his connections with Lord Beaverbrook of the Ministry of Aircraft Production (MAP) to acquire a captured Heinkel 111 bomber and uniforms.[87] The operation was scheduled to take place in the English Channel near Dover in October 1940 yet was postponed after two reconnaissance flights by British Costal Command revealed that there were no German rescue boats operating in that vicinity. HNS Birch, who had previously described RUTHLESS as a 'very ingenious plot', wrote to one of BP's designated NID contacts 'Callaghan', relating the reaction of his two of his senior cryptographers regarding the postponement of the operation:

> Turing and Twinn came to me like undertakers cheated of a nice corpse two days ago, all in a stew about the cancellation of operation Ruthless. Did the authorities realise[…] there is very little hope, of any, of their deciphering current or even approximately current, Enigma for months and months and months – if ever?[88]

Their feelings regarding future decrypts emphasise the importance of the pinch. Birch also wrote to Denniston on 19 October stating that:

> Operation RUTHLESS, he thought, such an operation, a matter of the highest policy, the cryptographers having given out no hope of being able to decipher Enigma currently for some months to come, unless we were able to pinch the clues at least for one day's traffic, with such a pinch, added to our developments in machinery and growing knowledge of our experts, we should be able to read Enigma traffic currently.[89]

---

[86] TNA ADM 223/464, Operation RUTHLESS, by C Morgan, pp. 263-664. Fleming's original memo is included verbatim as part of the body text.

[87] Lycett, *Ian Fleming*, pp. 121-122. The He 111 bomber had been shot down after a raid on the Firth of Forth, after which it was repaired and made air worthy at the Royal Aircraft Establishment, Farnborough. Captured GAF uniforms were held in storage at RAF Cardington.

[88] TNA ADM 223/464, Operation RUTHLESS, by C Morgan, p. 264. Cancellation of Ruthless 16 October 1940, Full text of Frank Birch's letter of 20 October 1940 and Fleming's reply.

[89] TNA HW 50/15, Naval Section's Share in the Organisation for Capturing Documents, p. 14.

Fleming responded to Birch that he should 'have no fear that the value of the pinch was underestimated. RUTHLESS was still laid on […]'. In the event, favourable circumstances never presented themselves.

BP proposed one final operation to capture the cryptographic artefacts on board a German Aircraft Security Vessel – the *Bernhard von Tschirschky*.[90] BP was to provide the navy with full details of the ship including her position based on intercepted codes. The pinch format was similar to RUTHLESS in that a party would man a captured German Vorposten-boot or trawler, masquerading as the German crew. They would offer the 'correct recognition signals, and then send out a boarding party fully armed with machine guns etc.'[91] Like RUTHLESS, this pinch was not pursued as it was decided on reflection that the 'narrow waters of the Channel, were in general, unfavourable to operations of this kind' as the enemy 'would almost certainly appreciate the compromise of his codes'. O'Keefe suggests it was Fleming who devised the RUTHLESS plan and cites it as an example of his 'wild and cut-throat planning'.[92] In contrast, the BP history compiled in 1945, unambiguously states that both this and the later operation to capture the *Bernhard von Tschirschky* were devised by Naval Section at BP. Sebag-Montefiore in the revised 2011 edition of his history 'Enigma' suggests it was probably Frank Birch who devised the plan, after the successful capture of the 'Polares' on 26 April 1940. Sebag-Montefiore implies Fleming was merely acquiescent to Birch's proposal.[93] Birch's often quoted text

---

[90] *Bernhard von Tschirschky* was a traffic control ship of the German Air Force. The ship was initially deployed to Norway during the German occupation campaign of April 1940, being stationed thereafter at Trondheim. After the fall of France, she operated from Cherbourg from August 1940 until eventually transferred back to Norway in 1943. Her purpose was to provide an efficient sea rescue for Luftwaffe aircrew downed over the Norwegian Sea or the English Channel.

[91] TNA HW 50/15, Naval Section's Share in the Organisation for Capturing Documents, December 1940, p. 15.

[92] O'Keefe, *One Day in August*, p. 49.

[93] Hugh Sebag-Montefiore, *Enigma: The Battle for The Code* (London: Weidenfeld & Nicolson, 2000; repr. 2011), p. 526.

included above, illustrates the indignation felt by Turing and Twinn, strongly suggesting that the codebreakers in Hut 8 were not squeamish about how to capture desperately needed cryptographic intelligence.

Pinches were eventually successful, with GC&CS citing six made between the outbreak of the War and January 1941 that enabled 3 Wheel M3 Naval Enigma to be read from June 1941 until the end of the War. These pinches are listed in detail in Appendix IV.[94] Two of the later targeted captures were successful against converted trawlers, repurposed as weather-ships in the Norwegian Sea. The vessels used Enigma to encode their regular meteorological observations. Hinsley of GC&CS had suggested that these isolated ships would make perfect Enigma pinch targets.[95] The two ships were approached by Royal Navy destroyers in May and June 1941 and on both occasions the British fired warning shots to encourage the crews to abandon their ships and surrender. Without the violent approach proposed with RUTHLESS, the captain of the München had time to throw his Enigma machine and wheels overboard, although code books and the weather cipher remained on his desk. Allon Bacon of BP travelled in the attacking force, joining the party boarding the second ship Lauenburg to identify documents.[96] The Enigma and wheels were again thrown overboard, with code papers burned before the boarding party could access the ship. The presence of Bacon was eventually justified as innocuous documents ignored by the initial navy boarding party were collected by the BP representative filling thirteen mail sacks. Within days of his return to Bletchley, the documents seized were used to decrypt July's codes.[97] Other items were passed to Tandy

---

[94] For further reading, please refer to Kahn, *Seizing the Enigma*, for additional background information regarding these six pinches not included in Appendix IV.

[95] Kahn, *Seizing the Enigma*, p. xi.

[96] Commander Norman 'Allon' Bacon, 1905-1990, according to Boyd, *British Naval Intelligence*, p. 358, Bacon was an Olympic sailor and was recruited to GC&CS because of his ability to speak fluent German.

[97] Kahn, *Seizing the Enigma*, pp. 202-212.

to enhance the dictionaries of the elucidation department. Bacon's presence was crucial as his training enabled him to identify pertinent cryptographic intelligence overlooked by the untrained eye. Bacon's experience on the Lauenburg emphasised the need for members of an IAU to receive detailed cryptographic document identification training.

2.05   Cryptographic Protocol Change, SHARK and Four Wheel Enigma

GC&CS had suspected since 1941 that the German navy might introduce a more advanced version of the Enigma machine, probably with a fourth wheel as this type of machine had been hinted at in decrypts and captured material.[98] Although the German navy had been developing the four wheel device since 1940, it was August 1941 that the first physical evidence of a fourth wheel was discovered with the capture of U-570.[99] The crippled U-boat was towed to Iceland and thoroughly searched, but most cryptographic equipment and paperwork had been discarded by the crew. The only remaining item was the sheet-metal cover for an Enigma machine that included slots and viewing windows for four wheels instead of three. This alerted BP that a more complicated M4 machine was being distributed.[100]

On 23 October 1941, a German signals operator inadvertently encrypted a message using the four wheel setting on his Enigma.[101] Immediately realising the error, the message was re-encrypted and transmitted a second time using the correct three wheel mode that emulated the original M3 Enigma machine. This provided BP with two versions of the same message and a crib to unlock this first M4 transmission. After deciphering both

---

[98] F. H. Hinsley, *British Intelligence in the Second World War*, 5 vols (London: Her Majesty's Stationary Office, 1981), II, p. 747.

[99] Kahn, *Seizing the Enigma*, p. 244. The Hudson damaged the U-boat on 27 August 1941, after which the abandoned vessel was towed to Iceland for inspection and scrapping.

[100] Kahn, *Seizing the Enigma*, p. 249.

[101] TNA HW 50/70, Enigma Breaks and Traffic Statistics, p. 3.

signals, Turing correctly postulated that a fourth wheel had been used.[102] BP had unequivocal proof that the four wheel M4 machine was being distributed that would supplant M3 at some point.[103] On 19 January 1942, Turing noted 'if U-boats […] began to use fourth wheel, a pinch would be the only hope'. The conclusion of a meeting held the following day discussing U-boat Keys concluded '…if and when the fourth wheel is brought into force for U-boat traffic, matters will become difficult, and a pinch will be essential.'[104] Without the *tagesschlüssel* for the M4 machine, together with an appreciation of how and when the new wheel rotated during message encoding, decryption of messages was beyond the current capabilities of GC&CS.[105]

The change came on 1 February 1942 when the Kriegsmarine adopted the M4 Enigma to encode their communications with their U-boat fleet in the Atlantic.[106] Immediately, decryption of U-boat communications ceased – a blackout that would continue until December 1942.[107] From February, the location of U-boats could only be ascertained by observation or via the D/F stations working with the OIC to triangulate positions. A pinch to capture the M4 *tagesschlüssel* or an M4 machine might have appeared appropriate, yet paradoxically, BP now discouraged the capture of enemy shipping. This change in pinch policy was discussed at a meeting in the Admiralty with DNI Godfrey, HNS Birch and others from NID 17.[108] Only the U-boat signals traffic was

---

[102] TNA HW 50/70, Naval Enigma – Traffic Statistics and Notes on Breaks. A detailed timeline.

[103] The German Admiralty had been issuing M4 machines to the navy since early 1941. The Enigma designers perceptively enabled the M4 to operate in M3 mode during this transition period.

[104] TNA HW 50/70, Enigma Breaks and Traffic Statistics, p. 3, notes 19 & 20 January 1942.

[105] It transpired that the fourth rotor was 'set' and did not advance mechanically as with wheels one, two and three. The fourth wheel was set in one of twenty-six positions, greatly increasing the number of encryption permutations.

[106] TNA HW 50/70, Enigma Breaks and Traffic Statistics, p. 3, notes 1 February 1942.

[107] M3 naval code used to communicate with the Atlantic U-boat fleet was named 'HEIMISH' by the German navy, 'DOLPHIN' to the British codebreakers. BP christened this new M4 cypher 'SHARK', but to the Germans, the new code was named 'TRITON'.

[108] TNA HW 50/15, Change in Pinch Policy resulting from Cryptographic Success, p. 16.

upgraded to the M4 SHARK protocol in February 1942, though BP suspected that it was only a matter of time before other naval commands discarded their M3 Enigma in favour of the new M4. The M3 machine was still operated by the German Atlantic surface fleet and U-boats operated in Norwegian waters.[109] BP were thus keen to avoid any provocation that might accelerate this transfer to M4.[110] Calling for close support from Naval Intelligence, Hinsley organised fortnightly meetings between HNS Birch and Commander Bacon and NID representatives Commanders Drake and Fleming.[111]

The dilemma facing GC&CS centred on the fact that a pinch of M4 code books was essential to comprehend and decrypt the four-wheel machine, yet BP feared a botched pinch action might endanger the reading of existing M3 cyphers - especially in the Mediterranean. Here, the German and Italian navies were still using M3 Enigma, while the *Regia Marina* also used the Hagelin machine cypher, both of which were being regularly decrypted by BP.[112] From the summer of 1942, BP also had to consider the Anglo-US landings on Algeria planned for later that year. Anglo-US forces could not afford to squander the intelligence advantage BP provided by a poorly executed pinch. Such an ill-conceived pinch occurred on 2 September 1942 - operation DRYAD. Twelve men of the Small Scale Raiding Force (SSRF), No 62 Commando under Major March-Philipps left Portland to raid the Casquets lighthouse off the Cotentin Peninsular. They successfully captured the building and German garrison, destroyed radios, then returned to Britain with

---

[109] Roy Conyers Nesbit, *Ultra Versus U-Boats: Enigma Decrypts in the National Archives* (Barnsley, Pen & Sword, 2008), p. 84.

[110] For a list of dates when four wheel M4 Enigma was phased into service in other naval commands, please refer to Appendix V.

[111] Ref CHU GBR/0014/GDFY, p. 148. Commander Drake along with Captain Baker Creswell represented DNI Godfrey on the Joint Intelligence Staff (JIS), the subordinate body to the Joint Intelligence Committee (JIC).

[112] BP were currently reading all Regia Marina (Royal Italian Navy) signals traffic encrypted using the Swedish manufactured Hagelin C-36 code machine. Both Axis navies in the Mediterranean were using the M3 Enigma machines to communicate with each other with all signals being read by BP.

the 'ABC codebooks' and seven prisoners. The organisers of the raid considered it a

complete success with rapid execution and no casualties.[113] Capturing the codebooks was

of little value as the codes were quickly changed. The ABC code governed the periodic

illumination of the lights on Casquets to ensure the safe passage of important Axis vessels.

When used, it would alert the Royal Navy of the presence of an important maritime target.

The theft of the codebooks merely ensured that ABC was unreadable for the remainder of

the War.[114] Imaginative thinking was required by BP and NID to devise new methods to

seize Enigma artefacts, unlock Germany's SHARK encryption and avoid long-term

penalties.

2.06   The Abwehr Kommando - MARES, Montagu & Glanville

Accompanying the German invasion of Yugoslavia and Greece in April 1941 was a highly

trained *Abwehr Kommando* [intelligence commando] or AK, tasked with identifying

intelligence material and reporting field conditions back to the German *Abwehr* [Military

Intelligence]. Two sources brought the AK to Godfrey's attention. The first was a staff

officer in NID Room 39, Commander Ewen Montagu. As head of NID 12, Montagu's role

was to devise 'cover plans' within NID 17 and draw up Intelligence Summaries.[115] He also

represented the Admiralty on the MI 5 'XX' or 'Double Cross' committee, in which he

was tasked with monitoring Enigma decrypts from *Abwehr* agents in Europe. [116]

---

[113] Gérard Fournier and André Heintz, *If I Must Die: From Postmaster to Aquatint, the Audacious Raids of a British Commando 1941-1943,* trans. by Heather Costil (Cully: Orep, 2006), p. 57. Major Gustavus March-Philipps (1908-1942), founder of No 62 Commando, died less than two weeks after DRYAD on 12 September 1942 participating in operation AQUATINT and is buried at Saint-Laurent-sur-Mare.

[114] TNA HW 50/15, Change in Pinch Policy resulting from Cryptographic Success, p. 18, 6 September 1942.

[115] CHU GDFY 1-7, The Naval Memoirs of Admiral J. H. Godfrey, Volume V, 1939-1942, Heads of Department and Sections 1942, Appendix D.

[116] Lieutenant-Commander Ewen E S Montagu, 1981 - 1985, Naval representative on the MI 5 Double Cross (XX) committee under Sir John Masterman that ran double agents. For further information refer Ben Macintyre, *Operation Mincemeat* (London: Bloomsbury, 2010).

In 1941, Montagu was reviewing decoded radio traffic collected during the invasions of the Balkans in April.[117] He had worked hard to access these decrypts due to restrictive security, once complaining that he felt circumvented and starved of Enigma transcripts, as the intense security that enveloped GC&CS inhibited sharing of information captured in the field by other intelligence teams. [118] In this case, Felix Cowgill, head of SIS 'Counter Espionage' withheld BP decrypts from other intelligence departments as a result of 'security paranoia'. To access SIS decrypts, Montagu had to obtain copies 'under the table' and worked behind Cowgill's back.[119] On this occasion, he noticed a small German unit known as *Marine Einsatz Kommando* or MARES, led by Kapitänleutnant Obladen. This German AK was charged with seizing intelligence documents, charts, supplies, interrogation of POWs and reporting on the serviceability of captured port facilities. The unit was manned by personnel of the *Lehr Regiment Brandenburg* and was subordinate to *Abwehr II* (German Military Intelligence - covert operations and sabotage).[120] They were among the first troops into Athens where they immediately occupied the British army headquarters, seizing documents, maps that detailed British troop deployment in Libya.[121] The MARES AK were noticed a result of Obladen offering to allow other German units to use his radio links, as theirs had failed. Montagu was intrigued by the concept of an 'intelligence assault commando', who operated with the vanguard and sought specific pre-defined intelligence. He subsequently prepared a report for DNI Godfrey who noted the concept and discussed their function with the First Sea Lord, Dudley Pound. Godfrey

---

[117] Simmons, *Ian Fleming's War,* p. 169.

[118] TNA ADM 223/464, p. 152.

[119] Batey, *Dilly*, p. 147.

[120] TNA ADM 223/464, German Intelligence Assault Units, MARES, points 2-13. For further reading, please refer to TNA WO 204/12365, German Sabotage Organisation – Brandenburg Regiment, The German Intelligence service: The Lehr Regiment Brandenburg z. b. V. 800, 26 September 1942, also Eric Lefevre, *Brandenburg Division: Commandos of the Reich*, trans. by J Finel (Paris: Histoire & Collections, 2000). *Lehr Regiment Brandenburg* were the German equivalent of the British Special Forces.

[121] TNA HW 8/104, document headed Part II, Section 6, German Intelligence Assault Units. Note that elements of this file are duplicated in ADM 223/214.

would revisit the concept of the AK in 1942. Without subterfuge to access the SIS

decrypts, Montagu may not have identified the MARES AK and Godfrey's inspiration for

30 Commando could have been missed.

The AK was also brought to Godfrey's attention by Trevor Glanville, a British SOE

operative. Glanville was stationed in Yugoslavia, working as an accountant for Price

Waterhouse, but covertly a member of the Special Operations Executive. He was arrested

by pro-Nazi Croats during the German invasion in March but was exchanged for Italian

prisoners and escaped back to Britain.[122] His post-action report detailed the operation of

the AK against the Forth Yugoslav Army. Reviewing the German unit's achievements with

the Assistant Director of SOE, Colonel Taylor, Glanville suggested that they should

develop a similar unit to serve British needs. Though Taylor approved the concept, he felt

an IAU was not within SOE's remit, suggesting that Glanville approach the SIS.[123] They

too declined the idea, stating that such a commando was impractical. Glanville then passed

the concept to Godfrey and NID.

The German army had developed the concept of the *Abwehr Kommando* prior to

the invasion of Poland in 1939, with the first team of twelve to fifteen men operating as

Abwehr Truppen as the country was occupied. According to *Abwehr* officer Paul

Leverkuehn, these troops operated with a remit to 'spot and acquire any material which

might be of intelligence value and to seek out and capture enemy agents'.[124] AK units

operated alongside sleeper agents in Denmark before and during the invasion of that

country. The Poland AK team were redeployed during the invasion of the Netherlands in

---

[122] Rankin, *Ian Fleming's Commandos*, p. 127.

[123] Simmons, *Ian Fleming's War*, p. 170.

[124] Keith Ellison, Frontline Intelligence in WW2: (I) German Intelligence Collection 2012, p. 1.
<https://www.academia.edu/35156437/Frontline_Intelligence_in_WW2_I_German_Intelligence_Collection>
[accessed 6 March 2024].

May 1940, operating alongside a Naval AK unit who were charged with assisting in the capture of ports and coastal towns. They were supported by a platoon of *Geheime Feldpolizei* [Secret Field Police] (GFP), with all captured intelligence despatched to *Abwehr* HQ in Berlin. Admiral Canaris, Head of the *Abwehr*, had enlarged the AKs for the invasions of the Low Countries and France. The largest AK known as OKW IV commanded by Oskar Reile was subordinate to OKW, *Oberkommando der Wehrmacht* [Armed Forces High Command]. With a staff of thirty-three officers and one hundred and sixty-five all ranks, Reile prepared an 'operations manual' detailing known representatives on western intelligence agencies in France. This manual also detailed buildings that were known to hold classified information about *Abwehr* agents held by the authorities in France and Luxembourg. With Paris captured, Reile supervised the despatch of intelligence paperwork captured from the French secret services, to Berlin for subsequent analysis.[125] The MARES *Kommando* commanded by Kapitänleutnant Obladen and noted by Montagu in Greece was one of two AKs formed in the Spring of 1941. The other accompanied the *Afrika Korps*, conducting long range reconnaissance patrols behind the Allied front lines. The final AK operations took place with the invasion of the Soviet Union in June 1941. The necessity to operate AKs diminished once the German forces started their westward withdrawal in 1943 - the staff reassigned to the capture of cultural treasures in the USSR.[126]

---

[125] Keith Ellison, Frontline Intelligence in WW2: (I) German Intelligence Collection 2012, p. 4. <https://www.academia.edu/35156437/Frontline_Intelligence_in_WW2_I_German_Intelligence_Collection> [accessed 6 March 2024] The French intelligence documentation was in turn captured by the Soviet Union in 1945, and only returned to the French authorities many decades after the War.

[126] Keith Ellison, Frontline Intelligence in WW2: (I) German Intelligence Collection 2012, p. 6. <https://www.academia.edu/35156437/Frontline_Intelligence_in_WW2_I_German_Intelligence_Collection> [accessed 6 March 2024].

2.07   IAU – Army and Naval Proposal and Creation Debated

According to the official history of 30 Commando prepared by the Admiralty in 1947, Fleming proposed the formation of an 'Offensive Naval Intelligence Group' after reviewing the operations of the Obladen AK in the Balkans.[127] Godfrey duly approved the concept, though additional sanction was sought from the JIC.[128] To ensure the support of the Chief of Combined Operations - Lord Mountbatten, the Deputy Director Naval Intelligence (DDNI) and the Assistant Director (Operational) Intelligence Centre (ADIC), (OIC), Fleming drafted a formal proposal on 20 March which was circulated to these officers for their comment.[129] Fleming acknowledged both the outstanding German innovation in creating their 'special intelligence commandos', and the need for a British equivalent unit. Appraised of the imminent change in direction of the War where 'we reassume the offensive on the continent' he envisaged a commando force that would accompany the forward troops when a port or installation was attacked - specifically to '…capture documents, cyphers etc., before these can be destroyed by the defenders'. Targets would also include photographs, RDF (Radar) sites, charts, enemy fleet orders etc. The Commando would train with the regular raiding force, perhaps accompanying the second or third wave of attack and make straight for predetermined buildings where booty was expected. Captured intelligence should be returned immediately. Operation SLEDGEHAMMER - the planned attack and capture of the Cotentin Peninsular was

---

[127] TNA ADM 223/214, Chapter I, Early History of the Unit, Origins, points 1 – 3.

[128] The JIC comprised the Directors of Intelligence from the army, air force and Admiralty, with government representation from the Ministry of Economic Warfare (MEW) and Foreign Office. John Godfrey was the permanent member representing the Admiralty as Director of Naval Intelligence or DNI from 1939 to 1942.

[129] TNA ADM 223/500, Proposal for Naval Commando Unit, Commander Ian Fleming, NID 17, 20 March 1942.

suggested as a typical objective.[130] Godfrey's pencil written comment is present on the

document - 'Yes - most decidedly […] we will work in collaboration with CCO'.

Godfrey sought approval for the new unit from the Joint Intelligence Committee

(JIC).[131] This body was subordinate to the Chiefs of Staff Committee and comprised the

directors of air, military and naval intelligence, a representative of the Ministry of

Economic Warfare (MEW) and a Foreign Office chairman. The JIC had been created by

the Committee of Imperial Defence at the suggestion of Sir Maurice Hankey in 1936 to

'remedy the lack of coordination in the British intelligence community'. Their wartime

function…

> has the additional responsibility of watching, directing and to some extent controlling
> the British intelligence organisation throughout the world, so as to ensure that
> intelligence is received at the most economical cost in time, effort and manpower,
> so as to prevent overlapping.[132]

 Their function was to coordinate the appreciations drawn up by the different service

intelligence directors, ensuring a holistic view of the War and not trammelled by individual

services.[133] They initiated many of the formations that undertook intelligence gathering

during the War. The inter-service JIC were tasked with preparing long-term appreciations

of trends in policy, strategy and the military preparedness of foreign countries. They were

nominally subordinate to the Chiefs of Staff, meeting every day at three in the cabinet

offices on Great George Street, Westminster.[134] The chairman appointed in 1939 was

---

[130] SLEDGEHAMMER was a US inspired plan to capture and occupy the Cotentin peninsular in the Autumn of 1942 and hold it into 1943, thus drawing German troops away from the eastern front. The British were not keen, knowing they would be unable to provide adequate air cover, while ground troops would be severely outnumbered. The plan was cancelled in late May 1942.

[131] TNA ADM 223/500, Intelligence Assault Units, DNI Godfrey to Brigadier Kirkman JIC, Air Vice-Marshal Medhurst JIC, Menzies MI 6 and Petrie MI 5, F 974, 2 June 1942.

[132] Michael Goodman, *The Official History of the Joint Intelligence Committee: From the Approach of the Second World War to the Suez Crisis* (Abingdon: Routledge, 2014; repr. 2016), p. 1.

[133] Howarth, *Intelligence Chief Extraordinary*, p. 112.

[134] Strong, *Men of Intelligence*, p. 114.

Victor 'Bill' Cavendish-Bentinck, a skilful diplomat and intelligence operative. He retained no martial affiliations or connection with one service over another yet was able to arbitrate between the powerful personalities of Admiralty, War Office and Air Ministry. At the same time, he ensured the representative of the MEW was not isolated and civilian government needs were represented. The DDMI had proposed Cavendish-Bentinck in 1939, stressing the importance of not 'interfering with the liberty of action of the individual departments'.[135] Major-General Kenneth Strong, Britain's senior military intelligence officer during and after the War, wrote of Bentinck's appointment, noting that there was 'no real alternative, since none of the service directors was prepared to serve under the chairmanship of a service colleague'.[136] Noel Annan of the War Office noted that Kenneth Strong judged Bentinck to be the 'outstanding intelligence officer of his time, his closest rival'. Strong commented that 'If there had been a difference, I'd have accepted that his judgement would be superior to mine'.[137] Throughout the War, Bentinck's leadership was not contested, and he remained in post till after the end of the conflict. Godfrey received his reply from the JIC on 12 June 1942 approving the formation of the IAU.[138]

Who conceived the idea of forming the IAU, Fleming or Godfrey? The official Admiralty history makes no mention of requests for a special intelligence unit from Combined Operations or GC&CS. On closer analysis, it does appear that the formation of the unit was initiated by Godfrey, with Fleming tasked as Godfrey's assistant, to facilitate the creation and navigate the many inter-service meetings. Clues to the unit's conception are revealed by Robert Harling, a pre-war friend of Fleming who casts light on who initiated the formation of the IAU. In 1944, Fleming appointed Harling as Topographical

---

[135] Howarth, *Intelligence Chief Extraordinary*, p. 120.

[136] Strong, *Men of Intelligence*, 1970, p. 117.

[137] Howarth, *Intelligence Chief Extraordinary*, p. 171.

[138] TNA ADM 223/500, Collection of Intelligence During Raids, J.I.C. (42) 223 (O) (Final), 12 June 1942.

Liaison Officer to 30AU - a later iteration of 30 Commando.[139] Fleming referred to 30AU

as 'a particular hobby horse of mine, wished on me by the DNI well before he was booked

for India. Glued to me by his successor'.[140] Fleming was referring to Godfrey and

subsequent DNI, Rear-Admiral Rushbrooke. Fleming's comments suggest Godfrey

initiated the formation of 30 Commando, implying that 30 Commando was not his idea,

but a requirement wished on him by Godfrey. Godfrey wrote to Mountbatten on 16 August

1943, commenting that he was 'very glad to hear that you [Mountbatten] are energetically

pursuing the question of forming Intelligence Assault Units under your command' and

emphasised that he had 'advocated the establishment of these units ever since it became

clear how greatly the Germans had profited by their use during the Balkans'.[141] Writing in

1970, Godfrey appears to confirm his involvement writing the forward to official history of

30 Commando and 30AU, where he stated 'that such an important development as 30AU

could be launched and sponsored by the Admiralty, with the JIC blessing, and initiated by

the DNI' - in other words, initiated by himself.[142] Godfrey then credits Fleming as being

the driving force to ensure 'rapid transit through the departments with the minimum of red

tape'.

Fleming continued to describe the unit to Harling stating that 'we borrowed the

idea from the Hun […] they used an operational intelligence unit in Crete: trained

paratroopers and the rest. Captured our ciphers and God knows what else.' Fleming's

second statement is incorrect as the AK was observed in the Balkans, not Crete and

paratroopers were not involved. Although Fleming worked alongside Montagu in Room

---

[139] Prior to working with Fleming in 1944, Harling headed the Contact Registry department (NID 21) within the Inter Service Topographical Department (ISTD).

[140] Robert Harling, *Ian Fleming: A Personal Memoir* (London: The Robson Press, 2015), p 33. Rear-Admiral John Godfrey left Naval Intelligence 28 November 1942, accepting the post of Flag Officer Commanding the Royal Indian Navy and promotion to Vice-Admiral. He departed the UK on 25 February 1943.

[141] TNA DEFE 2/955, John Godfrey to Mountbatten, P. 370 16 August 1942.

[142] TNA ADM 223/214, History of 30AU, Preface Note by John Godfrey, 5 September 1970.

39, he may not have had first-hand knowledge of the original Ultra transcripts, the AK or Obladen. Harling then postulates that the desire to create the unit was in fact a requirement of the First Sea Lord, Admiral of the Fleet Sir Dudley Pound. He suggests that Godfrey, 'having been deputed by the First Sea Lord to form such a unit, had passed on the job to Fleming, lock stock and gun barrel'. The new DNI Rushbrooke had found '30AU and its manifold and frequently inexplicable activities a further oddment' and again left their administration to Fleming.[143] If the change of cryptographic protocol was the trigger to form the creation of the commando, it is logical that Pound would request their formation.[144] After all, it was Pound later in December 1942, who announced to the US and Royal Navies that this new protocol had at last been decrypted and that GC&CS could once again read the enemy communications.[145]

Assuming the German adoption of the 4 Wheel Enigma resulted in the creation of the IAU, why was there no hint that this was the trigger in the official history? There are several reasons. The first is the prohibition of all references to GC&CS, BP, Enigma, Hagelin or cryptography in orders or after-action reports, correspondence or official documents. BP and NID insisted that orders were to be memorised by commanders in the field with nothing written down that might be captured.[146] Field operatives could not be indoctrinated regarding BP and target briefings included the minimum of detail. If targets were mentioned in after-action reports, subjects are inferred using euphemistic language. For anyone compiling a unit history, there ought to be no reference on file with details of the early targets or outcomes.

---

[143] Harling, *Ian Fleming*, p 36.

[144] Admiral of the Fleet, Sir Alfred Dudley Pound, 1877 – 1943, promoted to First Sea Lord in July 1939, his health failed in the summer of 1943 with several strokes, before a brain tumour was diagnosed. He resigned his position and died shortly afterwards.

[145] Hinsley, *British Intelligence in the Second World War*, II, p. 233.

[146] TNA ADM 223/213, History of SIGINT Operations undertaken by 30 Commando / 30 AU, p. 1.

The embargo restricting written references to Enigma date back to 1940. Fear that Britain's success decrypting parts of Enigma may have been leaked to Germany was highlighted by a security scare in that year. Before he was Prime Minister, First Lord of the Admiralty Winston Churchill was corresponding with Roosevelt using the 'unbreakable' Grey Code cypher system at the US Embassy, discussing the deployment of the Royal Navy in response to information gleaned from Enigma decrypts. A member of the US Embassy staff Tyler Kent was intercepting these messages and passing some of the information to the Italian military attaché at the Italian Embassy in London. The Italian was then forwarding information to Hans Mackensen, the German ambassador in Rome, who subsequently made public statements about Anglo-US Naval policy.[147] The leak was traced to Kent and the transcripts of Churchill and Roosevelt's messages in his possession seized and subsequently checked for written referenced to BP or Enigma - none were included. A precedent was immediately established that references to Enigma, ULTRA and latterly pinch operations would not be written down.

The writer of the official IAU history was Lieutenant-Commander Trevor Glanville RNVR who joined the unit just before the Sicily landings in July 1943, compiling the unit's history in 1947. Quentin Riley, the commander of 30 Commando had been searching in vain for an Italian speaking officer for since April.[148] Glanville was proposed on 20 May 1943 as a replacement for one of the unit's Lieutenants who was transferring to the Fleet Air Arm.[149] Glanville's ability to speak Italian, German, French and Serbo-Croat made him

---

[147] Anthony Cave Brown, *Bodyguard of Lies: The Vital Role of Deception in World War II* (London: W, H, Allen, 1975), p. 67.

[148] TNA DEFE 2/942, Special Engineering Unit, Relief of Lieutenant Phillips, Lieutenant-Commander Riley, 3 May 1943.

[149] TNA DEFE 2/942, Release of Lieutenant CEHJ Phillips, QTPR/JMFS, 20 May 1943. Proposal to replace Lieutenant Philips with T J Glanville, assuming an RNVR commission can be organised.

an attractive addition to the unit. The history he wrote would reflect his own perceptions and experience after the Sicily landings but would be compiled from after action reports for the unit's deployment in Africa. These reports could not mention Enigma, pinches or GC&CS. Glanville's history was later criticised for a lack of objectivity and an arrogant implication that 30 Commando and later 30AU - only functioned effectively once he himself was involved with the unit. In a letter written on 9 December 1947, 30 Commando's early senior officer Lieutenant-Commander Curtis questioned the veracity of the presented history, stating that Granville…

> packed a pigheaded and arrogant certainty of his own rightness. His judgement never seemed to be particularly good and for that reason I never took to him. Further, he draws certain – to me – unreal conclusions, based on inaccurate facts […] his conclusions on this period [Normandy landings to the fall of Paris] can only be described as opinion – and rather jaundiced opinion at that.[150]

Reviewing Curtis's comments, it is reasonable to assume that Glanville did not liaise with him to ensure an accurate record of the formation or early operations. Although Curtis offered to record his own version detailing the first two years of the unit's operation, no alternative history appears to have been preserved. Additionally, GC&CS Commander Allon Bacon wrote on 21 April 1948 regarding the accuracy of the official history, noting that the narrative written by Lieutenant-Commander Glanville…

> by direction of the DDNI and failing the appearance of a complete history from the CCO authorities who ran the unit, or from Commander Curtis if requested by the DNI, it is suggested that this history should stand.[151]

Only after the War in the summer of 1945 did HNS Frank Birch start to compile a history of the BP Naval Section that included some interaction with 30 Commando. Birch's project was to compile recollections of colleagues before they were demobbed. This record

---

[150] TNA ADM 223/214, History of 30 Assault Unit, Note by Lieutenant-Commander Dunstan Curtis 9 December 1947. Lieutenant-Commander Dunstan Curtis DSC (1910-1983), first field commander of 30 Commando during the TORCH landings in 1942 and later in Tunisia and Sicily in 1943.

[151] TNA ADM 223/214, History of 30 Assault Unit, Note by Commander Allon Bacon 21 April 1948. The DDNI in April 1948 was Colonel H. Quill RM.

of the section's history was assembled for posterity, not for publication and provides much of the timeline for BP activities.[152]

Major W G Cass of MI 5 also believed a specialist intelligence unit was required. He suggested that a dedicated and permanent 'Special Intelligence Unit' could benefit the army, proposing that such a unit be formed in a paper dated 18 March 1942 – two days before Flemings proposal to Godfrey.[153] Surviving correspondence would suggest that his proposal was spontaneous and not in response to any prior communication from an outside body such as Combined Operations or Naval Intelligence. He believed this unit could operate under the guise of a reconnaissance unit and should have to be trained solely for offensive duties. He saw this role being full-time and not merely appended to the existing security duties of the FSS. He discussed the idea of forming a unit with Home Forces - the parent body for the FSS and Intelligence Corps, under the command of General Sir Bernard Padget. Home Forces felt that existing FSS personnel should be able to fulfil the role that Cass proposed. Discussions with Home Forces continued when Cass received a copy of Godfrey's letter of 2 June 1942 sent to Brigadier Sir David Petrie, Director General MI 5. Godfrey advised that NID were planning to create an Intelligence Assault Unit emulating the German AK unit observed in the Balkans.[154] With the JIC sanctioning an inter-service unit, it was agreed that a small experimental army section could operate alongside a naval section under the aegis of the Chief of Combined Operations.

---

[152] TNA HW 50/2 details the regular meetings held between June 1945 and November 1947 while the history of Naval Section was recorded. TNA HW 50/15 includes multiple dossiers detailing the history of sections within NS.

[153] TNA DEFE 2/942, 30 Commando – Military Section, 6 April 1943, summary of formation and training written by Major William Geoffrey Cass.

[154] TNA ADM 223/500, Intelligence Assault Units, John Godfrey to Brigadier Kirkman JIC, Air Vice-Marshal Medhurst JIC, Menzies MI 6 and Petrie MI 5, F 974, 2 June 1942.

With all three arms of service short of manpower, Godfrey was an advocate for inter-service bodies that would reduce task duplication, while meeting the requirements of each service. Godfrey stated in his memoirs, that each arm of service held divergent views of the foreign targets. The army was 'only interested in countries it had to garrison or fight over', the air force 'in those it might have to bomb, fly to or over'. For the navy, they were more interested in 'coasts, cities and economy of all countries foreign, colonial or dominion'. Choosing the right people for an inter-service team was critical to building a team with a willingness to co-operate. First class leadership and administration were key, avoiding members who might be prejudiced against other services or departments.[155] Fleming endeavoured to accommodate Godfrey's inter-service requirements, engaging with the DNI on 21 May 1942, expressing his desire to involve the personnel and communication services of MI 6 with the IAU. He also noted that the FSS were 'working on similar lines with regard to lower grade objectives', compared to the navy's 'Special Intelligence Unit', but that he hoped the FSS would still be involved, with the use of field security personnel being discussed with the War Office.[156]

2.08   Testing the Concept - RUTTER and JUBILEE

Godfrey wrote to JIC colleagues on 2 June 1942 noting that, with SLEDGEHAMMER cancelled, they now had time to review the creation of an Intelligence Assault Unit (IAU).[157] SLEDGEHAMMER had been abandoned in late May, yet Godfrey used the operation as an example of a raid that could offer multiple targets. Looking for support from departments within the Admiralty, Godfrey circulated a request for IAU target

---

[155] CHU GBR/0014/GDFY 1/6, Memoirs of John Godfrey, Chapter XXIII, Inter-service Committees, pp. 145-146.

[156] TNA ADM 223/500, Fleming writing to DNI Godfrey, IAU status 21 May 1942.

[157] TNA ADM 223/500, Intelligence Assault Units, DNI Godfrey to Brigadier Kirkman JIC, Air Vice-Marshal Medhurst JIC, Menzies MI 6 and Petrie MI 5, F 974, 2 June 1942. Comment regarding developing the scheme on inter-service lines so that the requirements of all services can be catered for.

proposals should future raids be carried out.[158] Responses were extensive and detailed. Intelligence requests pertaining to booms, buoys, beach defences, pill boxes, mines, light anti-aircraft weaponry, RDF equipment, U-boats and torpedoes.[159] Godfrey suggested that 'an effort should be made to include an Intelligence Assault Unit in Operation RUTTER' – the raid on Dieppe scheduled for early July 1942.[160] The JIC gave their support for the formation on an inter-service IAU on 12 June, issuing a memo for review by the COS. The JIC suggested that in addition to naval, Royal Marine and RAF teams, the army contingent should be drawn from FSS ranks. The JIC concurred with Godfrey that the IAU be assembled 'as an experiment, in connection with operation RUTTER'. This left less than a month to assemble and train an IAU.[161] Included in the correspondence was Sir David Petrie - Director General of MI 5 since April 1941. The previous year, Colonel Petrie had been stationed in Cairo in the Intelligence Corps overseeing the formation of nine FSS.[162] This gave Petrie first-hand knowledge of the training and capabilities of the one hundred and sixty officers and men of the FSS under his command. Petrie's inclusion suggests that the Intelligence Corps were involved in the planning of the IAU from a very early stage. It is also probable that Petrie, as Major Cass's Commanding Officer, was aware of his proposal to create a dedicated military IAU, independent from the FSS and subordinate to Combined Operations.

The genesis of RUTTER can be traced to Churchill's 'Make Hell while the sun shines' memo written on 23 June 1941. With the cancellation of SLEDGEHAMMER in

---

[158] TNA ADM 223/500, Intelligence Assault Units, Admiralty Targets (Material) as extracted from Admiralty NID 003285/42, 25 June 1942. Circulation of memorandum JIC (42) 223 Final 12 June 1942.

[159] TNA ADM 223/500, Intelligence Assault Units, Admiralty Targets (Material) as extracted from Admiralty NID 003285/42, 25 June 1942. Replies noted 29 June through to 6 August.

[160] TNA ADM 223/500, Intelligence Assault Units, DNI Godfrey to Brigadier Kirkman JIC, Air Vice-Marshal Medhurst JIC, Menzies MI6 and Petrie MI 5, F 974, 2 June 1942.

[161] TNA ADM 223/500, Collection of Intelligence During Raids, J.I.C. (42) 223 (O) (Final), 12 June 1942.

[162] Clayton, *Forearmed,* p. 154. Sir David Petrie 1879-1961, Director General of MI 5 from 1941-1946.

late May, the attack on Dieppe took on a new importance. The original operation prepared by General Bernard Montgomery in April 1942, employed airborne troops to neutralise flanking coastal batteries - necessitating good weather.[163] Montgomery's operation was approved by the Chiefs of Staff on 13 May 1942 and formed the basis for detailed planning by 'Force Commanders'. RUTTER had been scheduled for 4 July however, the attack was delayed due to inclement weather until 7 July. At sea near the UK coast, the raiding force were spotted by German reconnaissance aircraft and bombed. The raid was eventually cancelled on 8 July and the troops disembarked. Mountbatten officially restated the case for re-running RUTTER when tides were optimal in August, on 11 July – a conversation noted in the diary of King George IV the following day.[164] This was contrary to advice issued by Montgomery who feared security leaks from the ten thousand troops briefed after boarding the assault vessels in July. Even Vice-Admiral Bertram Ramsey tried to dissuade Mountbatten on 25 July without success.[165] The repeat raid was now christened JUBILEE and received approval from the Chiefs of Staff on 12 August.

A search of the files that record the formation of the IAU during 1942, reveals no reference of a commando having been assembled to take part in RUTTER. Analysis of the eighty-six page 'Orders for Operation RUTTER' issued on 29 June 1942, reveals no reference of an the IAU included in the planning.[166] A Royal Marine Commando and naval 'Dock Assault Party' is mentioned, but no precise details of their target is provided other

---

[163] Lieutenant-General Bernard Montgomery (1887-1976). Commander of South-Eastern Command in the UK before transferring to North-Africa in August as commander of the Eighth Army - then in Egypt.

[164] Andrew Lownie, *The Mountbattens: Their Lives and Loves* (London: Blink, 2019), p. 139.

[165] Admiral Sir Bertram Home Ramsay (1883-1945), appointed Naval Force Commander for the invasion of Europe in April 1942 when RUTTER and JUBILEE were staged, transferring to the Mediterranean as deputy naval commander for the invasion of North Africa. He was promoted to full Admiral in April 1944 and appointed Naval Commander-in-Chief of the Allied Naval Expeditionary Force for operation NEPTUNE.

[166] TNA WO 106/4194, Orders for Operation RUTTER, Commander-in-Chief's Office, Portsmouth, Admiral James, Memorandum No 0221/65, 29 June 1942. Admiral Sir William Milbourne James (1881-1973), Commander-in-Chief of Portsmouth.

than the usual 'cutting-out' duties in the harbour .[167] Referring to correspondence between

Mountbatten and his Chief of Staff, Major-General Wildman-Lushington in September

1942, there is evidence of a small deployment of FSS participating on behalf of Combined

Operations.[168] Lushington refers Mountbatten to a confrontation between himself and the

DMI, Major-General Davidson. With insufficient time in June to prepare a naval assault

unit, Mountbatten had requested from Davidson, troops from the Intelligence Corps. He

reminded Mountbatten that the DMI could only manage to 'squeeze a detachment of FS

Personnel out of Home Forces after considerable argument and because you [Mountbatten]

forced the issue'.[169] It appeared that the DMI resented the FSS not being given primacy for

targeted intelligence capture and was reluctant to assist other services when the opportunity

arose. Details of which FSS were allocated to RUTTER have not been found.

The composition of the new intelligence unit was still being debated throughout

July - to the clear frustration of Fleming. Recorded in the minutes of meetings held at

Combined Operations Headquarters (COHQ) on 22 July 1942, Fleming stated that there

was 'an urgent requirement for personnel to be intensively trained to carry out special

naval intelligence duties', continuing that there 'could be no question of training other than

selected personnel, who should then be kept together as a [permanent] unit'. It was five

months since the German navy first used the four wheel Enigma machines and without a

successful pinch, BP were no nearer to decrypting the German communications. Fleming

then affirmed that…

---

[167] TNA WO 106/4194, Orders for Operation RUTTER, Section VIII, point 17 clause 2 and 3, p. 5, 22 June 1942. Cutting-out is a naval term for an attack by a designated team on an anchored target.

[168] Major-General Godfrey Edward Wildman-Lushington, 1897-1970, Chief of Staff to both Admiral of the Fleet Roger Keys and then Lord Mountbatten, he continued to work with the latter, transferring with Mountbatten to South East Asia Command. He was the brother of Captain Gilbert Wildman-Lushington, flying companion of Churchill in 1913 and the first naval aviator to die in a crash. His death helped convince Churchill to end his training to be a pilot.

[169] TNA DEFE 2/955, Chief of Staff to Chief of Combined Operations commenting on the lack of support for IAU from the DMI, 2 September 1942.

the Admiralty had pointed out the urgency of this requirement as long ago as March, and he emphasised the now increasingly urgent need for a permanent body to which this type of naval intelligence work could be entrusted.[170]

Forester of MI 6 duly attended future planning meetings, where discussions regarding the inclusion of the FSS continued. Meeting at COHQ on 22 July and chaired by the Vice-Commander of Combined Operations Major-General J C Hayden, Commander Forester stated that MI 6 did not dispute that some of the intelligence targets could be divulged and dealt with by the FSS, but continued that MI 6 would prefer to entrust its requirements to a permanently trained unit that was likely to obtain better results and be preferable from a security point of view. Major Cass of MI 5 expressed similar opinions to Forester. Cass stated later he felt that the IAU should be trained solely for offensive duties, that offensive intelligence capture was a full time role and could not be combined with usual FSS security duties.[171]

The opposing argument was proffered by Lieutenant-Colonel Hill-Dillon of General Headquarters GHQ Home Forces (GHQHF) who believed that creating a 'special intelligence unit' would lower 'the moral of Field Security Units' and could 'have a detrimental effect on the FSP'[172] Patrick Bishop notes the reluctance of the services to release their operatives to form specialist teams suggesting the 'army was instinctively opposed to the idea of elite units which seemed to implicitly denigrate the qualities of the regular battalions'.[173] Bishop also notes a similar reluctance displayed by the RAF and

---

[170] TNA CAB 81/109, J.I.C. (42) 305 (O), 5 August 1942, circulation of minutes and annex documentation relating to previous meetings and discussing the formation of IAU on 5, 22 and 27 July at COHQ, Combined Operation Headquarters. Copies of memos also held in ADM 223/500.

[171] TNA DEFE 2/942, 30 Commando Military Section, Retrospective report, Major Cass, 6 April 1943.

[172] Brevet Lieutenant-Colonel Stephen Hill-Dillon, (? – 1981), veteran of the First World War and Deputy Chief of Military Intelligence in Ireland and British Secret Service in Dublin 1919. Responsible for military intelligence work in southern Ireland after independence. Retired from active service as a Major in 1927 but recalled to active duty in 1940 to advise on Irish affairs.

[173] Patrick Bishop, *Operation Jubilee: Dieppe 1942, The Folly and the Sacrifice* (London: Viking, 2021), p. 39.

navy who considered such units as 'little more than stunts'. Hill-Dillon observed that 'during the early phases of an assault, there is little for the FSS to do, so they might well devote themselves to collecting operational intelligence'. Hill-Dillon was only mollified by the assurance that there was little likelihood that the IAU would duplicate the duties of the FSS, but Combined Operations would issue a definition of roles that would prevent any duplication. As a compromise, the meeting attendees including Hill-Dillon, agreed that Combined Operations would initiate a trial of twenty men as an 'experimental measure', with the future expansion of the IAU dependent upon results of their deployment. Not mentioned in the minutes, Mountbatten had already formed a special section within 10 (Inter-Allied) Commando on 11 July, that included German speaking Sudeten German (Czech) marines who had completed their commando training. Their first deployment would be alongside 40 Commando assaulting the port of Dieppe on 19 August as part of operation JUBILEE.

A third July meeting was held on 27 July, but with Hill-Dillon no longer present to represent the FSS or GHQ Home Forces.[174] The members agreed that the permanent IAU was to be part of the Special Service Brigade - subordinate to Combined Operations. The naval contingent would comprise ten marines and seven NCOs and officers, while the army element would include eighteen ordinary ranks and ten NCOs and officers. All officers should speak German, and preferably French and Dutch as well. At least one should speak Norwegian. Colonel Neville RM of Combined Operations, pointed out that by creating a 'special intelligence body which could be kept permanently together' it could be 'most highly trained and deal with the most highly secret and most highly technical

---

[174] TNA ADM 223/500, JIC memorandum, Collection of Intelligence During Raids, J.I.C. (42) 223 (O) (Final), 12 June 1942 had suggested using FSS personnel, to be provided by Home Forces.

targets'.[175] This elevated security rating was to place this Commando apart from the conventional FSS in the way they could be used to identify sensitive cryptographic intelligence. All agreed that the members of the future IAU were to be British Nationals, excluding the émigré members of 10 (Inter-Allied) Commando who were preparing for their assault on Dieppe.

Chief of Combined Operations Mountbatten issued a letter to the JIC on 31 July advising that new unit was officially titled the 'Intelligence Assault Unit' or IAU.[176] He also confirmed that members of the unit would be drawn from Royal Marine and army commando units, which by implication now excluded the Intelligence Corps and FSS. This ruling allowed the all-volunteer assault force to remain under the control of the Special Service Brigade, ensuring the commando members could continue to wear their prized green beret. All soldiers were advised that through volunteering for special and hazardous duties with this new commando, they would not prejudice their pay or promotion prospects expected in their original marine or army commando unit. To ensure a clear command structure and enable Major Cass to continue to lead the army Troop, it was proposed that he should transfer from MI 5 to the Special Service Brigade. Mountbatten wrote personally to Lieutenant-General Colville Wemyss at the War Office to ensure the transfer of Cass.[177] Preparing for the unit's formation, the commander of the Special Service Brigade,

---

[175] TNA ADM 223/500, J.I.C. (42) 305 (O) 5 August 1942, attached minutes of meeting held at COHQ, Combined Operation Headquarters, To Discuss Composition of Special Intelligence Units, 27 July 1942.

[176] TNA ADM 223/500, J.I.C. (42) 305 (O) 5 August 1942, attached letter dated 31 July 1942, Combined Operations Headquarters to the Joint Intelligence Committee, Formation of Special Intelligence Units.

[177] TNA DEFE 2/955, Lord Mountbatten to Colville Wemyss, 16 September 1942. Lieutenant-General Henry Colville Wemyss, 1891-1959, Military Secretary to the Secretary of State for War, Sir Percy Grigg.

Brigadier Robert Laycock wrote to commanders of existing commando units on 3 September 1942, requesting volunteers for the new IAU.[178]

In June, DNI Godfrey had optimistically suggested that the IAU should participate in Operation RUTTER scheduled for July. Though cancelled on 8 July, the raid was re-scheduled for late August and given the new operational title of JUBILEE. A number of authors cite JUBILEE as the first operational engagement for Flemings' 30 Commando, however this is incorrect as the raid was mounted over a month before the IAU was assembled.[179] It is correct that a few of the officers and other ranks who participated in JUBILEE, would serve in 30 Commando when it eventually formed in September.[180] Hinsley states that the August Dieppe raid was carried out by a special section of 40 Commando, briefed by DNI on what material to look out for once ashore.[181] Boyd states that Fleming provided this briefing, with the target building a Dieppe hotel that NID believed was the German HQ.[182]

40 Commando were supported by fluent German speaking members of No 10 (Inter-Allied) Commando. This unit was created by Mountbatten on 2 July 1942, a few days before RUTTER was scheduled to commence, and comprised refugee foreign

---

[178] TNA DEFE 2/942, Intelligence Assault Unit, to Commanding Officers No 1, 2, 3, 4, 6, 9 and 12 Commando, SS/171/G1/SEC, Brigadier R E Laycock, Commander Special Service Brigade, 3 September 1942. Brigadier Robert Edward Laycock, 1907-1968, creator of the commandos, commander of the Special Service Brigade, would be promoted to Major-General when he replaced Mountbatten as Chief of Combined Operations in October 1943. Mountbatten left in September after accepting the post of Supreme Allied Commander, South East Asia Command (SEAC).

[179] Hall, *British Exploitation of German Science and Technology*, p. 24, Simmons, *Ian Fleming's War*, p. 172, Lycett, *Ian Fleming*, p. 139.

[180] TNA DEFE 2/1107, War record of personnel belonging to 30 Commando records that Sergeant Kruthoffer, Sergeant Whyman, Marine Watson, Marine McGrath, and Marine Finlayson all participated in the Dieppe raid, before joining 30 Commando and landing near Algiers.

[181] Hinsley, *British Intelligence in the Second World War*, II, p. 704.

[182] Boyd, *British Naval Intelligence*, p. 515.

nationals unified by a hatred of Nazi Germany.[183] No 10 (Inter-Allied) Commando provided a pool of fluent European speakers who could be seconded to other commando teams for 'special raids' on enemy territory, where native speakers would be needed.[184] The commando was made up of seven Troops: No 1 French; No 2 Dutch, No 3 British; No 4 Belgian; No 5 Norwegian; No 6 Polish and No 7 Yugoslavian.[185] No 3 was titled 'British' yet was made up of German speaking refugees and émigrés from Austria, Germany and the Sudetenland – many of them Jewish. Officially formed on the 11 July 1942 under Captain Bryan Hilton-Jones, they were posted to Harlech in Wales on 23 July for training. Volunteers for the Troop, often called X Troop, were taken from SOE or the Marines and were provided with false British names to protect their refugee identity in the event of capture. The Troop's fluent German was seen as crucial to the mission's success.

Nick van der Bijl in *Commandos in Exile*, notes that five German speaking Czech commandos participated in the Dieppe raid, with two – Privates Latimer and Platt operating alongside an FSS who approached Dieppe in one of the landing craft.[186] The commandos were given their orders just before landing - to 'proceed immediately to German H.Q. in Dieppe to pick up all documents etc. of value, including, if possible, a new German respirator'.[187] Garret believes the reference to a 'respirator' is a euphemism for the team's pinch target – the four-wheel Enigma M4. If Garret is correct, this extract from Trooper Latimer's after action report correctly uses an obtuse Enigma description in accordance with the BP and NID directive - not to record any details of Enigma in reports.

---

[183] Garrett, *X Troop*, pp. 73-74.

[184] Fry, *Denazification*, p. 17.

[185] Garrett, *X Troop*, p. 49.

[186] Van der Bijl, *Commandos in Exile*, p. 22. The five Sudeten Czech privates 'Bate' (unknown), 'Maurice Latimer' (Moritz Levy/Max Loewy), 'Platt' (B. Platek), 'Rice' (unknown) and 'Smith' (unknown).

[187] Garrett, *X Troop*, p. 75. Extract from Maurice Latimer's (Moritz Levy) after action report held within file TNA DEFE 218/40.

Led by Commander Ryder VC aboard HMS Locust, the men of 10 and 40 Commando approached Dieppe harbour in landing craft under intense enemy fire. Though a few commandos reached the foreshore, they failed to advance into the town. Survivors were forced to swim back to the waiting naval escort vessels, before returning to home waters.

Why are 30 Commando repeatedly, and inaccurately, associated with the Dieppe raid? Pearson suggests that the landings at Dieppe was the inaugural raid for the intelligence scavengers, that he referred to as 30 Assault Unit by the time of the Torch landings in November.[188] The title of 30 Assault Unit was not allocated to the unit until January 1944. As mentioned earlier, Simmons suggests the IAU was formed in July with their first action at Dieppe.[189] Fleming's IAU was actually formed in late September 1942, a month after the Dieppe raid. Simmons is probably confusing 30 Commando with Mountbatten's 10 Commando who were formed in July and participated in Dieppe. Lycett refers to Fleming's 'small raiding party who received their baptism of fire at Dieppe'[190]. He later suggests that the IAU at the time of the TORCH landings in November 1942, like at Dieppe, was not yet ready for action.[191] Shakespeare refers to Dieppe as '30 AU's disastrous trial run in August 1942.'.[192] O'Keefe suggests Fleming's IAU was variously named 10 Platoon, X Platoon, 30 Commando or 30 Assault Unit.[193] This assertion is incorrect as 10 Commando and X Troop were an independent entity for the remainder of the War with no connection with 30 Commando. It is worth noting that X Troop of 10 Commando fought alongside 30AU at Douvre in Normandy in June 1944. O'Keefe correctly notes that Fleming proposed the Intelligence Commando on 20 March 1942, but

---

[188] Pearson, *The Life of Ian Fleming*, pp. 124-125.

[189] Simmons, *Ian Fleming's War*, p. 172.

[190] Lycett, *Ian Fleming*, p. 139.

[191] Lycett, *Ian Fleming*, p. 145.

[192] Nicholas Shakespeare, *Ian Fleming: The Complete Man* (Vintage: London, 2024), p. 288.

[193] O'Keefe, *One Day in August*, p. 10.

then incorrectly implies that at that time he intended to draw the cadre for his IAU from 10

Platoon, X company who, after Dieppe, would provide the nucleus of 30 Assault Unit.[194]

This is incorrect as the commandos that tried to land at Dieppe - X Troop, 10 (Inter-Allied)

Commando were not formed till July 1942 and did not exist in March 1942. Furthermore,

as foreign nationals, members of 10 Commando were barred from volunteering for the new

IAU from 27 July – three weeks before their assault on Dieppe.[195]

Admiralty file ADM 223/500 holds Fleming's correspondence between Combined

Operations, Naval Intelligence, MI 5, The Royal Marines, the Chiefs of Staff and the JIC.

It includes no documentation regarding JUBILEE, Dieppe or X Troop. A reference is made

on 22 July that Combined Operations would operate an 'experimental' troop of Marines

but even here, there is no specific link to the JUBILEE operation. This 'experimental'

troop could equally refer to the inclusion of the army 34 Troop within 30 Commando. Two

additional files DEFE 2/942 and DEFE 2/955 contain correspondence regarding the

formation of the IAU and make no reference to the commando force assembled to raid

Dieppe. This is in spite of personal correspondence between Mountbatten and Godfrey

preserved from the weeks before and after the raid.[196] On 27 August, Godfrey offered his

congratulations regarding JUBILEE, commiserating that the raiding force made contact

with a German convoy in the channel alerting the enemy to the impending raid.[197] Fleming

was certainly associated with the raid, briefing the commandos before the operation and

observing progress off shore on board the backup command vessel HMS Fernie. He also

---

[194] O'Keefe, *One Day in August*, p. 183.

[195] TNA ADM 223/500, Minutes of 2nd Meeting at C.O.H.Q. to Discuss the Composition of Intelligence Assault Units, 27 July 1942, points 6 and 15, The surviving marines of X Troop would not join Fleming's new Intelligence Assault Unit (IAU) when it was formed in September 1942. It was decided on 27 July, before X Troop had even attacked Dieppe, that all officers and men joining the naval IAU must be of 'British Nationality, and that the personnel of 10 Commando would not be suitable'.

[196] TNA DEFE 2/955, DNI to CCO, P. 370, Godfrey to Mountbatten, 16 August 1942.

[197] TNA DEFE 2/955, DNI to CCO, P. 434, Godfrey to Mountbatten, 27 August 1942.

wrote an account of the raid for the NID Weekly Intelligence Report, though he doesn't specifically mention an IAU or refer to the commandos by their correct unit numbers.[198]

File ADM 223/213, 'History of SIGINT Operations Undertaken by 30 Commando' written after the War, contains a single line noting that the 'party concerned at Dieppe did not reach their objective' before moving onto actual 30 Commando operations. Perhaps this single entry and the presence of Ian Fleming aboard HMS Fernie on the day of the attack has been enough to place 30 Commando as participants on 19 August. Patrick Bishop in his detailed 2021 analysis of operation JUBILEE, notes the presence of Lucian Truscott as a US observer on HMS Fernie yet does not mention the presence of Fleming on the same vessel, his presence as a NID observer or 'his' commando raiding party.[199] The historiography of Fleming's biographers reveals the confusion that surrounds the identity of commandos who landed at Dieppe and the often repeated and incorrect assumption it was 30 Commando or 30 Assault Unit.

2.09 IAU Formation – Commando Assembles and Training Begins

On 16 September 1942, almost one month after his action aboard HMS Locust at Dieppe and six months after the Fleming's original proposal document was issued, Robert Ryder VC was appointed officer in command of the new IAU.[200] Fleming issued a formal letter on 19 September confirming Ryder's appointment as the officer in command.[201] This appointment was the culmination of Godfrey writing numerous personal letters to

---

[198] Lycett, *Ian Fleming*, p. 139.

[199] Bishop, *Operation Jubilee*, p. 209, General Lucian Truscott (1985-1965), created the 1st Ranger Battalion in June 1942, based on the British commandos. In August he was assigned to the Allied Combined Staff under Mountbatten and was the principle US Observer at Dieppe on 19 August 1942.

[200] Richard Hopton, *A Reluctant Hero: The life of Captain Robert Ryder, VC* (Barnsley, Pen & Sword Maritime, 2011), pp. 170-173.

[201] TNA ADM 223/500, Letter from Ian Fleming to DNI – John Godfrey and Colonel C. R. W. Lamplough, 19 September 1942, confirming Commander Ryder VC will be commander of the Intelligence Assault Unit.

Mountbatten throughout August, attempting to persuade him to release Ryder from Combined Operations planning duties to command the new unit. Mountbatten initially refused, stating that Ryder was an invaluable asset in his current role planning operations within Combined Operations.[202] Mountbatten was also mindful that Ryder had been lucky to survive both the raid on St Nazaire and Dieppe. In response, Godfrey assured Mountbatten that Ryder was required for his inspirational leadership and outstanding organisational skills and would not be asked to lead troops in combat again.[203] Mountbatten finally acquiesced, releasing Ryder to supervise the formation of the unit.[204] His appointment would last till 4 March 1943 when he relinquished command in favour of Lieutenant-Commander Quentin Riley.[205] Riley took over command on 24 March 1943.[206] On 1 May 1943, Ryder joined the staff of Force J, the permanent naval assault force of over 15,000 men that would eventually support the Canadian landings on Juno beach in Normandy.[207] The Admiralty created two other assault forces – Force S and Force G who were formed to support British forces landing on Sword and Gold beaches.

Fleming was due to accompany Godfrey to the United States on 22 September, so met with key officers of the IAU on 16 September. Present were Ryder, Cass and Neville of Combined Operations.[208] Ryder stated that he was not happy with Godfrey's established title of Intelligence Assault Unit (IAU). Instead, he introduced the anodyne cover-name

---

[202] TNA DEFE 2/955, Chief of Combined Operations to DNI 70075, Mountbatten to Godfrey, 26 August 1942.

[203] TNA DEFE 2/955, DNI to CCO, P. 434, Godfrey to Mountbatten, 27 August 1942. As head of the unit, Godfrey pointed out that Ryder would be a security risk were he to accompany forces in the field.

[204] TNA DEFE 2/955, Special Engineer Unit – Establishment, Chief of Combined Operations Mountbatten writing to the Admiralty, 4 November 1942.

[205] TNA DEFE 2/955, R E D Ryder, Commander Special Engineering Unit, confirming conversation with Ian Fleming, NID 17, 4 March 1943.

[206] TNA ADM 223/500, No 30 Commando or Special Engineering Unit, RM 180, 26 March 1943.

[207] Hopton, *A Reluctant Hero*, pp. 175-180.

[208] Colonel Robert Arthur Ross Neville, Royal Marines (1896-1987), Assistant director NID 1940 to June 1942, Royal Marines Planning Section, Combined Operations August 1942 to January 1944, Fleet Royal Marine Officer, Mediterranean Fleet January 1944 to October 1945.

Special Engineers Unit (SEU), effective from October 1942. Ryder also wished to rename the different service elements within the SEU 'Detachments' that he could then sub-divide into 'Sections'. This proposal was swiftly squashed by Brigadier Laycock, the commander of the SS Brigade, who insisted on retaining the title 'Troop' rather than 'Detachment' as this mirrored all other units within the SS Brigade.[209]

The SEU's War Establishment (WE) G1098 documentation was urgently required as this would define the different Troops, as well releasing the allocation of weapons, supplies and transport. The WE G1098 for the SEU (Naval Troop) was issued on 6 November 1942, though was promptly withdrawn when it was realised that no transport had been included. The corrected G1098 was issued on 13 November 1942 while the naval Troop was in Algeria. The equivalent G1098 for the SEU (Army Troop) was issued in December. Major Cass believed Ryder's choice of cover-name was poor, suggested it caused confusion, pointing out that if any member of the unit were captured, it would quickly be realised by an interrogator that they were not engineers.[210] Cass was to eventually ensure the WE G1098 for the army section of 30 Commando carried the title 34 Troop, Special Service Brigade. The title '30 Commando' also starts to appear on paperwork as an alternative cover-name from November 1942.[211]

The size of the 34 Troop was restricted by the DMI Major-General Davidson who still maintained that the function of the SEU should be carried out by the FSS but conceded that it had been agreed to form a small unit as an experiment. He was unhappy that a proposal by Mountbatten for four officers and twenty four other ranks exceeded two

---

[209] TNA DEFE 2/955, Correspondence between Ryder and Laycock between 8 October and 12 October 1942.

[210] TNA DEFE 2/955, correspondence between Laycock, Cass & Ryder, 7 October 1942.

[211] War Establishment Army Form G1098 details the precise size, stores and equipment allocation of a unit. The form is prepared by the staff quartermasters attached to the arm of service controlling the unit.

divisions' worth of FSS personnel, insisting that a maximum of twelve soldiers and one or two officers was all he was prepared to sanction.[212] Mountbatten accepted Davidson's restriction, responding that he would start with twelve soldiers and two officers, all of whom were taken from the Special Service Brigade and not the FSS. The original inter-service makeup of the SEU included for 35 Troop (RAF) but was this was never formed. Initially the Air Ministry stated that they were not able to release personnel permanently, but they could provide trained individuals for specific tasks when required. Colonel Neville of Combine Operations believed this arrangement could not work as the RAF were too focused on only RDF (RADAR).[213] In practice, the close working relationship between the SEU and the RAF Regiment in the Mediterranean meant a permanent RAF Troop within the SEU was not necessary.[214]

The volunteers for the SEU, whether army, naval or Royal Marine, had all completed commando training and wore the commando 'Lovat Green' beret. Supplementary intelligence training was organised by Major-General Lamplough RM acting for the DDNI. Initial lectures examining German psychology and organisation were given in late September by Lieutenant-Commander Montagu of NID – the same officer who had read Enigma transcripts describing the German MARES commandos in Greece in 1941. Future historian of NID 17, Lieutenant McLachlan co-chaired these lectures. Allon Bacon of GC&CS lectured on the collection and care of enemy documents. Sabotage was taught by Commander Janson, details of France and the French navy by Commander Scott and

---

[212] TNA DEFE 2/955, War Office letter from Major-General F H N Davidson, DMI to CCO, 20 August 1942.

[213] TNA ADM 223/500, 30 Commando, Special Engineering Unit, Memorandum on Objects and Possibilities Colonel R Neville, Royal Marines Planning Section, Combined Operations, 4 November 1942, SR.71/42, p. 4, point 12, Future Expansion, (ii).

[214] The RAF Regiment was formed by Royal Warrant on 1 February 1942. At the time John Godfrey proposed that the IAU be an inter-service formation in June 1942, the RAF Regiment was still being assembled. By the time the IAU was assembled under Combined Operations in September 1942, the RAF Regiment was established, and it was no longer necessary to create an RAF Troop within the IAU.

Lieutenant-Commander Shawcross provided Topographical intelligence. Intensive training courses were then set up in early October, with all ranks attending multiple lectures in London and on the coast, with instruction from SOE and SIS. Subjects included: safe-cracking; defences; Germany – morale and propaganda; escaping; the war at sea; photography and document handling. These latter lectures were presented by Lieutenant-Commander Geoffrey Tandy of the BP Elucidation Department discussed earlier.[215]

The commandos also received instruction on where to locate code books and crib sheets in enemy Signal facilities – under door mats, behind pictures, under desk drawers - and received special instruction as to how to handle, inspect and transport charred intelligence which had been partially destroyed by the enemy. Language skills were essential with officers preferably multilingual graduates, while all commandos receiving daily schooling in German and Italian. Officers were also selected from the RN Volunteer Reserve as it was hoped their actions would be less constricted by naval indoctrination compared to career naval officers. The SEU assembled at Coldmoreham Farm, isolated on the edge of the village of Amersham in Buckinghamshire.[216] The site was carefully chosen as Amersham provided arable land on which the unit could hone their weapon and explosives training – often carried out in full view of the local population.[217] Importantly, Coldmoreham and Amersham were only one hour north west of Baker Street in London, linked by the Metropolitan train line. This afforded easy access to north-west London and

---

[215] TNA ADM 223/500, Training of Special Engineering Unit, schedule of lectures to be held from 5 October 1942, memo C. R. W. Lamplough, ref NID 2423, 24 September 1944.

[216] Coldmoreham Farm, comprising the main house and several out-buildings, have since been converted into prestige private dwellings and remain to this day.

[217] Amersham Museum, *Interview with Gerry Dyche 2*, 14 May 2018, audio recording and transcript forwarded by the museum staff [accessed 20 May 2019]. Gerry Dyche, a local teenager remembered watching 30 Commando members displaying how to enter… 'a first-floor window – without using a ladder, one of the commandos would crouch down on the ground, the next one would climb on his back, and they'd continue that until they were high enough to get into an upstairs window. For a young lad like me it was exciting to see this'.

the training lectures organised by Lamplough. Amersham was also only four miles from the family home of Major Cass in the neighbouring village of Chalfont St Giles.

Elements of the training provided for 30 Commando was specific to the capture of cryptographic items, with instruction detailing how to identify and recover the most secret documents. This had the effect of raising the unit's security rating above that of the army's Intelligence Corps and FSS personnel. By comparison, the instruction provided for FSS was broader, with an eight week basic training course comprising organisation and administration, map reading, motor cycling, field craft, night patrols, first aid, drill and physical training, weapons and unarmed combat. Thereafter, recruits received specialist intelligence or signals training, with officers being provided with additional instruction in unit administration and language skills. Further training encompassed interrogation techniques with just under seven hundred and fifty officers trained in German interrogation and thirty-eight in Italian interrogation. Five hundred and fifty all ranks completed the signals training with around nine hundred officers and five thousand three hundred and fifty soldiers completing the field security training.[218] The roles of the FSS and the SEU although superficially similar, were diverging with their training defining the way the men would be deployed.

The first cohort of 30 Commando having completed their training, left Amersham to participate in operation TORCH, the Allied landings in North Africa on 8 November 1942. Fearing capture by the enemy, GC&CS instructed that no orders regarding the capture of cryptographic items were to be written down, with instructions to be memorised by the officer in charge.[219] No reference to cryptographic targets could be made in radio

---

[218] Clayton, *Forearmed*, pp. 283-286, Appendix E, Training of Intelligence Corps Personnel 1940-45.

[219] TNA ADM 223/213, History of SIGINT Operations Undertaken by 30 Commando / 30AU, point 3.

messages or, in case Allied communications were being intercepted and decrypting by the Germans.[220] Unbeknown to the Allies, British navy cyphers were being regularly read by the German B-Dienst, thus the GC&CS embargo on written communications referencing Enigma turned out to be a wise precaution.

As early as 1940, the German equivalent to GC&CS - the *Beobachtungsdienst* [Observation Service] or *B-Dienst*, had succeeded in decrypting the Royal Navy cypher and reading between a third and half of all messages. The British introduced Navy Cypher No. 3 on 20 January 1941 hoping to make communications secure yet, by 1942, the B-Dienst was still reconstructing most of the British Admiralty's messages. In April 1942, the Germans penetrated British and Allied Merchant Ships Code (BAMS), assisted by codebooks captured by the German raider *Atlantis*.[221] By December, the five thousand B-Dienst staff were successfully reading over eighty percent of Cypher No 3, with Vizeadmiral Dönitz, head of the German U-boat fleet, stating that during 1942, fifty percent of his intelligence regarding north Atlantic convoys was derived from B-Dienst intercepts. The British Admiralty were only alerted to the fact that Cypher No. 3 had been compromised by B-Dienst in December 1942, paradoxically from comments in decrypted Enigma messages. In June 1943, the new Naval Cypher Code No. 5 replaced all previous cryptosystems, finally making convoy communications secure. Adoption of the same cypher made warship communication equally safe from the start of 1944.

---

[220] Hinsley, *British Intelligence in the Second World War*, I, p. 346.

[221] Christian Jennings, *The Third Reich is Listening: Inside German Code Breaking 1939-45* (Oxford: Osprey, 2018) p. 173, the German raider ship Atlantis captured then boarded the passenger liner *City of Baghdad* in July 1941 where the BAMS code book was recovered. Previously on the 11 November 1940, *Atlantis* captured the British Merchantman *SS Automedon*. On this occasion, the German boarding party found hidden mail bags containing Royal Navy cypher tables, merchant navy decoding tables, government papers, maps and other official documents relating to the defence of the far east, all marked 'Classified: destroy in an emergency'. All were shown to the Japanese before they were shipped to Berlin. For further reading, please refer to <https://www.awm.gov.au/articles/blog/ss-automedon> [accessed 15 January 2025].

An internal Kriegsmarine review undertaken in November 1941 by Captain Ludwig Stummel, chief of staff of Naval Communications Service concluded that Enigma was invulnerable and secure, and that security within the German navy was good. The key findings of this review gave credit to British Intelligence who they acknowledged were extremely efficient at utilising its network of U-boat observers, intercepting 'en-clair' radio traffic, using D/F technology and finally enjoying good luck. Although Dönitz accepted that the British must have recovered examples of German naval Enigma machines by 1942, he still held an unwavering faith in the security of Enigma and a certainty that encrypted transmissions could not be decoded by Germany's adversaries. Explicating the British navy's excellent knowledge of the movements of his U-boats, Dönitz declared 'that a widespread spy network was at work in our bases in occupied France' continuing that 'efficient enemy intelligence […] able to ascertain the distribution of U-boats among various bases, the dates of their sailing and return to port, and possibly also the sea areas allotted to boats proceeding on operations'. During 1942, the German reading of Cypher No. 3 and an increase in shipping targets with the entry of the America into the War, enabled the U-boat fleet stationed off the coast of the US to achieve great success attacking Allied shipping, a period that was to last into early 1943. These two factors diverted attention from the possibility that the introduction of M4 Enigma in February might have prevented the British from penetrating the German codes which by implication, could have alerted the Germans to the possibility that M3 had been compromised.

When Enigma decrypts indicated that an Allied convoy should change course to avoid waiting U-boats, plausible cover stories were always provided by NID or the OIC. These were issued to convoy escort vessels, perhaps suggesting that a U-boat had been spotted, while always emphasising the veracity and reliability of the intelligence. Allied flag officers were warned to expect coded messages advising of U-boat activity prefixed

HYDRO which guaranteed the authenticity of the information. The equivalent codeword for army and air force decrypts was BONIFACE. The secrecy imposed by GC&CS and their total ban of written references to Enigma, ensured that the Germans were never aware of the success of the teams at GC&CS. The plausibility of the NID cover stories issued to their own navy, provided the eavesdropping Germans with an infallible narrative. The cover stories recognised the efficiency of British Naval Intelligence and were corroborated by the B-Dienst codebreakers, who trusted the contents of the intercepted British naval transmissions. All changed in 1943 with the Admiralty's introduction of Cypher No 5 which the German code breakers failed to penetrate. When B-Dienst members were captured at Flensburg in June 1945, interrogation by British Naval Intelligence revealed that in the last year of the War, B-Dienst had shrunk to fewer than fifty code breakers.

For the historian researching this period, the debarring of all written references to cryptographic targets, operations or successes noted in after action reports makes building a definitive picture challenging. Often references to such operations are veiled in euphemistic language with the following regularly quoted memorandum a good example of such prose. It was written just before the TORCH landings on 4 November 1942 by Colonel Robert Neville, RM and Combined Operations and refers to 30 Commando who…

> will operate in small groups which will move with the assault troops to fight for and capture enemy material and documents of special importance.[222]

Referring to targets, Neville does state the 'importance of seizing the enemy's codes and cyphers', citing this as 'one of the reasons why the formation of this unit has been so strongly pressed for by the Admiralty'. Capturing 'documents of special importance' emphasises that the IAU was to emulate the role of Allon Bacon boarding the Lauenburg

---

[222] TNA ADM 223/500, 30 Commando, Special Engineering Unit, Memorandum on Objects and Possibilities Colonel R Neville, Royal Marines Planning Section, Combined Operations, 4 November 1942, SR.71/42, p. 1, point 2, Object.

in June 1941, to identify useful manuals and other documents. The unit's training was tailored to suit this role. Referring to their forthcoming operation in Algiers, Neville notes that the team comprising Lieutenant Curtis, one NCO and six Royal Marine other ranks have been despatched to partake in TORCH with one specific target.[223] No other detail of the target are provided, although it is likely this was cryptographic. The Bletchley Park Trust were contacted to establish if they were aware of more detailed target information to have survived in any archive. Dr David Kenyon, Research Historian with the Trust advised that to their knowledge, no lists of targets or successful captures exist.

An undated Admiralty document comprising a mere three pages, offers a brief history of SIGINT Operations conducted by 30 Commando. Clearly written after the War, the document confirms the SEU remit in north-west Africa, Sicily, Italy and 30AU in Normandy. The document states unequivocally that the main objective of 30 Commando 'from its inception was the capture of current German and Italian cypher material', 'specimens of the wheels used on the Enigma cyphering machine' daily settings for wheels and plugs and documents and code books.[224] The document continues that a meeting was set up for NCOs and senior officers 'under Commander Bacon', to appraise 30 Commando of BP's requirements in advance of landing in North Africa. Briefings were jointly provided by Bacon and Tandy.[225] GC&CS requirements included different Enigma wheels, numbered code books and the latest *Tagesschlüssel.* The document's unnamed author emphasises the BP directive regarding no notes detailing operational objectives with all targets memorised. With 30 Commando officers excluded from the briefing, it is likely that

---

[223] TNA ADM 223/500, 30 Commando, Special Engineering Unit, Memorandum on Objects and Possibilities Colonel R Neville, Royal Marines Planning Section, Combined Operations, 4 November 1942, SR.71/42, p, 3, point 11, Present Activities.

[224] TNA ADM 223/213, History of SIGINT Operations Undertaken by 30 Commando / 30AU.

[225] TNA HW 50/15, Naval Sections Share in the Organisation for capturing Documents, New Phase of Pinching as Result of the Invasion of North Africa, p. 19.

it was a NID representative who met with Commander Bacon – probably Fleming as he was the designated NID representative with BP. Uniquely it also mentions an additional role of counter espionage, where 30 Commando was tasked with looking for evidence of German 'book-breaking', 'Y work' or 'any up- to-date intelligence accorded by the Germans and Italians relating to Allied signals for intercept purposes'. In other words, to look out for evidence that the Germans were intercepting and breaking Allied codes. The document notes that similar briefings were provided by GC&CS before the landings on Sicily and Salerno confirming specific cryptographic items that were required from each of landings.

To provide an operational link between the SEU (30 Commando) and Naval Section GC&CS, Commander Allon Bacon was embedded with the staff of General Eisenhower's General Headquarters, established at Gibraltar on 5 November 1942. Bacon's position was 'direct liaison for 'Y', W/T and SI', with the title of 'Senior Officer Y' or SO Y. He would meet and liaise with Curtis prior to the TORCH landings to provide a final target details. Lieutenant Curtis and six ordinary ranks left Amersham on 23 October 1942 to join in the assault of the North African coast. Curtis and the SEU arrived at Gibraltar to meet with Bacon on 5 November, before reembarking for Algeria. Having left Gibraltar on HMS Malcolm, the target was revealed.[226] At the request of the DNI, Curtis had one specific target in Algeria – a pinch of cryptographic items and documents in or around Algiers.[227]

---

[226] TNA DEFE 2/942, Report from Lieutenant-Curtis to Commander Ryder, 7 December 1942, p. 1.

[227] TNA DEFE 2/955, Special Engineering Unit, Memorandum on Objects and Possibilities, p. 3, Point 11, 4 November 1942.

2.10   Operation TORCH – 30 Commando Deployed in Algiers

The Allied landings on Vichy French Morocco and Algeria commenced on 8 November

1942, with three attacking forces comprising British, Free French and US Troops. Eleven

FSS landed to take up local security duties and work to locate pro-Axis locals and stay-

behind Italian espionage parties. The FSS presence soon expanded to sixteen.[228] 30

Commando were part of 'Eastern Task Force', targeting the French naval headquarters in

Algiers. It was hoped that cryptographic equipment could be seized, however the target

was abandoned after the sudden French capitulation, Lieutenant Curtis had already been

briefed by Fleming and again by Bacon with an alternative target further along the coast.

Some authors cite the failure to secure the French Naval HQ as an example of 30

Commando's poor performance.[229] Tom Bower writes 'Curtis was irritated and anxious to

prove his importance, drove eastwards with a huge white ensign flapping, following

Rommel through the desert, towards Bone [modern Annaba]'.[230]

Curtis in fact, on hearing that his primary target was now off limits, travelled west

landing at Sidi Ferruch (modern Sidi Fredj) and switched his attention to a building used

by the Italian and German Armistice Commission (Deutsche

Waffenstillstandskommission, DWStK) less than a mile away. The DWStK used a special

type of Enigma machine to encipher messages between a handful of Vichy Armistice sites

in French North Africa, three sites on the Vichy French mainland and the Armistice HQ in

Germany.[231] Enigma machine No G 292 was quite a prize. Curtis and his team arrived at

---

[228] Clayton, *Forearmed*, p. 158.

[229] According to the after action report submitted by Curtis, as soon as it was known that the French forces protecting Algiers were going to defend the city, it was realised that the six hundred US troops allotted to take the city were too few and the target was abandoned. Refer TNA DEFE 2/942, Report from Lieutenant Curtis to Commander Ryder, 7 December 1942 for a full explanation.

[230] Bower, *The Paperclip Conspiracy*, p. 76 and quoted by Hall, British Exploitation of German Science and Technology, 1943-1949, p. 15.

[231] David Kenyon and Frode Weierud, Enigma G: The Counter Enigma, (Bletchley, Bletchley Park Trust and Crypto Cellar Research, 2019), p. 28. David Kenyon is the Research Historian at the Bletchley Park Trust. ,

the building two hours before the FSS and carried out a thorough search. The official 30 Commando record suggest that Curtis failed to find anything of note 'no documents of any importance were discovered, though the wireless telegraphy (W/T) transmitter was taken intact'.[232] It is likely that this was an *Abwehr* KK Enigma machine in fully working order - desperately needed at BP. GC&CS records state it was captured in the Armistice Commission building - however, Curtis was acting under BP instructions ensuring his after-battle report is obtuse.[233] GC&CS secrecy meant that Curtis was unable to trumpet his success, appearing to have failed in his mission. Communications in Algiers were lacking, when SO Y Bacon issued a signal informing Lieutenant Curtis that a much needed Enigma 'GAMMA' wheel was reported to be at El Hammamet, ten miles east along the coast from Sidi Ferruch. BP note that the signal never found Curtis and subsequently the wheel didn't reach BP until some months later. BP state that 'had this wheel been taken in the first instance, the effect on the conduct of operations in the Atlantic would have been most marked'.[234]

On 12 November, four days after the first landings in Algeria, Curtis travelled back to Sidi Ferruch to question several Germans, captured trying to escape the Armistice Commission with '"papers" found on them'. These were impounded by a US Colonel Dixon, who released the items to Curtis. While in Dixon's office, Curtis 'discovered two T………D… [*sic*] lying with a lot of luggage'. Whatever these un-specified items were, their discovery merited chartering an aircraft the following day to rush them to Bacon in

---

<https://www.cryptomuseum.com/crypto/enigma/g/files/CounterEnigma_V2_20190505.pdf > [accessed 6 June 2024].

[232] TNA ADM 223/214, Chapter II, early operations, The Invasion of North Africa (Operation TORCH), points 11 – 22. W/T refers to wireless telegraphy.

[233] Batey, *Dilly*, p. 155. The 'rewired' Enigma machine was liberated from the offices of the German Armistice Commission and enabled six weeks of back traffic to be read immediately.

[234] TNA ADM 223/213, History of SIGINT Operations Undertaken by 30 Commando / 30AU, point 4, footnote.

Gibraltar. They were subsequently described by Curtis as 'drums' - Enigma wheels perhaps? Before Curtis could board his plane, British FSS Major Trevor-Wilson intercepted the items along with captured paperwork and forwarded them to HQ Gibraltar himself.[235] The fact that Curtis had captured the items from the fleeing Germans was acknowledged by GC&CS when the papers eventually reached Bletchley Park.[236] Trevor-Wilson later became friends with Curtis, with the two working closely searching intelligence targets in Tunisia. Curtis left Algiers on the 15 November on HMS Fleetwood, disembarking at Gibraltar on 20 November to pass the Enigma Machine to Bacon. Curtis then returned to Algiers to oversee the despatch of other material captured in the Armistice Commission that might prove useful to BP's Geoffrey Tandy, before flying again to Gibraltar with other important finds, then returning to the UK on 6 December.[237] It can be argued that 30 Commando had fulfilled its GC&CS brief well, even accepting that the primary target of the French Naval HQ in Algiers had been rendered off limits. Curtis submitted an incredibly detailed after action report that provided an hour by hour account of each day, confirming the unit had only one target in Algeria – to capture cryptographic items and technical documents.

---

[235] TNA DEFE 2/942, Lieutenant D M C Curtis to Commander R E D Ryder, Report covering Section 33, now known as 30 Commando – in connection with Operation Torch, 7 December 1942, p. 3.

[236] The KK *Abwehr* Enigma Machine G 292, seized by Curtis at the Armistice building in Algiers, was the only example of the type to be captured fully functioning. Peter Twinn of GC&CS wrote to William F Friedman, the US army's chief cryptologist in September 1943, to say they could not have 'their' KK Enigma machine back. Friedman stated that as they had captured the machine in Algeria, they now wanted it returned to the US. Twinn refused, stating that the KK was regularly used to decrypt the signature text at the end of long messages, as its unique design allowed it to be manually cranked forwards and backwards producing the correct turnover sequence. There is no doubt that Dunstan Curtis delivered the KK Machine to Allon Bacon at Gibraltar, but it would appear from Twinn's correspondence with Friedman, that Curtis may have been frugal with the truth regarding how he first acquired the Enigma machine For further reading, please refer to Kenyon and Weierud, Enigma G, p. 29.
<https://www.cryptomuseum.com/crypto/enigma/g/files/CounterEnigma_V2_20190505.pdf > [accessed 6 June 2023].

[237] TNA DEFE 2/942, Lieutenant D M C Curtis to Commander R E D Ryder, Report covering Section 33, now known as 30 Commando – in connection with Operation Torch, 7 December 1942, p. 4.

Reviewing 30 Commando's involvement in the TORCH landings, Lieutenant Curtis was praised for the speed of his actions and was subsequently mentioned in despatches.[238] In recognition of the operation's success and the performance of 30 Commando, Curtis received a Bar to his Distinguished Service Cross (DSC).[239] His original DSC was awarded in recognition of his involvement in Operation CHARIOT - the St Nazaire raid in March. These accolades appear to underline the success of the operation in the eyes of his superiors, contrasting with the negative view by the writers such as Bower. Curtis munificently attributed his team's success to the excellent briefing by Fleming before the raid.[240] Regarding the secondary target, Curtis knew precisely what to look for at the Armistice Commission, 'astonished at how much Fleming knew about Algiers' and the accuracy of his intelligence briefing for both targets.[241] Fleming's knowledge of targets on the Algerian coast was enhanced by the ISTD based in Oxford University. They provided detailed topographical intelligence for not only 30 Commando targets, but the entire TORCH landings, garnering praise for their contribution from the overall commander of AFHQ, Lieutenant-General Eisenhower and the First Sea Lord, Dudley Pound.[242] Admiral Sir Andrew Cunningham, Naval Commander during the TORCH landings, stated that ISTD provided a 'flying start to the North African operation'

---

[238] TNA DEFE 2/1107, 20 November 1943, letter from Lieutenant-Commander Quintin Riley, Commander No 30 Commando, Bari, Italy, to the C-in-C Mediterranean to Chief of Combined Operations. Riley recommended that Lieutenant-Commander Curtis, in addition to his mention in despatches for the success of the Algiers landings in November the previous year, should also be decorated for this action.

[239] TNA DEFE 2/1107, 14 February 1944, official 'Recommendation for Decoration or Mention in Despatches' Lieutenant-Commander Dunstan Michael Carr Curtis, RNVR to be decorated amongst other actions, for his leading of a landing party at Algiers and capturing the German and Italian Armistice Commission and associated equipment, papers and codes. By his courage and resourcefulness and continual devotion to duty he achieved continual success and fulfilment of his mission. Reporting officer – Lieutenant-Commander Quintin Riley, Commanding 30 commando.

[240] TNA ADM 223/214, Chapter I, Early History of the Unit, Point 12, Lieutenant, later Lieutenant-Commander Curtis, Oxford Graduate in Law, fluent in German and French.

[241] Rankin, *Ian Fleming's Commandos*, p. 153.

[242] Major-General (in 1942) David Dwight Eisenhower (1890-1969), commander of AFHQ until he left for the UK on 14 January 1944 to take command of preparations for the invasion of France. AFHQ had been created on 14 August 1942 before the TORCH landings on North Africa and remained active until it was abolished on 16 September 1947.

allowing it to be 'executed with speed and accuracy'.[243] The ISTD, their history and their contribution to both intelligence target capture and ultimately, target identification and location will be examined in detail in chapter four.

Lieutenant Curtis and 30 Commando had fulfilled their brief from NID by securing the KK *Abwehr* Enigma machine and code books, with swift transfer to BP via SO Y Bacon in Gibraltar. The German authorities, unaware of the machine's capture, did not revise their encryption, trusting that the staff had ample time to destroy signals equipment. This pinch enabled BP to decrypt *Abwehr* SIGINT for the first time and continue for the remainder of the War.[244] Curtis reviewed the performance of 30 Commando during the TORCH operations and observed that the intense secrecy surrounding the unit's role had hindered the free movement of the unit. By contrast, the independent nature of 30 Commando had enabled Curtis to swiftly switch targets, proving the efficacy of the new naval Troop. Eight months had passed since Fleming had issued his proposal document at the behest of Godfrey and now the naval Troop had seen action. The Army troop proposed by Cass had been formed, yet they languished in Amersham. They awaited their formal War Establishment and with it, the allocation of weapons and transport with which to complete their training. They would reach the Mediterranean in May the following year.

On his return to the UK, Curtis approached the new DNI Rushbrooke for support who responded by writing to Admiral Cunningham on 11 December 1942 regarding 30 Commando. [245] Confirming to the Admiral that 'valuable material was obtained' he continued…

---

[243] Helen Fry, *Women in Intelligence: The Hidden History of Two World Wars* (London: Yale University Press, 2023), p. 110. Also see CHU GBR/0014/GDFY 1/7, p. 377.

[244] Batey, *From Bletchley With Love*, p. 11. By the end of the War, 140,000 *Abwehr* messages had been decrypted and read.

[245] CHU GBR/0014/GDFY 1/8, Flag Officer Commanding Royal Indian Navy, p. 3. Godfrey received a communication from the First Sea Lord, Sir Dudley Pound in October 1942, advising that he had been promoted to Flag Officer Commanding Royal Indian Navy (FOCRIN) with the prospect of leaving for India in January. The position of DNI with its seat on the JIC was handed to Captain (later Commodore and Rear-

The duty of these units is to accompany the second or third wave of assault on a port or naval establishment and obtain possession of documents and cyphers before they can be destroyed by the defenders. […] Since their work is not likely to be fully understood by the military authorities, I would be very grateful if your staff could assist them in any way possible […] This would ensure that when they capture material it is not seized upon by the military and perhaps sent all the way back to Washington, where, I fear, its value might not be recognised. I hope you forgive me bothering you with these suggestions, but I felt you might have been wondering what Curtis and his party were really up to and whether they were producing results of value.[246]

For the historian trying to build a picture from surviving archive material, the euphemistic language and lack of comment regarding the capture of cryptographic items, makes building a clear picture of 30 Commando's true role near impossible. This is despite known captures such as the *Abwehr* Enigma machine which are not recorded in 30 Command's achievements. A twenty page register of items captured by 30 Commando between November 1942 and February 1945 notes that all SIGINT and associated documents are excluded. Navigational charts and enemy equipment handbooks are noted as the only captures in North Africa.[247] Dr David Kenyon, Research Historian at Bletchley Park Trust has confirmed that he is not aware of a list of 30 Commando's cryptographic captures either at TNA or the BP archives. Additionally, memoirs of veterans who participated in raids often provide little additional clarity, as ordinary ranks often had little knowledge of their precise target, being totally reliant on their section leader, making their memoirs a questionable primary source for certain details.[248]

Admiral) Rushbrooke on 28 November. Rear-Admiral Edmund Gerard Noel Rushbrooke, 1892 - 1972, DNI 1942-1946.

[246] TNA ADM 223/500, Letter from DNI Rushbrooke to Admiral Cunningham, P.885, 11 December 1942. Admiral Sir Andrew Cunningham, 1883-1963, C-in-C, Mediterranean Fleet, later First Sea Lord 1943-1946.

[247] TNA ADM 223/501, The Future Employment of No 30 Advanced Unit, XF No 113/0/1056, 16 February 1945, Appendix B, Condensed statement of Material and Documents Captured by 30 Assault Unit (Late 30 Commando and Special Engineering Unit) During the Campaigns in North Africa, Sicily, Italy and Western Europe, p. 1, point 1.

[248] Whittel, *The Greatest Raid*, p. 5 & 62. Referring to the commando participants of the raid on St Nazaire in March 1942, Whittel notes that advanced briefings were on a need-to-know basis, with members of the raiding party only finding out where they were after capture by German forces. A few officers knew the target, the ordinary ranks did not. It is probable that 30 Commando would be no different, as ordinary ranks would have no knowledge of cryptographic targets, BP or GC&CS.

Nine months after the German Kriegsmarine introduced the M4 encryption for their U-boat communications, GC&CS were still unable to decrypt any of the German signals and feared the inevitable transition of other commands to the M4 protocol.[249] The breakthrough, when it came, did not involve Curtis or 30 Commando, but an attack on a U-boat in the eastern Mediterranean. On 30 October, U-559, a Type VIIC U-boat was spotted north of Alexandria and damaged by British aircraft and a British Destroyer.[250] The crew abandoned ship and opened the scuttling valves to sink the submarine – ineffectually as the U-boat flooded at a sedate rate. This error afforded three crew members from HMS Petard, time to board the gently sinking submarine. The boarding party managed to recover weather and code books (*Wetterkurzschlüssel*, the short weather cypher and *Kurzsignale* or short signal book) before the U-boat sank – trapping two of the British seamen.[251] The recovered books reached Bletchley Park on 24 November, and slowly their true value was revealed. The *Wetterkurzschlüssel* was designed to suit the M4 machine, enabling a working crib to be developed. Through this innocuous breakthrough, First Sea Lord Dudley Pound was able to advise on 13 December that the M4 SHARK cyphers were now being decrypted.[252] Once the methodology had been established, GC&CS were swift to adapt. By 26 December using the captured *Wetterkurzschlüssel* cribs, SHARK messages

---

[249] For a list of dates when four wheel M4 Enigma was phased into service in other naval commands, please refer to Appendix V.

[250] The Type VIIC U-boat was the most numerous version of the Type VII family of submarines, with five hundred and sixty-eight commissioned by the German navy between 1940 and 1945. U-559 was launched in January 1941 and conducted ten patrols between February 1941 and its sinking on 30 October 1942 after being spotted by an aircraft from RAF 47 squadron. According to uboat.net, a comprehensive database of all commissioned U-boats, there is a suggestion that the enigma machine was retrieved from U-559, while other sources suggest only the code books were recovered by the crew of HMS Petard, <https://uboat.net/boats/u559.htm> [accessed 10 November 2023].

[251] Sebag-Montefiore, *Enigma*, pp. 256-264, First-Lieutenant Fasson, Able Seaman Grazier and Lacroix entered U-559 via the conning tower, while the water slowly rose inside the vessel. They first smashed, then on finding keys, unlocked cupboards in the commander's cabin, all by torchlight. Finding codebooks, Fasson returned to the conning tower passing his haul to the waiting canteen assistant Tommy Brown. Fasson and Grazier went back into the submarine to try and find more books and what Brown described afterwards as 'boxes with wires' – possibly the boat's Enigma machine - yet failed to reappear before the U-boat slipped under with the two British seamen trapped inside. Fasson and Grazier both drowned.

[252] TNA HW 50/70, Enigma Breaks and Traffic Statistics, Turning Points in the Enigma History, 24 November 1942 and 13 December 1942.

were being read 'currently' for the first time.[253] The documents revealed that the fourth wheel was not used with all transmissions and had to be set in a neutral position on short signal weather reports, rendering the new machine effectively a hybrid of the M3. Once realised, this enable new Bombes to be created and M4 Enigma SIGINT to be decrypted for the remainder of the War.[254] The code books recovered from U-559 unlocked the SHARK code six months before a physical M4 machine was captured and sent to BP in April 1943.[255]

Throughout this chapter, it has been argued that the changes to Enigma encryption protocol in February 1942, greatly increased the need to undertake cryptographic pinches. This motivated Naval Intelligence to propose a permanent intelligence assault unit that would specialise in capturing predetermined intelligence items. 30 Commando's close collaboration with GC&CS is evidenced by the training given to the unit by GC&CS and field target briefings provided by SO Y Bacon in Gibraltar. The Commando was described as operating with considerable success in North Africa, reflected in Curtis being mentioned in despatches and later receiving a Bar to his Distinguished Service Cross. And yet, there is little record of any items recovered from that theatre – a blank canvas that authors such as Bower conclude as a reflection of the failure of Curtis and 30 Commandos. A document listing the unit's achievements, prepared by NID for the Secretary of the Admiralty in February 1945, provides twenty pages that detail successful intelligence captures in Sicily, Italy and France.

---

[253] TNA HW 50/70, SHARK decrypts.

[254] Hinsley, *British Intelligence in the Second World War*, II, p. 750.

[255] TNA HW 50/65, Hut 8 timeline notes, probably written by Frank Birch, noting the arrival of the first captured M4 Enigma machine in April. According to HW 50/71, an inventory of captured machines held at Bletchley Park reveals only three 'Naval 4 wheel' machines held at BP on 3 October 1944.

By contrast, captures recorded from the TORCH landings in November 1942 to the fall of Tunisia in May 1943 include some annotated charts of 'immediate operational value' and enemy equipment handbook. A note advised the reader that 'SIGINT Material and Documents' are excluded.[256] No supplementary list of these captures is known to exist in TNA or Bletchley Park archives. In a three page Admiralty document that offers a brief history of 30 Commando's SIGINT operations written after the War, the writer notes that North Africa yielded 'a new machine relating to high grade ABWEHR link that had hitherto remained unbroken' and a notebook containing particulars of a high grade Italian code.[257] With GC&CS insisting that no details of ENIGMA should be recorded, little survives to quantify 30 Commando's 'considerable success'. With the paucity of recorded cryptographic captures, it is pertinent that GC&CS state in their own history of captured documents written in the summer of 1945, that 'the most important factor arising out of the Torch operations, was the setting up of the organisation known as the 30AU'.[258]

---

[256] TNA ADM 233-501, The Future Employment of No 30 Advanced Unit, XF No 113/0/1056, 16 February 1945, Appendix B, Condensed statement of Material and Documents Captured by 30 Assault Unit (Late 30 Commando and Special Engineering Unit) During the Campaigns in North Africa, Sicily, Italy and Western Europe, p. 1, point 1.

[257] TNA ADM 223/213, History of SIGINT Operations undertaken by 30 Commando / 30 AU.

[258] TNA HW 50/15, Naval Sections Share in the Organisation for capturing Documents, New Phase of Pinching as Result of the Invasion of North Africa, p. 19.

Chapter III

Tunisia, Sicily and Italy

30 Commando, S Forces, IOSS and Target List Creation,

1943 to 1945

> …it is essential that the nucleus of officers and men of an "S" Force should be kept permanently together so that planning is continuous, even during an operation, when the planning team notes faults and inadequacies which can be remedied – or recommendations for improvements to be made – during the subsequent pause for planning the next operation

Lieutenant-Colonel Young Jr, Commander HQ, S Force 1944.[1]

The Special Intelligence Force - S Force – operating in different forms in the Mediterranean from spring 1943 to the end of the Second World War, is rarely mentioned in secondary literature and no detailed analysis has been created to date. When S Force is mentioned, it is often dismissed as an ad-hoc formation, created for the capture of a single target and swiftly disbanded when that target was secured, providing no continuity of purpose.[2] It will be argued in this chapter that although the leadership of the S Forces deployed in Tunisia and later in Italy may have changed, many of the participating formations served continuously, participating in multiple S Force actions. S Force would prove to be a well organised asset whose make-up was perfected during the advance through Italy. Units such as 30 Commando and experienced Squadrons of the RAF Regiment were retained in theatre, viewed as essential components of immediate and future intelligence S Force operations. It will be argued that not only were the same units deployed each time, but continuity of staff and expertise was an essential feature of the S Force. The extended delay in liberating Rome allowed AFHQ G2 staff to undertake a

---

[1] TNA WO 204/907, Summary Report, S Force Operations, p. 5, section 7, Personnel, paragraph 2 Lieutenant-Colonel Thomas Young Jr, Commanding Officer HQ, No 1 ICU, 28 December 1944.

[2] Longden, *T-Force*, pp. 5-40 (p. 9).

detailed analysis of intelligence target compilation and S Force procedure that should have defined similar operations in Western Europe from the Normandy landings.

The inter-service intelligence assault unit - 30 Commando – who had established their reputation in Algeria, continued to operate in Tunisia, Sicily and Italy, becoming an integral component of the S Force that entered Rome. Much is written in secondary sources of 30 Commando's operations in Normandy, while the Special Engineering Unit (SEU) – the army Troop of 30 Commando who remained in Italy at the behest of the highest ranked British intelligence officers, is only mentioned in the briefest terms. It will be shown that the SEU became a permanent part of S Forces throughout 1944 and a key member of the Intelligence Collection Unit (ICU) formed after the liberation of Rome in June 1944. G2 Intelligence staff within the headquarters in Tunisia compiled detailed lists of intelligence targets, both physical and human, anticipated in Tunis and Bizerte to be secured by S Force. The same G2 staff honed their skills with Roman targets, being renamed after the city's liberation the IOSS and continuing target analysis for the capture of Florence and other north Italian cities. IOSS would eventually coordinate their operations with CIOS in London as targets were sought in post-war Austria.

3.01   S Force in Tunisia – The Capture of Tunis & Bizerte

30 Commando returned to Tunisia in April 1943 to be deployed in the liberation of Tunis & Bizerte.[3] It was anticipated that many items of intelligence interest would fall into Allied hands when the Axis forces surrendered the last two cities in North Africa. In preparation,

---

[3] 30 Commando comprised sixteen ordinary ranks and three officers, commanded by Lieutenant-Commander Curtis 24 April 1943.

Major-General McCreery,[4] Chief of General Staff of the Eighteenth Army Group ordered

the formation of a 'Security Intelligence Force' or 'S Force' under the command of the

British Lieutenant-Colonel Strangeways.[5] This Force was created with the purpose of

'giving assistance to various organisations interested in the towns of Tunis and Bizerte,'

and ordered to proceed to either town , 'which ever may fall first, at the earliest possible

moment after capture of those towns'.

The Strangeways S Force comprised around two hundred personnel under the

command of British First Army from midnight on 24 April. Troops were ordered to

assemble at 1200 hours on 25 April in readiness for the advance on Tunis. Detailed on the

Movement Order issued the day before, the 'Royal Navy Party' - 30 Commando - would

occupy the pole position, with the bulk of the S force provided by the one hundred and

forty officers and men of 2788 Squadron RAF Regiment immediately behind.[6]

Confusingly, three squadrons of the RAF Regiment are shown on the distribution list for

forthcoming operation, but only 2788 included in the S Force movement orders. It

transpired that two squadrons – 2721 and 2744, were already posted to the front line

outside Tunis, with only 2788 officially allocated to S Force.[7] These two additional

---

[4] Major-General Sir Richard "Dick" McCreery (1898-1967), Veteran of the First World War, the 1940 Battle of France, advisor on Armoured Fighting Vehicles to Lieutenant-General Montgomery and assisted in the planning of the battle of El Alamein. Appointed Chief of General Staff, Middle East command then appointed Chief of Staff Eighteenth Army Group for the Battle of Tunisia. He was knighted in the field by George VI in July 1944.

[5] TNA WO 204/6992, Directive for Intelligence Plan – Tunis and Bizerta, 23 April 1943. Eighteenth Army Group was a short lived, created on 20 February 1943 and disbanded 15 May the same year. Under the command of Sir Harold Alexander, its purpose was to coordinate the operations of the British Eighth Army (present in North Africa since 1940) under Lieutenant-General Montgomery and the newly arrived British First Army under Lieutenant-General Kenneth Anderson that included in addition to the British V and IX Corps, the US II Corps and the French XIX Corps.

[6] TNA WO 204/6992, S Force Operational Instruction No 1, Movement Order No 1, Appendix B, General Plan, Lieutenant-Colonel David Strangeways, 24 April 1943.

[77] TNA WO 204/6992, S Force Operational Order No 3, Distribution to 2721, 2744 and 2788 Squadrons, RAF Regiment, 11 May 1943, p. 1.

squadrons offered support when the city was taken which would appear to account for S Force duties being added to the battle honours of all three squadrons.

In November 1942, three full strength RAF Regiment Squadrons had landed as part of Operation TORCH, then advanced with the British Armies in North Africa, ostensibly to provide airfield security for the DAF. By the spring of 1943, their numbers had swollen to five full strength Regiments.[8] With complete air supremacy enjoyed by the DAF, only two RAF Regiment Squadrons were actually required for airfield security duty, releasing the remaining three Regiments to be utilised as a strategic reserve for 'other overseas operations'.[9] When formed during the summer of 1942, the RAF Regiment Squadrons received additional training to counter expected enemy opposition as the air force established bases in continental Europe. This entailed equipping armoured sections of each squadron with Mk II and Mk III Humber Light Reconnaissance Cars enabling offensive operations to be undertaken at the front. Planning for the capture of Tunis & Bizerte, 2788 RAF Regiment were assigned to follow 30 Commando into action, capture and guard communications targets and prevent looting.[10] The 2788 RAF Regiment had established a formidable combat reputation, having successfully provided a fighting rear-guard when protecting the retreat of an RAF mobile radar unit - euphemistically called an Air Ministry Experimental Station (AMES), positioned at Cap Serrat. The AMES had been observing

---

[8] TNA AIR 20/3658, Five RAF Squadrons deployed to North Africa - Field Squadrons numbers **2721**, 2788, 2771, 2744, 2825. The standard establishment for each squadron was 143 Aircraftsmen (RAF equivalent to navy seaman or army ordinary rank), 6 Officers, 1 Warrant Officer, 10 Sergeants and 10 Corporals. Each regiment included a Rifle Flight (32 A.C's, 1 Officer, 4 NCO's), a Mobile Rifle Flight (32 A.C's, 1 Officer, 4 NCO's), an Armoured Flight, often mounted in Humber Armoured Cars (12 A.C's, 1 Officer & 5 NCO's) and an Anti-Aircraft Flight with 32 A.C's and 5 NCO's). The remaining numbers were support staff.

[9] TNA AIR 20/3658, four page document outlining strategic basis for the deposition and organisation of the RAF Regiment in 1943, 29 December 1942, p. 4.

[10] TNA WO 204/6992, orders dated 1 May 1943 issued to RAF Regiment on occupation of high priority GAF sites.

enemy aircraft supply movements since late February and with its task complete, was withdrawn to Allied lines on 2 March 1943.[11]

Planning for the entry into Tunis, an intelligence objectives list was prepared, allocating targets to the RAF Regiment, 30 Commando and the FSS.[12] Due to the size of the formation, the RAF Regiment received a large number of targets - thirteen RDF (Radar) stations, ten technical intelligence targets, plus hospitals, POW cages and the headquarters of the German air force (GAF). They were also to provide the muscle for one of 30 Commando's targets – a Wireless Telegraphy (W/T) station just outside the city near La Marsa. Other targets allocated to 30 Commando included the Italian Naval HQ in Tunis, an infra-red station, other W/T stations and a RDF (RADAR) station – all potentially holding documents sought by Tandy's elucidation department or cryptographic targets.[13] The FSS were employed in numbers, with six FSS (later increased to ten) charged with capturing and detaining known collaborators and enemy personnel, as well as searching enemy HQ buildings for immediate tactical intelligence.[14] Of the one hundred and thirty targets issued to the FSS before the city fell, one hundred and eleven (85%) were human while the remaining nineteen targets (15%) were buildings.[15] The German Headquarters in the city was allocated to, and captured by 31 FSS, who were accompanied by the commander of the S Force, Lieutenant-Colonel Strangeways. He was credited with

---

[11] Kingsley M Oliver, *Through Adversity: The History of the Royal Air Force Regiment, 1942 - 1992* (Rushden: Forces Corporate Publishing, 1997), p. 87.

[12] TNA WO 204/6992, S Force Operational Instructions No 1 , Appendix E Targets – British Military Targets.

[13] TNA WO 204/6992, S Force Operational Instructions No 1 , Appendix C, Targets – Royal Navy Party.

[14] Steers, *FSS*, pp. 45-49.

[15] Clayton, *Forearmed*, p. 159. The large number of prisoners detailed by the FSS severely delayed their movement in the captured city. Lessons had to be leaned for future operations.

capturing cypher machines and code books discovered in the HQ building before they could be destroyed, earning him a DSO for this achievement.[16]

Security surrounding the deployment of the 30 Commando extended to the use of their title in S Force documentation. Most participating units were referenced 'en clair' - '2788 Squadron RAF Field Regiment' or '31 FSS' for example. Acting on orders issued by GC&CS and NID, 30 Commando are never named explicitly in any S Force order, being referred to obliquely as the 'Royal Navy Party'. Only the naming of Curtis as their commanding officer reveals the unit's identity.[17] With a mere three officers and sixteen men and advised to expect enemy snipers, Curtis elected to concentrate his force on the assault on Tunis, moving to Bizerte once operations in Tunis were complete. On 7 May, Tunis was liberated by British forces, with Curtis entering the city ahead of the main S Force who arrived the day after.[18] The US Second Army Corps also liberated Bizerte on 7 May, though it was forty-eight hours before 30 Commando could travel the 60 kilometres and investigate the second city – acknowledged to be a primarily naval objective.[19] With targets in Tunis and Bizerte secured, the S Force that had been assembled on 24 April, was disbanded on 11 May 1943. Two days later, the last Axis forces surrendered to the Allied armies and fighting ceased in North Africa.[20] The S Force commanded by Strangeways had existed for a mere eighteen days. For participating units within the S Force, the three RAF

---

[16] Joshua Lavine, *Operation Fortitude* (London: Harper Collins, 2011), p. 201.

[17] DEFE 2/942, Combined Operations Headquarters Docket, Lieutenant Dunstan Curtis promoted to acting Lieutenant-Commander in Lieu of Lieutenant-Commander Quentin Riley who was appointed commander of Special Engineering Unit by departure of Commander RED Ryder, 4 March 1943.

[18] Keith Ellison, *Frontline Intelligence in WW2: (II) The Development of Allied Intelligence Collection Units*, p. 4.
<https://www.academia.edu/35156351/Frontline_Intelligence_in_WW2_II_The_Development_of_Allied_Intelligence_Collection_Units_doc> [accessed 6 March 2024].

[19] TNA WO 204/6992, S Force operation Order No. 1, 11 May 1943, Appendix C, Targets – Royal Navy Party.

[20] TNA WO 204/6992, S Force operation Order No. 3, 11 May 1943.

Regiment Squadrons and 30 Commando, they remained on standby for future S Force operations on Sicily.

In his post-action report, Curtis reviewed the unit's participation in the Tunis S Force, suggesting that the unique potential of capturing intelligence the moment the target was overrun as they had done in Algeria, had been ignored. By being attached to the larger and more cumbersome S Force, the advance of 30 Commando was slowed by as much as twenty-four hours. The size of 30 Commando was also too small to exploit multiple targets. This was partially addressed by NID despatching the few marines that had completed their training in Amersham to join Curtis.[21] The army Troop assembled by Cass were deployed, sailing for North Africa on 18 May and arriving in Algiers on 13 June. Major Cass never witnessed his creation in action, choosing to accept an Intelligence posting in South East Asia in April 1943 and handing command over to Captain Wade. Writing prior to operation HUSKY, the invasion on Sicily, Rushbrooke noted to Mountbatten 'the smallness of this force [was an issue because] a lucky burst of machine-gun fire might easily reduce its strength by a quarter during the course of any one operation'.[22] A request to expand the SEU to fifty ordinary ranks was duly approved, with further troops training in Amersham swiftly despatched to Tunisia in readiness for the invasion of Sicily. Continuing his letter, Rushbrooke praised the continued effectiveness of Curtis and his team, noting:

> It is my conclusion, based on the opinion of the NID sections concerned, and of 'C' and his organisation at Bletchley [GC&CS], that No. 30 Commando has a highly

---

[21] TNA AMD 223/500, letter from Lieutenant-Commander Curtis to Lieutenant-Commander Riley, 28 May 1943. After the Tunis capture was complete, Lieutenant-Commander Curtis requested of Lieutenant-Commander Riley, that 30 commando be expanded.

[22] TNA AMD 223/500, NID 14 letter p. 606, regarding 30 Commando, from DNI Rushbrooke to Chief of Combined Operations, Vice-Admiral Louis Mountbatten, 6 July 1943.

important role to fulfil in all theatres of war and that units of this type should take a permanent place in our basic establishment for war. [23]

30 Commando's success in the November landing in Algeria with the capture of the *Abwehr* Enigma machine and its efficient transit to GC&CS had justified the team's formation and field methodology.[24] Once again using obtuse references, Rushbrooke wrote to Mountbatten in July 1943 referring to the shroud of secrecy that enveloped 30 Commando:

> I appreciate you will have found it difficult to introduce this new unit at such a late stage in the war, and that for security reasons it is impossible to explain its purpose to all the authorities with whom is forced to come in contact. There is, however, time for it to be given a proper place in COSSAC, and so far as the Far-Eastern war is concerned, I have taken the opportunity to explain its duties to Admiral Somerville.[25]

COSSAC was an acronym for the 'Chief of Staff to Supreme Allied Commander' and refers to the planning team appointed in March 1943 to prepare for the Allied return to North West Europe. This is the first hint that 30 Commando would be pulled out the Mediterranean in the future and split, some men to prepare for operations in France, while others would be deployed in South East Asia under the command of Admiral Sir James Somerville. The immediate concern for 30 Commando was to prepare for future

---

[23] TNA ADM 223/500, Letter to Chief of Combined Operations Mountbatten from DNI Rushbrooke, CR5460/43, P606 6 July 1943, Point 4. 'C' refers to Major-General Menzies. The letter 'C' as title for the Chief of SIS dates back to Sir Mansfield George Smith-Cumming (1859-1923), head of SIS until his death. He used to sign all correspondence 'C', and the practice was continued by his successors with 'C' now the official abbreviation for 'Chief'.

[24] Batey, *Dilly*, p. 159. Having now decrypted the *Abwehr* cypher using the Algiers KK machine, later intercepts from German agents proved to be a hugely fruitful source of intelligence.

[25] TNA ADM 223/500, Letter to Chief of Combined Operations Mountbatten from DNI Rushbrooke, CR5460/43, P606 6 July 1943, Point 5. It was anticipated that 30 Commando would operate in the Far-East once the Allies were on the offensive in that theatre. Admiral James Somerville, 1882-1949 was Commander-in-Chief, Eastern Fleet in 1942-43.

Mediterranean operations including the landings on Sicily, with Curtis briefed by SO Y

Bacon who provided BP's current requirements for enemy cypher material.[26]

3.02   HUSKY – The Landings and Liberation of Sicily

Operation HUSKY commenced on 10 July 1943 with multiple Allied landings on the

Sicilian coast followed by a rapid thrust inland. The three RAF Regiment Squadrons

remained on standby to re-invigorate S Force duties, however the speed of the advance

meant that no S Force operations were deemed necessary before hostilities ceased on 17

August. Operational intelligence was secured for the British by the FSS, while the Counter

Intelligence Corps (CIC) acted for US forces.[27] The performance of the independent 30

Commando in North Africa had been deemed a success by GC&CS and Naval

Intelligence. The restrictive nature of the S Force, hastily assembled by Strangeways to

exploit Tunis and Bizerte, had resulted in little useful intelligence being secured by the

naval commando. The freedom that the unit appreciated in Algeria was restored once the

commando landed in Sicily and the Italian mainland. Lieutenant-Commander Curtis had

requested an expansion of 30 Commando, receiving an increase in personnel to around

fifty all ranks.

30 Commando were once again independent - free to pursue targets assigned by

GC&CS and NID, the capture of which fully utilised their training. A complete set of

cyphers used by the Italian Air Force homing beacons for July, August and September

1943 were captured. Taken by hand to Malta, they were used immediately by the Allied

---

[26] TNA ADM 223/213, History of SIGINT Operations Undertaken by 30 Commando / 30AU, point 3. The M4 GAMMA wheel was introduced in July 1943. It would be fitted for one month, before either being replaced by the original M4 BETA wheel or left in place for another month.

[27] Keith Ellison, *Frontline Intelligence in WW2: (II) The Development of Allied Intelligence Collection Units*, p. 1.
<https://www.academia.edu/35156351/Frontline_Intelligence_in_WW2_II_The_Development_of_Allied_Intelligence_Collection_Units_doc> [accessed 6 March 2024].

Tactical Air Force (TAF) to guide their bombers to enemy targets in northern Italy.[28] The training received in London bore fruit in Messina, where 30 Commando arrived to find a German 'Y' Station, heavily bombed by the Allies prior to the city's liberation. A German signals codebook was discovered in the rubble that contained current daily keys, while W/T logs were recovered from a wrecked German car, the occupants had been killed trying to escape the bombing. The haul revealed the latest observations by the German cryptographer concerning British and US cyphers.[29] Operating independently had restored the commando's flexibility, essential for swift intelligence capture. GC&CS were providing the location of intelligence sites through SO Y Bacon and 30 Commando were securing any intelligence available. The unit received an official commendation following the liberation of Sicily, with the recently appointed Chief of Combined Operations Major-General Robert Laycock forwarding the text to the officer commanding SS Group and 30 Commando.[30] The commendation stated:

> I am to acquaint you that Their Lordships have read with considerable interest the report of the work of No. 30 Commando during the invasion of Sicily. Results of great value and importance have been obtained and I am to state that Their Lordships consider that No. 30 Commando and the technical officers attached are deserving of high commendation for its excellent work.[31]

Although Curtis had succeeded in increasing the size of 30 Commando in time for HUSKY, there were still too few men to comfortably secure and protect all targets. This was graphically illustrated when Lieutenant-Commander Riley led a team of ten commandos to capture the German Air Force (GAF) radar station at Cape Passero. After firing several demolition charges, the German radar crew surrendered the site. Although

---

[28] TNA ADM 223/213, History of SIGINT Operations Undertaken by 30 Commando / 30AU, point 5.

[29] TNA ADM 223/213, History of SIGINT Operations Undertaken by 30 Commando / 30AU, point 6.

[30] TNA DEFE 2/955, Chief of Combined Operations Major-General Laycock officer commanding SS Group, CR/270/44, 20 January 1944.

[31] TNA DEFE 2/955, Commendation to CCO, by command of Their Lordships, M/T 007612/43 11 January 1944.

some of the Radar electronics suffered damage, the *WASSERMANN* long range radar array remained largely intact.[32] After useful documents and manuals were captured, Riley placed two 30 Commando corporals to guard the site before taking the rest of the unit to secure a nearby target. Returning later to Passero to relieve the corporals, Riley found the site demolished. A passing team of British sappers who outranked the corporals, had insisted on carrying out their orders to destroy military installations fearing of an enemy counter-attack. The corporals were later unable to prevent looting by other British troops and Sicilian locals.[33] The Cape Passero incident illustrated the need for supporting troops such as the RAF Regiment that had been deployed in Tunis, to 'freeze' sites while they were being assessed for intelligence or preserved for future investigation.

3.03   30 Commando - S Force in Italy

The Admiralty history of 30 Commando states that in early November 1943, proposals were issued to a Captain Bousfield of the Chief of the Intelligence Staff, Mediterranean (COIS Med), stating that 30 Commando were to join the S Force being assembled for the liberation of Rome. Capture of the Italian capital was expected before Christmas 1943.[34] 30 Commando's participation was accepted, with Lieutenant Glanville appointed to represent naval interests with S Force planners. Preparations for entering Rome were orchestrated by the US Major Cave, Advance G2, who eagerly agreed to 30 Commando joining the vanguard ahead of the general advance, enabling the securing of the Naval Ministry, W/T and Communication Centres and locate key senior staff from the Italian

---

[32] TNA ADM 223/214, Review of 30 Cdo performance Sicily.

[33] TNA ADM 223/500, Lieutenant-Commander Riley letter to Chief of Combined Operations Mountbatten, 17 August 1943.

[34] TNA WO 223/214, Chapter IX, The Final Phase of 30 Commando's Operations in the Mediterranean, Planning for Further Operations, points 6 and 7.

navy.[35] The three RAF Regiment Field Squadrons that participated in the original Strangeways S Force had remained in theatre to participate in future intelligence capture operations and now joined the new S Force. Intelligence targets were being collated by AFHQ Advance G2 staff.

A request to increase the numbers in 30 Commando ahead of Rome's capture was met by the War Office repeating their old statement that the unit of conflicted with the role of the FSS. Responding in November, Laycock wrote to the NOIC at Bari, the Commander in Chief (C-in-C) Mediterranean and Rushbrooke asking for their written assurance that 30 Commando did not conflict with the FSS.[36] Brigadier Airey of the Fifteenth Army Group confirmed the usefulness of the unit, advising that Fifth Army had stated they were satisfied with work carried by 30 Commando while under their command. Airey emphasised that the intelligence tasks assigned to 30 Commando were not appropriate for the FSS due to the Intelligence Corps' existing commitments and limited training. He drew attention to 30 Commando's unique skills which included amphibious training that was employed on Capri and Ischia – operations that would not have been feasible for other organisations - especially the FSS.[37]

By December 1943, Rome's liberation had been postponed to February or March the following year. The Allies readied forces for operation SHINGLE, the landings on the coast southwest of Rome at Anzio on 22 January, with AFHQ anticipating a swift advance and the fall of the capital shortly thereafter. Preparations for the city's capture intensified

---

[35] According to an S Force staffing roster, Major R J C Cave was the head of Advance G2 AFHQ and representative of the US Federal Bureau of Investigation (FBI). For the S Force staffing roster, please refer to ADM 233/13034.

[36] TNA DEFE 2/955, Chief of Combined Operations Major-General Laycock to NOIC (Naval Officer in Command), C-in-C Mediterranean.

[37] TNA DEFE 2/955, Employment of 30 R N Commando, Brigadier T S Airey to CCO, 15 AG/1061/1/GSI (a), 6 November 1943.

in December, with British Brigadier Kenneth Strong issuing a memo to the HQ Fifteenth

Army Group, advising that AFHQ anticipated 'many valuable documents and archives,

both enemy and Italian, [would] become available to the Allied Forces'.[38] AFHQ met on

11 December 1943, confirming the formation of a new S Force under command of

Fifteenth Army Group, to prepare for the city's capture within the first months of 1944.

With the relative abundance of intelligence targets located in Rome, the new S Force

swelled to accommodate the requests of the large number of intelligence organisations

keen to access targets in the city. Their role would be to secure strategic and political

targets within the city and prevent their destruction by the retreating Germans or looting by

Allied troops or residents of the city. The FSS and the US CIC were included to provide

security for S Force HQ and operational 'battlefield' intelligence for 'their' respective

Division of Corps.[39]

Fifteenth Army Group requested that all Allied arms of service forward their

intelligence target proposals to AFHQ headquarters by the 18 December.[40] These targets

were received, assessed and collated by the G2 (Advance Intelligence) sub-section of the

intelligence staff of AFHQ, often referred to as 'Advance G2'. Targets included Italian

government ministries, document archives, local airfields and many sites currently used by

the occupying German forces. Consular and diplomatic buildings were to be excluded.[41] In

all, four hundred and thirty-one sites are identified, though unlike the Tunis target list, no

---

[38] Brigadier Sir Kenneth Strong (1900-1982), later Major-General from late December 1943, Assistant Chief of Staff for Intelligence G2 at Lieutenant-General Eisenhower's AFHQ. From late May 1944, he returned to the UK to work under General Eisenhower within Supreme Headquarters Allied Expeditionary Force (SHAEF).

[39] TNA, WO 204/9917, Tasks & Targets in Rome, HQ Fifteenth Army Group, 15 AG/1408/1/G (1b) 18 December 1943.

[40] TNA WO 204/9917, Exploitation of Intelligence in Rome Area, 5 JAR/1006, 11 December 1943.

[41] TNA WO 204/9917, Exploitation of Intelligence in Rome Area, HQ Fifteenth Army Group AMG/680/13, 11 December 1943.

personnel are included within the surviving document.[42] It is probable that human target lists that detailed collaborators, German SD agents and fascist sympathisers were issued to the FSS to expedite. The FSS would add these enemy targets to their Black Book, while their White Book recorded Allied supporters and antifascist sympathisers with whom they would seek assistance tracking down subversive residents. The FSS would also search for hidden arms, explosives, ammunition and secure vital installations, utilities and financial centres such as banks to prevent looting. Other human targets would be located by MI 6 Section V, known as Special Counter Intelligence Units (SCIUs), who were present under Major Wootton and Squadron Leader Johnson Special Intelligence b (SI(b)). These units were responsible for counter-espionage and neutralising enemy intelligence services and were keen to locate members of the anti-fascist Italian intelligence organisation Servizio Informazion Militare (SIM) in the capital.[43] SIM had advised S Force of targets within the city, with their intelligence proving to be particularly reliable.

By December 1943, Lieutenant-Colonel Strangeways, commander of the Tunis S Force, had returned to the UK to join the staff planning operation FORTITUDE – the deception element of operation OVERLORD.[44] The commander of the new Anglo-US Rome S Force was US Colonel George 'Budge' Smith, an artilleryman by training, but by 1943 deputy G2 Intelligence to the Brigadier G2 Intelligence Fifteenth Army Group.[45] Smith's appointment was announced 'By command of General Eisenhower' in a letter on

---

[42] TNA WO 204/13034, Complete List of S Force Building Targets, Giving Instructions for Each Target. A small proportion of target details have been redacted.

[43] SIM was an intelligence organisation re-formed under the Badoglio Government that was assembled in July 1943.

[44] Lieutenant-Colonel David Strangeways (1912-1998). On arriving in the UK from North Africa, he made himself extremely unpopular by re-writing previous plans prepared by long-standing members of the FORTITUDE team including Hesketh. He advocated the creation of a completely fictitious First US Army Group or FUSAG. His proposals were accepted and proved to be very effective.

[45] Lori Stewart, *S Force Enters Rome: 5 June 1944* (U.S. Army Intelligence Center of Excellence, 2023), <https://www.dvidshub.net/news/446222/s-force-enters-rome-5-june-1944> [accessed 22 June 2023]. Colonel George Stanley 'Budge' Smith., 1900-1968 Appointed as Deputy G2 to the Fifteenth Army Group in June 1943, after conducting an inspection of intelligence in all theatres.

12 December 1942 issued by Major-General Bedell Smith.[46] This document outlined

Colonel Smith's command responsibilities of coordinating intelligence capture and noted

that S Force would temporarily operate under command of the US Fifth Army until 'the

situation in Rome returns to normal'.[47] Colonel Smith formed his headquarters at Caserta

on 5 January 1944. Target lists with supporting maps were completed by 15 January, with

the S Force assembled on 24 January in readiness to march on Rome. By the end of

January, it was apparent that Rome was not about to fall, forcing elements of S Force to be

dispersed. The HQ detachment and representatives of different agencies bivouacked in the

vicinity of Baia near Naples from 23 February. They would remain in Baia refining target

lists and operations in Rome until the eventual move to the capital on 20 May.[48]

30 Commando had established a broadly positive reputation operating in the

Mediterranean Theatre for over a year. GC&CS had benefitted from numerous

cryptographic captures, while the Admiralty had received examples of the latest Axis naval

technology. These for example included samples of acoustically guided torpedoes,

captured at an Italian factory at Baia, that were efficiently transferred to the UK for

evaluation. 30 Commando's efficiency so impressed Captain Maitland Douglas of the

navy's Directorate of Torpedoes and Mining, that he became a vocal advocate for the

unit's future employment in Italy and France. Their reputation as an essential part of an S

Force intelligence team was also appreciated by the senior intelligence officers serving in

the Mediterranean Theatre of Operations. Writing on 9 December 1943, Group Captain

Luard - Senior Intelligence Officer of the Mediterranean Air Command (MAC) - had been

---

[46] Major-General Walter Bedell Smith (1895-1961), Eisenhower's Chief of Staff throughout World War II, later ambassador to the Soviet Union 1946-48 and 4th Director of the CIA 1950-53. He was chosen by Eisenhower to be his Chief of Staff from 15 September 1942, because of his excellent rapport with British staff officers.

[47] TNA WO 204/907, Allied Force Headquarters – Intelligence Material in Rome, 12 December 1943.

[48] TNA WO 204/907, Final Report of S Force Operations, 17 June 1944, Section 3, Planning and Organisational Phase.

charged with assembling intelligence teams to exploit Italian and German Air Force HQs in the capital.[49] He proposed assembling an intelligence team comprising an expert on the German Air Force, a 'Y' SIGINT officer, a CSDIC interrogation party and supported by a flight from the RAF Regiment.[50] Commander Wiseman, Chief Intelligence Officer of Northwest African Tactical Air Force (NATAF) recommended incorporating 30 Commando.[51] Wiseman suggested Luard should 'consider [the] military element of 30 Commando would be of the greatest use and request that you arrange allotment'.[52] Luard duly placed the request with the senior intelligence officer Fifteenth Army, Brigadier Terrence Airey[53], who subsequently signalled Brigadier Strong on requesting 30 Commando's participation.[54]

30 Commando were well known to Airey through contact with Dunstan Curtis. The unit had returned to Algeria on 3 February 1943 with Curtis instructed to contact senior intelligence offices in theatre and make them aware of the services 30 Commando could offer. He met with Naval Command, Expeditionary Force (NCXF), SO Y Bacon, local NID representatives and SOE.[55] Colonel Felix Cowgill of the Special Intelligence Service

---

[49] Mediterranean Air Command (MAC), commanded by Air Chief Marshal Sir Arthur Tedder (1890-1967), existed between 18 February and 10 December 1943.

[50] TNA AIR 23/6317, Secret Cypher Message, Tactical Air Force to Air Command, Group Captain Luard, Senior Intelligence Officer, 9 December 1942, document number 3A. CSDIC refers to the Combined Services Detailed Interrogation Centre – teams of specialists trained in the interrogation of prisoners of War.

[51] The formation of the Northwest African Tactical Air Force (NATAF) was agreed at the Casablanca Conference with the formal creation on 18 February 1943. They combined the command of the RAF Desert Air Force (DAF) (fighters) and the Tactical Bomber Force (medium bombers) and the US XII Support Command (fighters and fighter bombers) – all under the command of Air Marshal Sir Arthur Coningham. NATAF was disbanded in December 1943, replaced by the Mediterranean Allied Air Forces (MAAF).

[52] TNA AIR 23/6317, Secret Cypher Message, Tactical Air Force to Air Command, AI 387, serial No 49/7, Wing Commander Wiseman to Group Captain Luard, 7 December 1942, point 4, document number 1A.

[53] Brigadier Sir Terrence Airey (1900-1983), later Major-General, Director of Military Intelligence reporting to General Sir Harold Alexander. Airey was Strong's opposite number first in Eighteenth and later Fifteenth Army Groups.

[54] TNA AIR 23/6317, Secret Cypher Message, Tactical Air Force to Air Command, 7 December 1942, Document number 1A.

[55] TNA, DEFE 2/942, Report issued to Colonel Neville RM and Combined Operations, point 6, 13 February 1943.

(SIS) introduced Curtis to Brigadier Airey at Eighteenth Army Group HQ in Constantine in early February.[56] When he and 30 Commando relocated to Bone on the coast of Tunisia in March 1943, he again made contact with Airey to promote the Commando.[57] According to Major Cass, Cowgill was also actively promoting the SEU to senior intelligence staff in North Africa.[58] It is probable that the good relations Curtis nurtured in the early months of 1943 contributed to Airey's support to keep the unit in the Mediterranean into 1944. Strong may also have met Curtis during 1943, but no documents have been found that confirm this. Strong was indoctrinated regarding GC&CS and ULTRA and as such, would be aware of the capabilities of 30 Commando and their unique remit when compared to the FSS. The FSS training did not include identifying and handling cryptographic material. Although 30 Commando's participation in S Force had been approved in November, by December the Admiralty advised that 30 Commando were to be withdrawn to the UK to prepare for operations in France and the Far-East.

Brigadier Strong wrote to the newly appointed Chief of Combined Operations, Major-General Robert Laycock, requesting that 30 Commando should remain in Italy to head the exploitation of Rome's intelligence targets.[59] Brigadier Airey also wrote to the commander of the Rome S Force, Colonel George Smith, seeking his endorsement for 30 Commando to remain and support the exploitation of the capital. That the most senior

---

[56] DEFE 2/924, Intelligence Assault Unit in North Africa, SL/RM, 13 February 1943. Colonel Felix Cowgill, 1903-1991, SIS and Head of Section V, Counter Intelligence, MI 6.

[57] DEFE 2/924, 30 Commando (Special Engineering Unit), Summary of Report No 3 from Lieutenant-Commander Curtis, RNVR, North Africa, 17 March 1943. Curtis reported to the Senior Officer Intelligence Service (SOIS) Commodore Oliver, DSO RN to discuss 'cloak and dagger' commando operations. Curtis also met with Colonel Peel Yates, Intelligence officer for First Army and Brigadier Airey representing Eighteenth Army.

[58] TNA, DEFE 2/942, Cass to Ryder, The Suggested Use of Military Section, No 30 Commando in Mediterranean Operations., 2 February 1943.

[59] By the autumn of 1943, Vice-Admiral Louis Mountbatten was no longer Chief of Combined Operations. In August, he had been promoted to full Admiral and appointed Supreme Allied Commander South East Asia Command (SEAC). He took up his new posting in October 1943. Mountbatten was replaced in October by Major-General Sir Robert Edward Laycock (1907-1968), who previously had commanded the Special Service Brigade. Laycock remained Chief of Combined Operations until 1947.

intelligence officers reporting to Lieutenant-General Eisenhower - supreme commander AFHQ and the Commander of Fifteenth Army Group, General Sir Harold Alexander, were requesting that 30 Commando remain in theatre was testament to the importance with which 30 Commando were now viewed. Laycock backed Rushbrooke, stating that 30 Commando were needed in the UK to train new Officers and ORs, with the intention to then split the unit between Western Europe and Southeast Asia Command (SEAC). The future of 30 Commando in the Mediterranean might have ended there, but administrative changes during the Autumn of 1943 resulted in the naval and Marine Troop separated from the army contingent, a split that was exploited by Strong to enable the army Troop to remain operational in Italy.

Unbeknown to the senior intelligence officers in AFHQ, the future role of 30 Commando, their composition and eventual withdrawal to the UK had been debated by Naval Intelligence and Combined Operations since May 1943. At that time, commander of the Special Service Brigade, Brigadier Laycock acknowledged that 30 Commando were trained to collect 'enemy intelligence beyond the scope of the Field Security Police [FSS]'.[60] Yet, he considered splitting the formation and handing over control of the army Troop to Home Forces. After debating the issue with Colonel Neville of Combined Operations, he decided in June, to deploy the army Troop currently languishing in the UK to North Africa to gain field experience before determining their eventual fate.[61]

Writing on 8 October, Rushbrooke rescinded the requirement for the original inter-service composition of 30 Commando originally proposed by Godfrey and championed by

---

[60] TNA DEFE 2/955, Employment of 30 Commando, Brigadier Laycock, Commander Special Service Brigade, 22 May 1943.

[61] TNA DEFE 2/955, Employment of 30 Commando, Colonel Neville's reply to Brigadier Laycock, 3 June 1943.

Mountbatten, Fleming and Cass. He stated that the RAF Troop of 30 Commando, though yet to be assembled, was no longer required due to the creation and positive deployment of the RAF Regiment. He also proposed that the army Troop should disband - officially because of task overlap with the FSS - but more as a result of limited support for the Troop received from the War Office and their perceived rivalry with the FSS. Rushbrooke confirmed that once 30 Commando were back in the UK, the remaining marines and naval staff would be expanded to one hundred all ranks.[62] Rushbrooke wrote to Colonel Neville stating that the Admiralty believed that 'the cream of the intelligence targets has already been skimmed in the Mediterranean theatre'. He acknowledged that the dividends 30 Commando 'have produced so far as enemy intelligence and enemy material are concerned have been far beyond our expectations'.[63] He continued that the unit had important tasks during operations OVERLORD, RANKIN and SEAC. Although the unit may have been doing valuable work in the Mediterranean, there were no longer any intelligence targets in this theatre that 'have sufficient priority to over-ride the requirements for OVERLORD and SEAC'.

In a memo dated 26 November 1943, Major Martin on behalf of the officer commanding SS Group, advised that a revised war establishment (WE) for 30 Commando would soon apply. He noted that representatives of the 'RN, RM and army SEU' had requested the unit be renamed 'Intelligence Assault Unit (RN and RM) and the Intelligence Assault Unit (army)'. This change would distance the unit from SOE and better reflect the unit's specialist remit . Martin suggested a return to the original Combined Operations proposed title of 'Intelligence Assault Unit'. Despite the name change, the intelligence gathering duties would remain unchanged. He stated that 'activities and requirements of

---

[62] TNA ADM 223/500, Memo from DNI Rushbrooke to NID 17, 8 October 1943.

[63] TNA DEFE 2/955, Rushbrooke to Neville, paragraphs 3 and 4, P. 32, 9 November 1943.

the Special Engineering Unit (late 30 Commando) have now been thoroughly investigated. It is recommended that SEU be reorganised into two separate units, each with its own Headquarters'.[64] There should be a 'Special Engineering Unit Royal Marine and navy and a separate SEU army'. This proposal ignored Rushbrooke's earlier statement regarding disband the army Troop. Martin believed this was necessary as the 'functions of the two suggested units are different; the SEU (army) frequently operate well inside enemy territory whilst this seldom happens in the case of the SEU (RN and RM).' Finally, he proposed that both units should fall under the administration of the Special Boat Unit (SBU).

Up to the time of Martin's letter, 30 Commando had received target information from NID and BP through SO Y in the Mediterranean. Operationally, their movements were controlled by NID while administratively they were subordinate to the Special Service Brigade who were in turn subordinate to Combined Operations. In July 1943, new layers of administration and bureaucracy was added to Combined Operations with the Special Service Group (SS Group) created who would control up to four Special Service Brigades. Under one of these SS Groups was established the administrative SBU mentioned by Martin, who were based at HMS Rodent, Liss in Hampshire.[65] Not to be confused with the famous Special Boat Service (SBS) formed earlier in the War, the SBU had been created by Combined Operations in July 1943 on the recommendation of

---

[64] TNA DEFE 2/1107, War Establishment, Special Engineering Unit (late 30 Commando), SSG/514/5/47/G dated 26 November 1943, Major Paul W. Martin GS, Special Service Group.

[65] HMS Rodent commissioned 30 October 1943, paid off 17 February 1944, <https://www.combinedops.com/Training%20EST%20UK.htm> [accessed 10 June 2023].

Mountbatten. [66] It was subordinated to one of the SS Groups on 8 November 1943. [67] The rationale behind the SBU was to provide a centralised administration and command headquarters for the various specialist naval forces. A key responsibility of the SBU was to publicise the functions of these forces through COHQ and to the higher commanders in the field.

The navy and Marine contingent were withdrawn from Italy as planned, arriving by air in London just before Christmas 1943. They were stationed in Littlehampton to prepare and expand in readiness for OVERLORD. [68] Later in the same month, Rushbrooke reiterated the statement he had made in October that the army Troop had been disbanded 'on the grounds that it overlaps with the Field Security Police which carry out rather similar duties for the army'. [69] As far as Rushbrooke was concerned, the title of 30 Commando was terminated and 34 Troop disbanded. However, this was not the case. 30 Commando, 34 Troop, operating as the Special Engineering Unit or SEU, remained in Italy awaiting future operations. Brigadier Strong had written to Brigadier Airey of Fifteenth Army Group to confirm that, while the bulk of 30 Commando was to be withdrawn to the UK, 34 Troop consisting of two officers and seven ordinary ranks might remain in Italy to support Fifteenth Army Group. In a subsequent telegram from Strong to Airey dated 17 December 1943, Strong advised that a Combined Operations officer was returning to

---

[66] Andrew Hargreaves, *An Analysis of the Rise, Use, Evolution and Value of Anglo-US Commando and Special Forces Formations 1939-194*5 <https://kclpure.kcl.ac.uk/portal/en/studentTheses/an-analysis-of-the-rise-use-evolution-and-value-of-Anglo-US> [accessed 10 June 2023]. SBU administered LCOCUs (Landing Craft Obstacle Clearance Units), RMBPD (Royal Marine Boom Patrol Detachments), SBS (Special Boat Section), COPPs (Combined Operations Pilotage Parties), SRU (Special Sea Reconnaissance) and 30 Commando, retitled 30 Assault Unit (30AU) after the name change was announced in a meeting held on 31 December 1943.

[67] History of the Special Boat Unit (SBU) - sometimes referred to as the Small Boat Unit - within Special Services Group (SSG), quoting TNA DEFE 2/1116 <https://www.coppsurvey.uk/chain-of-command> [accessed 10 June 2023].

[68] TNA ADM 223/214, Col. Neville's tour of inspection, point 20.

[69] TNA ADM 223/500, Reply by DNI Rushbrooke to Director of Plans confirming status of 30 Cdo & 30AU, 27 January 1944. Rushbrooke had previously stated on 8 October 1943, NID 0050343/43, Point 2, that the military side of the unit overlapped with the Field Security Police (FSS) so were now 'rendered unnecessary'.

London, where the idea that 34 Troop might remain in Italy for deployment by Fifteenth Army Group was to be pursued. Strong expressed his lack of confidence that his plan would gain approval.[70]

To Strong's surprise, an Admiralty telegram sent less than one week later, confirmed that 34 Troop, 30 Commando, due to return to Algiers after completing duties in Corsica, were then to remain in Italy. They were to be subordinate to No 2 Special Service Brigade and loaned to Fifteenth Army Group for the Rome S Force operation, pending the planned reorganisation of all Troops within 30 Commando.[71] It transpired that the new Chief of Combined Operations Major-General Laycock, objected to Neville's recommendation that the army Troop be disbanded, stating 'since it was an effective unit with a war establishment and was not to be abolished by a stroke of a pen'.[72]

A meeting of senior staff was convened at COHQ in London on 31 December 1943, to discuss the future naval, military and Air requirements of the unit.[73] The primary role of 30 Commando were re-established – to seize 'special intelligence data' during any engagement, operate against enemy HQ's to obtain cyphers, equipment, instruments and papers. Captain Maitland Douglas representing the navy's Department of Torpedoes and

---

[70] TNA ADM 204/943, from Brigadier Strong to Fifteenth Army Group Brigadier Airey, Telegram Ref 15251, 17 December 1943.

[71] TNA ADM 204/943, from NID (Troopers) to Fifteenth Army Group, Telegram Ref 51167, 22 December 1943.

[72] TNA ADM 223/214, Chapter X, Planning and Training for Overlord, points 1 – 2.

[73] The meeting held and Combined Operations HQ on 31st December 1943 brought together many high ranking officers from the three services and planners for Overlord. The list of high ranking attendees attests to the importance of the commando. Those present included Colonel Neville RM, Brigadier Robertson of COHQ and Brigadier John Durnford-Slater of the SS Group. Fleming was present for the DNI along with representatives of the navy's Director of Torpedoes and Mining (DTM) and Deputy Director Operational Division (DDOD). Military Intelligence and the War Office were represented by Brigadier Vale, Deputy Director Military Intelligence (DDMI) and Lieutenant-Colonel Perceva for MI1. Ensuring 30 Commando were involved in the planning stages of operation OVERLORD, a representative of the COSSAC planning team was present, along with representatives of Twenty-First Army Group and the Air Ministry. Representing 30 Commando were the CO, Lieutenant-Commander Riley, backed up by Lieutenant-Commander Curtis and Captains Ward, Huntington-Whiteley and Hargreaves-Heap.

Mines (DTM), emphasised how effectively 30 Commando had captured examples of enemy torpedoes in the Mediterranean,[74] with captured examples returned to the UK for evaluation enabling counter measures to be devised.[75] Fleming advised the meeting that, in preparation for OVERLORD, agreement had been received to increase the Naval Section of 30 Commando to one hundred and thirty-four all ranks to provide the strength required to fulfil the intelligence capture requirements of the DNI and DTM. It was acknowledged that this figure allowed for thirty men to be despatched to join SEAC under Mountbatten, but only if clear information could be provided detailing the command structure in Asia and proposed duties.[76] By 7 January 1944, Rushbrooke decided that no members of the unit would be sent to the SEAC, with the total strength of the unit reduced to one hundred all ranks reflecting this decision.

The role of 30 Commando's existing military Troop was debated, with agreement that they would not be disbanded but would remain in Italy to support S Force and the exploitation of Rome. Members of the army Troop returning from Corsica to Algiers, were to transfer to the Italian mainland. 30 Commando military personnel still training in the UK were to join the rest of the Troop at Bari. Naval Intelligence would have no further involvement in Italy, with the army Troop, operating under the original cover title SEU, administered by No 2 SS Brigade, subordinate to Fifteenth Army Group. The latter acknowledged that the local FSS were not competent or trained to provide the services of an Intelligence Assault Unit. The SEU's numbers were increased to four officers and

---

[74] TNA DEFE 2/1107, Minutes of meeting to Discuss the Intelligence Assault Unit (Special Engineering Unit, No 30 Commando), Held at COHQ, 31 December 1943, CR 58/44, point 2, clause iii and point 3.

[75] TNA ADM 223/500, This sentiment echoes the DTM's earlier appraisal of 30 Commando's performance in Italy noted in the internal Naval memo dated 8 December 1943.

[76] TNA DEFE 2/1107, Minutes of meeting to Discuss the Intelligence Assault Unit (Special Engineering Unit, No 30 Commando), Held at COHQ, 31 December 1943, CR 58/44, points 5 and 8, SACSEA or Supreme Allied Command, South East Asia.

thirty-five other ranks by 11 January 1945, with all ranks trained in specialised intelligence capture.[77]

The remaining naval and Marine Troop of 30 Commando based at Littlehampton, lacked an army component for operations in France. Brigadier Vale representing the DDMI and War Office stated that the FSS should be able to undertake these tasks. This was swiftly quashed by the representatives of COSSAC and Twenty-First Army Group who reiterated the statement by Fifteenth Army Group in Italy, that the FSS did not possess the level of training necessary for an Intelligence Assault Unit. Twenty-First Army Group confirmed they could not spare personnel to make up the military formation now absent from 30 Commando.[78] It was possible that Brigadier Vale was unaware of 30 Commando's training and expertise concerning GC&CS or cryptographic intelligence, so was ignorant of the tasks they were expected to fulfil. The proposed solution was to add a further sixty-five Royal Marines to the ranks of the commando to handle the military tasks in France. 30 Commando had operated alongside various RAF Regiment Squadrons in the Mediterranean and developed a productive relationship that catered for air force intelligence needs. With no similar role anticipated for the RAF Regiment in France, the Air Ministry decided that an RAF Officer would be appointed to work with 30 Commando to liaise with target requirements and planning.

The change of title of the commando needed to be finalised. Major Martin had suggested returning to the original tile of Intelligence Assault Unit (IAU) to distance the SEU from SOE. During the meeting at COHQ, the consensus was to adopt the new title of

---

[77] TNA WO 170/5495, Special Engineering Unit, Memo reviewing of status of SEU since 1943, p. 1, Major W. Strachan, Officer Commanding SEU, 11 January 1945.

[78] Each Field Security Section (FSS) comprised fifteen to twenty men and was allocated to a Division or Corps.

No 30 Assault Unit (30AU).[79] This change was confirmed to the staff and commander of

the unit at Littlehampton by letter on 10 January 1944.[80] Although the term 'Commando'

had been dropped from the unit's title, it was confirmed by Brigadier Durnford-Slater that

the commando green beret could still be worn as the unit would remain subordinate to the

Special Services Group.[81] The army Troop in Italy were not included in the circulation, so

continued to use the title 30 Commando on official paperwork and operate under their

cover name of Special Engineering Unit. The new War Establishment (WE) for 30AU and

administration was repeatedly debated, with the unit expanded several times until finalised

in May 1944 with the issue of army Form G1098.[82]

3.04   RAF Regiment and ALSOS - S Force in Italy

The RAF Regiment Field Squadrons had proven their worth forming the 'muscle' within S

Force during the Tunisian Campaign, in addition to fulfilling the Air Ministry's

intelligence gathering needs. Three Squadrons - 2721, 2744 and 2788 - were retained in the

Mediterranean as a mobile reserve. Squadron 2788 (stationed near Cassino with Fifth

Army forward troops) and 2721 (billeted in Naples) were inspected in February 1944 and

continued to be allocated to forthcoming S Force operations planned for Rome. Squadron

2771, the third Tunisian veteran was held in reserve yet also earmarked for S Force

---

[79] TNA ADM 223/500, J.I.C. (42) 305 (O) 5 August 1942, attached letter dated 31 July 1942, Combined Operations Headquarters to the Joint Intelligence Committee, Formation of Special Intelligence Units.

[80] TNA DEFE 2/1107, Change of Name and Address, HH/A12/1014, Captain Huntington-Whiteley RM, to commanding officer 30AU, 10 January 1944.

[81] TNA DEFE 2/1107, Minutes of meeting to Discuss the Intelligence Assault Unit (Special Engineering Unit, No 30 Commando), Held at COHQ, 31 December 1943, CR 58/44, p. 3, point 11 and p. 4, point 13. When Fleming had raised the Intelligence Commando in September 1942, it was on the understanding that Marine Commandos would not sacrifice privilege by volunteering for his fledgling Commando. By 1942, Royal Marines had to complete commando training, allowing them to wear the green beret in recognition of successfully completing the training course. Army and naval ratings could also complete the commando training, allowing them to wear the converted green beret, although they were expected to install their usual regimental or naval badge in place of the Marine's 'Gibraltar' badge.

Brigadier John Durnford-Slater (1909-1972) is credited with raising the first army commando during the Second World War – No 3 Commando in July 1940.

[82] Army Form G1098 defines the size of any unit, providing entitlement to weapons, stores, equipment and transport.

duties.[83] Their inspection was part of a wider review of all RAF Regiment Squadrons stationed in the Mediterranean by Major-General Claude Liardet, Director-General of Ground Defence (DGGD) and Commandant General of the RAF Regiment.[84] There was mounting pressure from Whitehall in 1944, to strip airfield security units of underutilised ranks and reallocated them to forces preparing for operation OVERLORD.[85] Liardet had accommodated War Office pressure by using greater number of local Levies for security duties in the Middle East and Africa, reducing two Regiment Squadrons and capping personnel numbers.[86] In the Mediterranean, this was set at three and one half thousand all ranks, with over two thousand officers and ordinary ranks returned to the UK.[87] In May 1944, Chief of the Air Staff (CAS) Air-Marshal Portal requested that Liardet push harder for further ranks to volunteer to transfer from the RAF Regiment and re-join the army.[88] Against this pressure it is an indication of the importance of S Force operations that RAF Regiment Squadrons 2788, 2721 and 2771 were retained at full strength (a total of twenty-one officers and five hundred and fifty-five other ranks) in readiness for the occupation of Rome. These mobile squadrons were supported by eighteen 5-CWT lorries, twenty-one three tonner lorries, twenty-one Humber Reconnaissance Armoured Cars and eighteen motorcycles. A further eighteen jeeps and three 5-CWT lorries were provided as transport

---

[83] TNA AIR 20/3658, Report upon the Tour of MAAF and ME by DGGD and GD4.

[84] Major-General Sir Claude Francis Liardet (1881-1966). In 1941 he was appointed Inspector General of Airfield Defence, Commandant-General of the newly formed RAF Regiment and in 1942 and Director-General of Ground Defence.

[85] Oliver, *Through Adversity,* p. 129. With the threat of invasion of the UK passed and air superiority enjoyed in the Mediterranean, moves were made to reduce the numbers in the RAF Regiments. Churchill commented 'I want 2500 men transferred, including 2000 immediately for the Guards. They will be much better employed there than loafing around overcrowded airfields.'.

[86] TNA AIR 20/3658, Report BJ 42/1/DGGD dated 9 March 1944. Liardet notes that in the Middle East and East Africa, the RAF employs thirteen thousand four hundred native levies for RAF troop duties.

[87] TNA AIR 20/3658, Report upon the Tour of MAAF and ME by DGGD and GD4. note dated 24 February 1944, p. 6.

[88] Marshal of the Royal Air Force Charles Frederick Algernon Portal, 1st Viscount Portal of Hungerford (1893-1971), Chief of the Air Staff (.

for the RAF Squadron HQ, technical intelligence, and an interrogation team to form a

POW interrogation CSDIC.[89]

Joining S Force in March was a newly formed US intelligence investigation team

using the cover name ALSOS and headed by Lieutenant-Colonel Pash. This group were

scouring liberated Axis territory for scientific and Atomic research establishments. Pash

was keen to capture and interrogate two Italian physicists who had worked with the

Germans and now resided in Rome. In a war punctuated with acronyms, ALSOS was not a

contraction, but ancient Greek for 'Sacred Grove' - a whimsical nod to the military head of

the Manhattan Project in Los Alamos, New Mexico, Lieutenant-General Groves.[90] There

was nothing whimsical about the purpose of either ALSOS or Pash in Europe. Allied

intelligence listed pro-Nazi physicists, their probable location and which of them

specialised in atomic research, yet the same intelligence teams were unable to speculate on

Germany's progress towards creating a weapon. Pash and his ALSOS team were charged

with tracking down the members of the German Atomic Research team - the Uranium Club

– and to establish how far the German's had progressed with building their own atomic

bomb.[91] Secrecy surrounded the ALSOS team, being merely referred to as the 'Technical

Mission' on S Force troop register.[92] Before leaving the US, Pash had been advised by

Groves not to trust or disclose his mission to the British.[93] On arriving in Italy, Pash was

---

[89] TNA AIR 23/6317, Outline of the Proposed Air Task Force to Operate Under S Force, Wing Commander Wiseman, Chief Intelligence Officer HQ NATAF, TAF/317/1/INT, 22 December 1943 to Colonel Smith, S Force. Interrogation of captured intelligence 'targets' such as identified scientists, industrialists or enemy officers were undertaken by the Combined Services Detailed Interrogation Centre (CSDIC).

[90] Lieutenant-General Lesley Richard Groves Jr (1896-1970), made his reputation as assistant for construction of the Pentagon in Washington during 1942, before heading the Manhattan Project – the US led research project to construct Atomic weapons.

[91] Colonel Boris Theodore Pash (1900-1995), a White Russian born Boris Fedorovich Pashkovsky, who emigrated to the US after the Russian Revolution. Pash became chief of counter intelligence, investigating members of the Manhattan Project before heading the ALSOS team in Europe between 1943 and 1945.

[92] TNA WO 204-13134, Troop List S Force, probably April 1944.

[93] Colin Brown, *Operation Big: The Race to Stop Hitler's A-Bomb* (Stroud, Amberley, 2016), p. 143. According to biographer Robert S Norris, Groves was an Anglophobe. He believed 'the Brit's contribution to the atomic bomb was miniscule compared to the massive amount of money and material invested in the

surprised to discover that the senior intelligence officer within AFHQ, British Major-General Strong, was fully briefed as to his team's purpose and the implicit secrecy of his mission. Strong had been senior intelligence officer reporting to General Eisenhower until the latter's return to the UK on 16 January 1944. He now held the same position for the current supreme commander AFHQ, the British General Maitland Wilson.[94] Receiving positive support for his mission from Strong, Pash passed non-atomic intelligence revealed by the ALSOS team to the British War Office, for circulation to other Allied ministries.

3.05 AFHQ - JIC representation and Permanent Target Analysis

AFHQ intelligence staff and the JIC were concerned that important intelligence targets in the Mediterranean theatre might be overlooked. A review in December 1943 conducted by Fifteenth Army Group, had concluded that there was 'inadequate detailed planning and preparation of intelligence target information, and the lack of continuity of command and staff'.[95] The JIC also worried that intelligence might be missed. In a memo issued on 17 August 1943, they reminding AFHQ of the targets that were anticipated and emphasising that they were responsible for coordinating the FSS alongside 30 Commando.[96] In addition, the Chiefs of Staff, fearing intelligence targets could be looted, proceeded to list the most important items AFHQ were expected to recover - codes, cyphers and communications equipment. To increase their presence in theatre, the JIC decided to create a regional Joint Intelligence Committees (Allied Forces) in the Western Mediterranean in March 1944,

---

development of the bomb by the United States, and they could not expect to be treated as equal partners.' Groves believed the British also wanted to gain commercial advantage in atomic reactors after the War.

[94] General Henry Maitland Wilson (1881-1964), C-in-C Middle East in 1943 and later Supreme Allied Commander Mediterranean (SACMED) in 1944, succeeding General Eisenhower when the latter returned to the UK as Supreme Commander Allied Expeditionary Force (SCAEF). Wilson was promoted to Field Marshal in December 1944, before a move to the US becoming British military representative dealing with the production and testing of the atom bomb as part of the Manhattan Project. He was replaced as SACMED by General Harold Alexander (1891-1969).

[95] TNA WO 204/907, Mediterranean "S" Force operations, Lieutenant-Colonel Thomas Young, 28 December 1944, History of S Force, p. 2.

[96] TNA CAB 81/116, JIC (43) 344 (O), Operations in the Mediterranean – Arrangements for Obtaining Special Information, 17 August 1943.

based alongside AFHQ in Algiers.[97] The Anglo-US JIC(AF) comprised one US and one British representative from each of the three services, a British member from the staff of the Minister Resident (Harold Macmillan MP) and an US member from the staff of the US Political Adviser to General Maitland Wilson. The JIC(AF)'s primary function was to produce appreciations and notes dealing with the military situation in the Mediterranean and the ongoing campaign on the Italian mainland. The established JIC(ME) – Middle East – established in Cairo was now subservient to the JIC(AF) in Algiers. Any papers or correspondence generated in the Mediterranean Theatre were issued through the JIC(AF) for forwarding to the JIC or JIC(Washington). In return, the JIC used JIC(AF) to promulgate information decided by London and liaise with local commands.

In December 1943, senior AFHQ staff reviewed the practicality of retaining a permanent intelligence gathering body within AFHQ. On 27 December, the newly promoted Major-General Strong wrote to Brigadier Airey of Fifteenth Army advising that he planned to attach a small group to S Force comprising three Advance G2 officers headed by Major Cave plus two clerks, and that they should remain in Rome once S Force was dissolved, to complete any outstanding intelligence duties.[98] With little prospect of Rome's fall before May, Major Cave took the time to draft and issue a detailed report on 24 April 1944, suggesting routine procedures for exploitation of large cities.[99] He attempted to bring together all the lessons learned thus far in Italy and from observed German practice when advancing in North Africa. From the start he emphasised the importance of safeguarding the sources of information and coordinating intelligence

---

[97] TNA CAB 81/121, JIC (44) 118, Joint Intelligence Committee, Allied Force JIC (AF), 23 March 1944. Joint Intelligence Committee, Allied Force Composition. Annexed memorandum dated 14 March 1944 detailing the creation of JIC(AF), their composition, responsibility, authority and relationship with JIC(ME).

[98] TNA WO 204/943, Letter from Strong to Airey, Fifteenth Army Group, GBI/197/11, 27 December 1943.

[99] TNA WO 204/795, A Suggested Routine Procedure for the Intelligence Exploitation of Large Cities, an expansion of the original memorandum dated 24 April 1944.

agencies. Cave stressed the need for a central intelligence agency to prepare detailed information about the target city, along the lines of analysis currently managed by his Advance G2 AFHQ. He noted the German practice of first securing the target by martial force before allowing technical investigators forward. He advocated that the intelligence assault unit or target investigators should be held back until the front stabilised, following the German practice of dividing the advance into a military phase followed by an intelligence phase. For example, when German forces prepared to exploit Cairo in 1942, intelligence experts were held behind the front line while Axis forces engaged the Allies at El Alamein. In the event the German attack was a debacle, that could have resulted in the loss of the German intelligence investigators, had they been in the vanguard.

Referring to the selection of targets, Major Cave suggested the creation of a permanent Intelligence Targets Sub-Committee (ITS) who would liaise with JIC(AF) to ensure joint intelligence needs were accommodated. Their first role would be to accept proposals for intelligence targets and compile lists for use by S Force planners. He then suggested ITS might offer assessments of troop requirements to secure targets, as well as administering the processing of target items and especially captured documents. They could combine the collation of intelligence targets with providing the intelligence collateral to assist with target capture – maps and contact details. Cave's recommendation that the intelligence phase should follow the initial assault phase was embraced by commander George Smith, with S Force entering Rome the day after US Fifth Army troops occupied the City.[100] Smith would wait to address Cave's proposed formation of an ITS until after the fall of Rome.

---

[100] TNA WO 204/907, Final Report of S Force Operations, 17 June 1944.

Preparing for Rome's liberation, Smith was keen to ensure the safeguarding of captured documents and archives. He sought advice from Mr Fred Shipman, Director of the Franklin Delano Roosevelt Presidential Library, flying him to Italy in May. In his temporary role as Archives Advisor to the Allied Combined Command, Shipmen counselled Colonel Smith of the best way to treat captured archives. He recommended good liaison with Advance G2 as he observed that the crucial time for safeguarding an archive is in the first days of occupation, preventing access to excited residents and liberators intent on looting. Good security was essential. G2 prepared in advance, organising facilities to microfilm, develop and print documents. Repair of buildings and general aid should be sought straight away, especially for repositories of information used daily by the local population and crucially, they should pay the archive staff. Shipman cited problems in Palermo where a lack of salary meant the staff simply disappeared to find paid work in jobs elsewhere. Colonel Smith followed much of Shipman's advice, with staff appointed to care for Rome's varied archives and ensure they were protected and catalogued for posterity.[101] By December a robust administration prevented the misuse of Italian archives, with Chief of Intelligence Mr Raleigh Radford appointed. He insisted that items should not be removed from Rome's archives, although they could be accessed by G5 AFHQ personnel if their contents were needed as evidence in ongoing prosecutions.[102] Photostats could also be taken as these were permissible in Italian courts. By December 1944, over one hundred reports had been completed listing individual archives.[103] The S Force policy with handling archives and developed by Shipman provided an exemplar to be adopted in Western Europe later in the war.[104]

---

[101] WO 204/943, Report of Fred W Shipman as Archival Advisor to the ACC, AFHQ, 7 May 1944.

[102] G5 - Civil Affairs and Military Government.

[103] WO 204/795, Meeting to discuss Future Work on Italian Official Archives, 22 December 1944.

[104] Keith Ellison, Frontline Intelligence in WW2: (II) German Intelligence Collection 2012, p. 9. <https://www.academia.edu/35156351/Frontline_Intelligence_in_WW2_II_The_Development_of_Allied_Intelligence_Collection_Units_doc> [accessed 6 March 2024].

In December 1943, it was envisaged that S Force Rome would comprise four hundred and eighty-seven enlisted men and one hundred and twenty-seven officers, a force of six hundred and fourteen men in total - including 30 Commando.[105] Rome was expected to fall within the first months of 1944. The S Force formation order issued by Colonel Smith followed a similar format to that established for the capture of Tunis. Once all listed sites had been secured and all seized documents handed to AFHQ G2 intelligence staff, S Force was to be disbanded, with all elements reverting to their original status upon release by the S Force commander. This document suggests that in December 1943, there was no plan to retain a permanent S Force in Italy after the Rome operation. The two-day alert ordering the imminent advance on Rome was issued by Fifth Army HQ on 18 May 1944.[106] Two weeks later, on 4 June Rome was declared an 'open city' as US troops of the Fifth Army moved into the Italian Capital. The S Force had swollen to twelve hundred and eighty-nine men, including two hundred and four officers. 30 Commando had been expanded with three officers and seventeen other ranks providing two separate sections and a headquarters contingent. Although the three RAF Regiment Squadrons remained in Italy to support S Force, in the event only two entered the capital, 2721 and 2788 Squadrons.[107] Both were attached to Fifth Army, with 2721 squadron responsible for capturing Ciampino Airfield on the outskirts of Rome.[108]

The first capital of an Axis power had been liberated, despite the instructions of General Alexander, commander of Fifteenth Army Group – now termed Allied Armies Italy (AAI), ordering the Fifth Army under US Lieutenant-General Clark to bypass the city

---

[105] TNA ADM 233/13034, Troop List S Force.

[106] TNA WO 204/9917. Headquarters S Force, c/o HQ Fifth Army, Operations Order Number 11, 18 May 1944.

[107] TNA AIR 20/3658, RAF Regiments Stationed in Central Mediterranean, BJ 42,/1/DGGD, 9 March 1944, Major-General Liardet DGGD.

[108] RAF Web, A History of RAF Organisation, RAF Regiment Squadrons 2700 – 2850, 2721 Sqn, <https://www.rafweb.org/Organsation/Regiment2.htm> [accessed 23 April 2023].

and cut off the retreating German forces.[109] S Force started moving into the city at 0015 on 5 June, with a command post set up by 0315. British Major Manley of the Psychological Warfare Branch (PWB) and part of S Force, vividly described his move to the city. The PWB drove by moonlight through the ruined remnants of Velletri, Genzano and Albano to reach the outskirts of Rome at around first light – a journey of some twenty-two miles. Looking at Rome in the distance, they could make out a small number of fires and feared that the city had suffered the same fate as the Alban Hill towns they had just passed through, but as the entered the city, they found virtually no damage. The streets were clean and swept, the fountains still operating and apart from hearing a few shots, there was virtually no presence of the retreating German troops.[110] Traveling deeper into the city around four o'clock, locals came onto balconies and a few clapped, but the atmosphere was subdued. Only at seven o'clock did the populous awake and find their city liberated and then the streets filled with celebration. S Force encountered little serious street fighting as they moved through the city, locating the targets they had spent months preparing to secure. With the slow advance to capture Rome, most of the ALSOS team had returned to the US after March, though Pash rushed to Italy when he heard Rome would be liberated in June, entering the city on the fifth.[111] He located and detained scientists and arranged for the capture of the University of Rome. Interrogating Italian physicists Adoardo Amaldi and Gian-Carlo Wick, he confirmed that progress on a German A-Bomb was less advanced than feared.

---

[109] General Mark Wayne Clark, 1896 – 1984, command of Fifth Army in Italy. He had been ordered by his superior General Alexander to cut the retreat of the German 10th Army as they swung round Rome. Clark instead moved into the city, leaving the German army space to retreat and reform north of the city. An officer in the Devonshire Regiment and part of the British Army Film Unit, Alan Whicker, when writing of this action by Mark Clark stated, 'if he had been German, Hitler would have him shot'.

[110] TNA WO 204/6321, The Fall of Rome to the Allies 4 – 5 June 1944, Report by Major Manley PWB.

[111] Alan Morrison, *1945: Statements on the Atomic Bomb* (MacKay: Glasgow, 2019), pp. 139-140.

3.06   30 Commando – A Key Member of S Force

The Allies strongly suspected that the German Intelligence, the *Abwehr*, and German

security services – the *Sickerheitsdienst* (SD), intended to leave agents in Rome to act as

saboteurs. Colonel Hill-Dillon had written to Fifteenth Army Group to make them aware of

the risk, and to alert them that the army Troop of 30 Commando were available when the

city fell, to trace and hunt down the agents and locate any paperwork they may possess.[112]

The German *Abwehr Kommando 150* had instructed fifteen agents to remain in the city,

controlled by two senior agents. The latter were double-agents working for the Allies, who

identified the other fifteen operatives who were quickly detained. [113] Hill-Dillon's letter is

interesting as the veteran Colonel, formerly of GHQHF, was last encountered in July 1942

questioning the creation of 30 Commando and promoting the role of the FSS.

On 7 June, Armando Perone, a onetime agent of the German *Sicherheitsdienst* (SD)

[SS Security Service], approached S Force and announced he could lead them to a cache of

explosives stored in the deserted German Embassy. He stated that he had worked for the

German authorities and had received explosives for sabotage operations from the cache

within the Embassy compound. The diplomatic status of consular buildings ensured they

remained locked and unsearched yet on this occasion, the risk of leaving explosives

unattended meant entering the Embassy compound was deemed essential. Italian engineers

could clearly remove any explosives on the site and the FSS could search the premises for

useful intelligence. Instead 30 Commando were deployed as they could undertake both

functions. They would also act on behalf of CSDIC who were keen to source names of

staff who had worked with the Germans before the building had been evacuated or who

---

[112] TNA WO 204/943, Letter to Fifteenth Army Group from Colonel Hill-Dillon, B-589.510, 16 December 1943.

[113] Keith Ellison, Frontline Intelligence in WW2: (II) German Intelligence Collection 2012, p. 8. <https://www.academia.edu/35156351/Frontline_Intelligence_in_WW2_II_The_Development_of_Allied_Intelligence_Collection_Units_doc> [accessed 10 March 2024].

had travelled behind German lines. They hoped that Italian workers might reveal details of the German order of battle during questioning. Any useful detainees, CSDIC 'routed' to Naples for further interrogation.[114]

30 Commando were led by Major Ward, SEU member since 1942, veteran of No 3 Commando and the Lofoton Raid and before that, FSS officer in France from 1939 to 1940.[115] Searches commenced on 8 June, with weapons and explosives discovered amounting to fourteen hundred pounds of plastic explosives plus mines and grenades. Partisan radio equipment and transmitters were also hidden within the compound. Documents were recovered by 30 Commando, including a card index listing all Italians in the city who had worked for the German Embassy. Training schedules, frequency schedules and call signs for agents remaining in Rome after the German withdrawal were also recovered.[116] To ensure correct procedure was followed, 30 Commando were accompanied by a representative of the US state department and UK Foreign Office and all actions witnessed by a member of the Swiss embassy. The only request of the Swiss representative was to provide a full register of all items found or removed. The search was completed by 17 June and a full list of both impounded documents and removed explosives and radio transmitters provided to the Swiss embassy official.

Alarmed by the discoveries within the German Embassy, General Maitland Wilson, Supreme Commander Mediterranean (SACMED) wrote to the Combined Chiefs of Staff and the JIC questioning the 'immunity from entry' policy, asserting that all consular

---

[114] TNA WO 204/11445, AFHQ, CSDIC MED, CSDIC/1030/1243/MED/A, Letter to the Military and Technical Officer, Lieutenant-Colonel McMillan regarding CSDIC duties within S Force after the fall of Rome, Commander G R Rodd RN, Commander CSDIC Med, 16 December 1943.

[115] TNA ADM 223/214, Chapter 1, Early History of the Unit, section 16, Army Troop, Trevor Granville, 1947.

[116] TNA WO 204/907, Material of Interest to SCI found in German Embassy, extract from 30 Commando after action report, 24 June 1944.

buildings held potential intelligence of value. Maitland Wilson advocated reversing the 'immunity' policy, suggesting that the JIC should preside over the proposed policy change. The JIC weighed the advantages of intelligence that could be gained from searching consular buildings, against the 'destruction of one of the few rules of international behaviour that is still of fairly general application.' They felt that if the principle of immunity were disregarded now, it could cease to have any meaning going forward, a fact that could be used by an unscrupulous power in the future to their advantage. The JIC concluded that the Allies were ultimately to be the losers from any further violation of diplomatic and consular immunity, which they felt was one of the foundations of normal international relations. Maitland Wilson's policy change was not adopted.

3.07   IOS and IOSS – Permanent Target Analysis in Italy

With Rome liberated, the focus of the British Government was now on the city. On 10 June 1944, British General Ismay requested that a short report be prepared by the IPC in London 'explaining the situation as regards the Italian theatre and making recommendations for any immediate action that may be required'.[117] Ismay's request was in response to an enquiry received from the Prime Minister's son in law, Mr Duncan Sandys, who was 'anxious lest valuable intelligence targets may be being missed in Italy'.[118] It is not made clear what 'valuable intelligence' might have been missed or why he was suddenly interested. Sandys was the technically minded chairman of the BODYLINE committee, appointed to the position by Churchill on 20 April 1943 after being proposed by Ismay two

---

[117] General Hastings 'Pug' Ismay (1887-1965), Minister of Defence and Chief Staff Officer serving Churchill throughout the War. He created an effective bridge between the Military establishment and the Prime Minister and civilian government leadership.

[118] TNA FO 935/19, Intelligence Priorities for Italy, Lieutenant-Colonel E. J. King Slater, 10 June 1944.

days earlier.[119] This committee was tasked with collecting intelligence and investigating the German rocket powered weapons program, changing its name to the CROSSBOW committee in November 1943. It is possible that Sandys was keen to discover if any intelligence relating to the rocket program may have been found in Rome. Both Ismay and Sandys were due to attend a meeting with the Imperial staff on 14 June, where future policy in Italy was scheduled for discussion, and both men presumably wished to better understand intelligence target capture in the Mediterranean. Cavendish-Bentinck, chairman of the JIC, drafted a short reply to Ismay dated 12 June where he clarified the role of the IPC stating it was a purely British committee formed at the request of the JIC - although US involvement was imminent. He advised that he had received news that an Intelligence Objectives Sub-Committee (IOS) was being formed under AFHQ. Bentinck noted that although this IOS would fulfil a similar role to the IPC in London, there was no expectation that the two bodies would correspond with each other.[120] No mention was made of AFHQ Advance G2, who had successfully collated intelligence targets in the Mediterranean since the Tunisian campaign in 1943.

Major Cave, head of AFHQ Advance G2 had proposed in April, that the work undertaken by his G2 team be formalised by creating a permanent Intelligence Target Sub-Committee (ITS). The JIC agreed with the concept and expanded the idea proposing the Intelligence Objectives Sub-Committee (IOS) who would absorb the duties of the Advance G2. They forwarded their requirements to JIC(AF) on 26 May, who in turn wrote to

---

[119] Allan Williams, *Operation Crossbow: The Untold Story of Photographic Intelligence and Search for Hitler's V Weapons* (London: Preface, 2013), p. 110. Duncan Sandys (1908-1987), his military experience after serving in Norway was as head of the British Rocket Regiment within the Projectile Development Establishment at Aberporth. After serious injury, he returned to government service as Parliamentary Secretary to the MoS, responsible for weapons research, development and supply – an ideal choice to head the CROSSBOW committee with nepotism unnecessary.

[120] TNA FO 935/19, Intelligence Priorities for Italy, Annex, Lieutenant-Colonel E. J. King Slater, 12 June 1944.

Colonel George Smith, expounding the JIC requirements and advocating the creation of the section.[121] Smith agreed to the formation, established shortly after entry into Rome. Reflecting the current sub-section of Advance G2, the new formation was titled the Intelligence Objectives Sub-Section (IOSS). This team were to process target suggestions from all units in theatre and propose targets themselves. Targets were defined as a building, office, factory or person likely to yield material of intelligence value.[122] IOSS researched and collated detailed information on targets including access to buildings, floor plans, target management and the expected results. Targets were classified, prioritised and the preparation of target folders initiated.[123] Focussing on cities that held maximum potential intelligence subjects, IOSS researched objectives within each city, planning how best to safeguard targets and nominating agencies best placed to exploit objectives.[124]

Operating in the UK in parallel to the IOSS was the newly formed Intelligence Priorities Committee (IPC) who coordinated intelligence target list compilation for Western Europe. The JIC considered whether to add Italian targets to the IPC remit when on 30 May 1944, they issued a decree stating that the IPC should carry out Italian target analysis for SACMED as well as SHAEF. This requirement appears to have been rescinded as it was believed there were insufficient targets in Italy to merit IPC involvement and the task remained with IOSS. The paucity of targets outside Rome is illustrated by the reaction of the British foreign office, who were approached to provide a list of priority targets for northern Italy – at that point still occupied the Germans. The Foreign Office responded with only one target – the archives of the Mussolini's Ministry

---

[121] TNA FO 935/19, IOS Proposal JIC (AF) /8, 26 May 1944.

[122] TNA WO 204/796, Fifteenth Army Group Headquarters, Directive on Exploitation of Intelligence in Northern Italy, Appendix B, Definitions, 17 February 1945.

[123] TNA WO 204/796, Fifteenth Army Group Headquarters, Directive on Exploitation of Intelligence in Northern Italy, 17 February 1945, p. 2. Reiteration of IOSS responsibilities within AFHQ.

[124] TNA WO 204/795, Joint Intelligence Committee (Allied Force), Intelligence Objectives Sub-Committee (IOS), JIC (AF) 8, 26 May 1944, Air Commodore F Wooley, officiating Chairman JIC(AF).

of Foreign Affairs - wherever it was now located - they believed in Venice.[125] The Foreign Office had been attempting to locate the archives relating to this ministry since September 1943, as it was believed it contained the identities of Italian officers who were responsible for the maltreatment of Allied prisoners of war in Italy and North Africa.[126] By August 1944, the IPC in London had evolved into the Combined Intelligence Objectives Sub-Committee (CIOS) who questioned whether they should be involved in Mediterranean targets or restrict their efforts to areas under the direct control of SHAEF. The CIC clarified that CIOS were responsible for coordinating exploitation throughout Europe and should continue their studies of all areas. [127] They were instructed to support IOSS for the remainder of the war, forwarding details of targets that were identified in Italy, Austria and Hungary.[128] Additional lists were also issued to IOSS by the foreign office, detailing Austrian military and industrial targets.[129] The IPC and CIOS will be examined in depth in Chapter four.

3.08 ICU - Formation of the Intelligence Collection Unit

The intelligence targets that had been identified by the Advance G2 leading up to the liberation of Rome had been investigated by 15 June. S Force had detained two hundred and forty-nine enemy nationals, including forty-five agents. Three hundred and thirty-two banks, factories, government offices, churches and Vatican buildings had been secured

---

[125] TNA WO 204/795, Letter to G2, AFHQ, from The Resident Minister, The Foreign Office, 13 July 1944.

[126] TNA WO Letter from Mr Harold. A. Caccia to Brigadier Kenneth Strong, Fifth September 1943. Harald Caccia had been personal secretary to Mr Anthony Eden, but in the summer of 1943, he was attached to the staff of Harold Macmillan, Minister Resident in the Mediterranean - Britain's political representative in Allied Headquarters in North Africa.

[127] TNA FO 935-21, CIOS Telegram Summary, CIOS (44) 2, Brigadier-General Betts to CIC 31 August 1944, CIC to Betts, Reply 11 September 1944.

[128] TNA FO 935/9, OBJ/O/783/45/119, Letter and list issued by Noton, EAB & FO, to CIOS, 23 February including lists provided to AFHQ in January 1945.

[129] TNA FO 935/9, Austrian target lists to be issued to IOSS in Italy, with input from ISTD in Oxford providing target intelligence.

along with the personal archive of Mussolini's secretary.[130] After a satisfactory review of the performance of S Force, Colonel Smith elected to retain essential units, forming a permanent body titled the Intelligence Collection Unit (ICU). Smith assumed overall command of the ICU, in addition to command of G2 Intelligence for Fifteenth Army Group. ICU HQ was commanded by US Lieutenant-Colonel Young Jr, with his British deputy Lieutenant-Colonel Vercoe.[131] The Anglo-US headquarters comprised command personnel, staff and documents sections with CSDIC specialist interpreters, seconded from the Eighth Army in readiness to interrogate target prisoners. Bomb disposal was provided by one section of 870 Nucleo Guastatori – Italian sappers and engineers. The British provided permanent mess and supply staff in addition to the majority of transport with 100 cwt lorries and a fleet of jeeps. 30 Commando's collaborative participation in searching the German Embassy, coupled with their unique training and skill in identifying secret documents and cryptographic intelligence, ensured their place within the ICU. Smith envisaged that this new formation would provide the veteran nucleus of all future S Forces in Italy, with his G2 Intelligence staff provided the command, operational, administration and communication facilities. They were supported by a specialist team of Italian 'Arditi' infantry troops to assist with engineering and bomb disposal duties. Other elements of future S Forces included FSS, CIC, Military Police, mechanics and a company of infantry requisitioned from the Allied Armies Italy (AAI). Although not officially part of the ICU, the RAF Regiment Squadrons identified earlier remained in theatre in readiness for future S Force operations.

The role of the ICU was to co-ordinate and facilitate the exploitation of intelligence targets defined by the IOSS, including the seizing and safeguarding of documents,

---

[130] Lori Stewart, *S Force Enters Rome: 5 June 1944* (U.S. Army Intelligence Center of Excellence, 2023), <https://www.dvidshub.net/news/446222/s-force-enters-rome-5-june-1944> [accessed 22 June 2023].

[131] TNA WO 204/907, S Force, photographs of personnel, June 1944.

archives, technical data, equipment and records. The arrest of enemy agents and fascist sympathisers, a key part of FSS duties, was also prioritised.[132] It was envisaged that target sites need only be held or guarded for thirty-six hours, with access only permitted to holders of special ICU passes. These documents were supplied to intelligence agencies or organisations who had applied to ICU for access to target in advance. The ICU reviewed all intelligence captured from documents to personnel, after which targets were efficiently removed from the IOSS target list. By creating the IOSS to process intelligence targets and the ICU to provide the administrative and operational nucleus of future S Force operations, Colonel Smith ensured continuity with all future intelligence capture operations in Italy.

On the 22 June, a little over two weeks after the liberation of Rome, Smith called a meeting to plan the expansion of the next S Force operation liberating Florence. Points agreed in this meeting were confirmed in a nine page document titled 'Florence S Operations' on 29 June 1944.[133] S Force Florence comprised 30 Commando, with 263, 412 and 47 FSS of the British Eighth Army taking in the role of providing security and guarding intelligence targets. 2744 Squadron RAF Regiment had formed part of the Tunis S Force, remained in Italy in readiness for future S Force deployment throughout 1944, advancing on targets in Austria in May 1945. Army input was minimal, with only one company taken from the Allied Armies Italy (AAI), a platoon of Military Police and one section of 870 Nucleo Speciale Guastatori (Italian Engineers or Sappers) providing mine and booby-trap disposal for the ICU. Any buildings suspected of containing German or Japanese operational intelligence were deemed top priority.[134]

---

[132] TNA 204/796, Intelligence Branch, Allied Armies in Italy, Exploitation of Intelligence in Northern Italy, Colonel G S Smith, September 1944, Section B, ICU Operations, p. 1.

[133] TNA WO 204/795, Florence S Operations, 29 June 1944.

[134] TNA WO 204/796, Intelligence Branch, Allied Armies in Italy, Exploitation of Intelligence in Northern Italy, Colonel G S Smith, September 1944, Section B, ICU Operations, Arrest of Persons, p. 6.

Unlike the comparatively peaceful entry into Rome in June, the advance into Florence involved drawn out street fighting and mine clearance. The ICU was split into two parts, with half the force, accompanied by one FSS, entering the city south of the river Arno on 4 August 1944. Forced to adopt a combat role, the ICU suffered thirty-four casualties.[135] The Germans blew five of the six bridges across the river before pulling out of the city on the night of 10 August.[136] The remainder of the ICU entered the city once the area north of the river was secured, with an HQ established on 14 August. The Florence targeted intelligence dossier was well prepared by the IOSS, resulting in investigations within the city being completed by 23 August.[137] Of the one hundred and forty-eight targets researched before the city was liberated, a further thirty-three were added after the city was entered. Of the one hundred and eighty-one targets, twenty-nine were still in German hands on the city's northern edge, while eighty six were deemed worthless as the enemy had efficiently cleared the targets of any useful intelligence before their withdrawal. Even so, S Force operations in the city were deemed successful. Regarding the ICU, 'all operational agencies and combat commanders who, without exception, endorsed its existence and requested its continuance'.[138]

Smith moved ICU headquarters from Rome to Florence and commenced preparations for S Force operations in north-west Italy under Fifth Army and north-east Italy under the British Eighth Army. The next targets were La Spezia, Genoa, Turin, Milan, Brescia and the Lake Garda Region, with the IOSS informed of all potential intelligence targets in these regions. Some of these were enemy personnel, ranging from suspected War criminals to technical staff who were moved to the officially designated

---

[135] TNA WO 204/907, S Force Operations in the Mediterranean Theatre of War, History, p. 3.

[136] James Holland, *Italy's Sorrow: The Year of War, 1944-1945*, (London: Harper Press, 2008), pp. 286-287.

[137] Final Report on 'S' Operations in Florence, ICU/FLO/16, 31 August 1944, pp. 1-2, point 3, Movement, Assault and Operations.

[138] Ibid, p. 2, point 4, Summary of Results.

detention centre in Florence.[139] Although Bologna was less than eighty miles away, the city was not liberated until 21 April the following year.

The efficiency with which targets in Florence had been identified, catalogued and listed by IOSS, then their capture carefully prepared for by the ICU, justified the creation of a similar second ICU to undertake S Force duties in southern France. The landings on the French Mediterranean coast code named ANVIL and later DRAGOON, had been conceived to support the OVERLORD landings in Normandy but now were to take place on 15 August. On 2 August 1944, SACMED General Maitland Wilson ordered the formation of a new Intelligence Collection Unit, designated 2 ICU, with the original ICU henceforth designated 1 ICU. IOSS were not to be involved in DRAGOON, with intelligence targets instead provided by French officers, after Maitland Wilson demanded maximum French involvement. The size of 2 ICU and the associated S Force is indicated by the requested mess facilities for one hundred and fifty officers and four hundred enlisted men.[140] 2 ICU was duly formed, with support provided by Tunisian S Force veteran RAF Regiment 2788 Squadron who landed on beaches between Cannes and St Tropez. As little enemy opposition was expected, the squadron was split into three smaller units, each tasked with occupying a designated enemy airfield and gathering any intelligence there. Swift progress was made, although one party was captured by German forces. They subsequently escaped from a train taking them North to captivity and managed to re-join their unit. 2788 squadron then returned to Ravenna in Italy, where it replaced 2721 Squadron before moving North.[141]

---

[139] TNA WO 204/796, Intelligence Branch, Allied Armies in Italy, Exploitation of Intelligence in Northern Italy, Colonel G S Smith, September 1944, Section B, ICU Operations, Mines and Booby Traps, p. 8.

[140] TNA WO 204/943, Allied Forces Headquarters to US Seventh Army, Order to organise and equip 2 ICU.

[141] RAF Web, A History of RAF Organisation, RAF Regiment Squadrons 2700 – 2850, 2788 Sqn, <https://www.rafweb.org/Organsation/Regiment2.htm> [accessed 23 April 2023].

Colonel George Smith's creation of 1 ICU formed the administrative nucleus for subsequent S Forces and operations undertaken in the cities of northern Italy to the end of 1944. According to Ellison, Rimini, Ferrara, Padua, Tarvisio, Forli and Venice were all targets investigated by 1 ICU as northern Italy was systematically liberated.[142] The formation was disbanded in January 1945 with the administration of future S Force duties transferred to Fifteenth Army Group who formed a sub-section within their headquarters G2 staff known as G2 (S Forces). It is not clear from the surviving documents whether the administrative staff from 1 ICU transferred to the Fifteenth Army's S Force. S Force operations continued up until the end of the war, with Bologna liberated on 21 April 1945. The population were not enthusiastic to see the Allies, as they believed their city should have been liberated six months earlier, noting Florence had fallen in August the previous year and was only eighty miles to the south. Residents responded more favourably when they saw Italian troops were also with the Allies. Well-armed partisans lined the streets, until the Luftwaffe attacked the city centre using small air-to-ground rockets to maximise the devastation - a parting reminder by the German Air Force of nearly twenty months of occupation. S Force investigators searched the Fascist HQ, retrieving party member records on cardex and other archive material.[143]

Even before the disbanding of 1 ICU was announced on 20 January 1945, the SEU were becoming disillusioned by the lack of deployment.[144] For much of January, the men of the SEU comprising four officers and thirty-five other ranks, conducted training

---

[142] Keith Ellison, Frontline Intelligence in WW2: (II) The Development of Allied Intelligence Collection Units, p. 10.
<https://www.academia.edu/35156351/Frontline_Intelligence_in_WW2_II_The_Development_of_Allied_Intelligence_Collection_Units_doc> [accessed 6 March 2024].

[143] TNA WO 204/6321, Initial Report on Conditions in Bologna, Fifth Army HQ, S Force, Lieutenant O A Ray, 24 April 1945.

[144] TNA, WO 204/796, Disbandment of 1 ICU, GBI/EXEC/ORG/66 B, 20 January 1945.

exercises and attended instructional lectures.[145] The officers attempted to maintain the unit's original training program instigated by Major-General Lamplough, supplemented in Italy with multiple parachute jumps ensuring the unit's capacity for 'intelligent individual action'.[146] To the frustration of the unit's commanding officer Major Strachan, the SEU merely provided protection and reconnaissance duties in their sector. Attempting to justify their specialist role, Strachan wrote to HQ at the Fifth and Eighth Armies, and HQ Fifteenth Army Group reminding them of the SEU's formation history and past achievements. He requested that the two army headquarters should take note of the SEU's unique training, requesting that the unit should be given the 'earliest opportunity of proving its worth and usefulness in the future'.[147] Attempting to preserve their independent status enjoyed since Algeria, Strachan proffered their services to any intelligence unit that might find their unique training of use. A positive response was received from the US Fifth Army, who proposed using them for special patrol and raiding duties through forward lines to secure intelligence and prisoners.[148] Within days, members of the unit were engaged in infiltration duties behind enemy lines as part of operation CARIBOU.[149] The unit remained in Italy, disbanding on 10 July 1945.

US Major Cave, Senior G2 AFHQ left Italy in May 1944, joining SHAEF as a G2 in London. In April 1944 Cave had advocated the formation of a permanent body to coordinate and compile intelligence target lists in Italy, along with S Force administrative duties. The Intelligence listing duties were successfully embodied by the IOSS, while S

---

[145] TNA WO 204/7322, Special Engineering Unit, Strength and Organisation, Major Strachan commanding officer SEU, 11 Jan 1945.

[146] TNA WO 170/5495, War Diary for Special Engineering Unit, January 1945.

[147] TNA WO 204/7322, Special Engineering Unit, Major W Strachan, 11 January 1945.

[148] TNA WO 204/7322, Special Engineering Unit, Fifth Army HQ, AG 370-X, Colonel M F Grant, 26 January 1945.

[149] TNA WO 170/5495, War Diary for Special Engineering Unit, February 1945.

Force administration was handled by the ICU. He took his extensive knowledge of target compilation and S Force operations to SHAEF, attending the second Combined Intelligence Priorities Committee (CIPC) meeting in June 1944.[150] Although S Force procedures developed to handle archives that were held as the exemplar to follow and were notionally adopted by SHAEF, broader lessons do not appear to have been incorporated in operations in Western Europe. The advantages of operating an S Force with a permanent administrative headquarters staff like 1 ICU, along with the experience gained as each city in northern Italy was liberated, was seemingly ignored until the eventual deployment of a permanent T Force in March 1945. It is surprising therefore, that senior members of AFHQ staff such as Major-General Kenneth Strong and Major Cave who both transferred to SHAEF, seemingly did not promote the formation of a permanent S Force to operate in France during 1944.

The S Force that Lieutenant-Colonel Strangeways had assembled in Tunisia in April 1943 was still in existence over two years later. The idea that the Italian S Forces had been created using available forces and disbanded on an 'Ad Hoc' basis for each individual operation was not a fair observation and does not stand up to more detailed analysis. Five month since the landings on Sicily, with the anticipation of the liberation of Rome, many of the experienced units that had entered Tunis in May 1943, now prepared for the bringing together of the next S Force to exploit Rome. The Army contingent of 30 Commando had remained in the Mediterranean at the specific request of the most senior intelligence staff in theatre to enter Rome. The three RAF Regiment Squadrons who had served in the Tunis S Force had also remained in Italy to secure the Air Ministry's intelligence needs, resisting CAS Air-Marshal Portal's request of their commanding officer that they return to the UK and to bolster Army numbers ahead of OVERLORD. The Advance G2 staff of AFHQ that

---

[150] TNA FO 935/20, Second Meeting Combined Intelligence Priorities Committee, 22 June 1944.

had accepted, processed, prioritised and created the intelligence target folders since

Tunisia, continued with these tasks till the summer of 1945. The importance of the task

they carried out was formalised by their title change in May 1944 to the Intelligence

Objectives Sub-Section or IOSS. Similarly, the retention of the administrative core of the S

Force assembled to exploit Rome, formalised by the title of Intelligence Collection Unit or

ICU provided the continuity that Colonel Smith and the ICU commander Lieutenant-

Colonel Young believed was essential to the operation of the S Force.

Chapter IV

Intelligence Target List Compilation:

Operation RANKIN, OVERLORD and ECLIPSE,

1943 to 1945

> In the summer of 1943, it was felt that German weakening or collapse might become manifest very soon, and the COSSAC staff was told in July that planning for 'RANKIN' was to be considered its most urgent task.

The Historical Sub-Section, General Staff, SHAEF, May 1944.
Based on verbal information provided by
Lieutenant-General Morgan (COSSAC) and Major-General Barker (D/COSSAC).[1]

The experience gained compiling intelligence target lists in the Mediterranean theatre, had little influence on the 1944 creation of the Black List of targets located throughout Western Europe. In Italy during 1943 and 1944, AFHQ Advance G2 intelligence staff, later titled IOSS, compiled lists of imminent targets in readiness for each city's liberation. By contrast, UK based intelligence teams researched and registered targets for the whole of Eastern, Western and Northern Europe. Clearly a massive undertaking, this course of action reflected the belief of the Anglo-US Combined Chiefs of Staff and JIC that Germany was so over-stretched on the eastern and southern fronts, that forces would be withdrawn from Western and Northern Europe. This would necessitate the swift seizure of research establishments across Europe before facilities could be destroyed by the retreating enemy. This eventuality was embodied in operation RANKIN. The initial focus of British target collators were research centres, though this remit was swiftly expanded to include all military targets of interest across the northern continent. It will be argued in this chapter that RANKIN drove intelligence target list compilation before,

---

[1] History of COSSAC, 1943-1944, Prepared by the Historical Sub-Section, SHAEF May 1944, p. 21, Historical Manuscripts Collection, 8-3.6A CA, <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023].

during and well after the Allied landings in Normandy. To provide intelligence on so many targets, the Oxford based ISTD worked closely with list compilers to detail enemy research facilities, names of the designers or scientists employed at each site and information on their specialist research subjects.

Teams of experts were assembled in March 1944, tasked by the JIC to provide a prioritised register of Europe's most important research centres and military sites. Initial drafts collated in May by the IPC revealed the huge number of potential sites, with a small supplement taken from this RANKIN register detailing targets in the Normandy lodgement. By mid-June the IPC evolved into the CIPC by incorporating US staff in both the committee and working parties. Their involvement would ensure Anglo-US intelligence gathering was coordinated, that US interests were accommodated as well as minimising the risk of effort being unnecessarily duplicated researching the same target. The intended result was the publication of a single 'Black Book' of targets across the whole of Europe in readiness for RANKIN being activated.

Predicting a collapse of German forces in France, the urgency to complete the Black Book only increased after the Allied landings in Normandy, with the first draft of the target list published in August. Within weeks, the combined priorities committee CIPC relinquished its ties with the British JIC and metamorphosised into the Anglo-US CIOS under the command of SHAEF. A key responsibility introduced under SHAEF was the appointment and despatch of teams of expert investigators to inspect liberated targets on the continent with those in Paris being the first to be investigated under CIOS control.

As for target capture, the successful Italian S Force were not immediately replicated, though a much expanded 30 Commando, now named 30AU, was present in

Normandy to investigate key naval, CROSSBOW targets and seize cryptographic intelligence. 30AU would relinquish cryptographic investigation to a body created by GC&CS named TICOM, although BP would still brief 30AU with the latest requirements should they happen to locate Enigma components. Though ad-hoc 'Target Forces' were assembled as the Allies advanced into the Low-Countries, a permanent T Force would not be created till November 1944, with troops only deployed after the Rhine crossing in March 1945. Readiness to activate RANKIN remained in force well into 1945 and was extended to cover northern Italy. It will be argued that an updated plan, ECLIPSE supplanted RANKIN for target compilation in the final months of the war.

4.01   COSSAC and RANKIN – Preparing for a German Collapse

It is important to understand the role of both COSSAC and the requirements of operation RANKIN. Churchill and Roosevelt met in Casablanca for the SYMBOL conference in January 1943, to discuss future Anglo-US strategy and agree to the formation of a planning team to prepare for a return to Western Europe in 1944. [2] That team was assembled in March 1943 under the title 'Chief of Staff to Supreme Allied Commander' or COSSAC commanded by British Lieutenant-General Frederick Morgan and his US deputy Major-General Ray Barker.[3] Their staff drew together Anglo-US officers, hitherto known as the 'Combined Commanders'.[4] COSSAC was unusual in two ways. Firstly, it was an 'integrated' staff with members appointed for being best qualified for a role and not due to their nationality. This resulted in an extremely close collaborative unit. By comparison, a

---

[2] SYMBOL conference held at Casablanca between 14 -24 January 1943.

[3] Kepher, *COSSAC*, p. 44. Lieutenant-General Frederick. E. Morgan (1894-1967), the British General who headed the COSSAC planning team for the eventual landings in Normandy in the summer of 1944. The Acronym COSSAC had been proposed by Morgan but would be renamed Supreme Headquarters Allied Expeditionary Force (SHAEF) on the arrival of the supreme commander, Major-General Dwight D Eisenhower, in January 1944.

[4] History of COSSAC, 1943-1944, The Historical Sub-Section, SHAEF May 1944, p. 1, Historical Manuscripts Collection, 8-3.6A CA. <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023].

'combined' command such as the Combined Chiefs of Staff , would see all positions

'paralleled' along national lines. The second way COSSAC was unusual was that members

were not responsible to the War Department in Washington, nor the War Office in London.

Instead, they were solely answerable to the Combined Chiefs of Staff and, above them, to

the Prime Minister and President.[5]

The 'Directive to COSSAC' drawn up in March and April 1943 stated their primary

objective was ' to defeat the German fighting forces in North West Europe' – operation

RUDGE - renamed OVERLORD in May.[6] A secondary objective was also stated - to

prepare for 'a return to the Continent in the event of German disintegration at any time

from now onwards with whatever forces may be available at the time'. COSSAC were to

prepare for the collapse of Germany's armed forces in the summer of 1943, based on the

precedent set by the Kaiserreich in 1918 when

> Germany passed from her zenith to her defeat in eight months, and history might
> repeat itself in 1943. If such a break came, then COSSAC must be prepared to take
> full advantage of it with whatever forces might at the time be available.[7]

Hugh Grey of the British Foreign Office issued a paper in November 1942 providing

extensive analysis of events that led to the German collapse in 1918. His aim - to 'marshal

the main indicators which were available to His Majesty's Government at the time' and

provide the facts that were evident prior to the Armistice of 11 November. [8] The JIC

responded to Grey's paper, considering parallels that might be evident with the current war

---

[5] F. S. V. Donnison, *Civil Affairs and Military Government: North-West Europe 1944-1946* (London: Her Majesty's Stationary Office, 1961), pp. 4-5.

[6] Kepher, *COSSAC*, p. 51. This lacklustre codename was updated at the insistence of Churchill, to the more martial sounding 'OVERLORD' at the Washington TRIDENT Conference held in late May and noted in a report dated 5 June 1943.

[7] History of COSSAC, 1943-1944, The Historical Sub-Section, SHAEF May 1944, p. 23, Historical Manuscripts Collection, 8-3.6A CA. <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023]. Directive to the Chief of Staff to the Supreme Commander (Designate), March 1943.

[8] CAB 81/112, Indicators of the German Collapse in 1918, 16284, Foreign Office, Hugh K Grey, 20 November 1942.

and creating a checklist of nineteen key indicators that would measure the moral of the 1940's German Government, armed forces and population.[9] These were monitored regularly by the JIC an appreciations published with their prognostications. COSSAC in the meantime were instructed by the Combined Chiefs of Staff to prepare troops to land on the continent from 1 August 1943, in the event of a sudden German collapse or withdrawal.[10]

The operational name assigned for this return to Europe was RANKIN. Morgan had outlined this plan to his Principle Staff Officers on 22 May 1943. Kepher in his book 'COSSAC' suggests that the British Chiefs of Staff placed as much importance or perhaps more, on the development of RANKIN as they did OVERLORD'.[11] Yet a plan was slow to materialise, with Morgan complaining that, although a vast amount of discussion had taken place, 'no progress whatever' had been made clarifying the RANKIN plan. He went on to state:

> the sum total of all the various factors now operating cannot be far from that of the factors which caused the collapse in 1918. I do not accept limitations imposed by the absence of [landing] craft and shipping. Should the enemy retire, we shall have to go after him, even if we have to swim'.[12]

By August, COSSAC had finalised the details of RANKIN, enabling a draft proposal to be passed to the British Chiefs of Staff for comment.

Outline plans for three RANKIN scenarios were presented at the QUADRANT conference held in Quebec in August 1943, with all three approved in principle by the

---

[9] CAB 81/112, Indicators of a German Collapse, JIC (42) 473 (Final), 8 December 1942, Joint Intelligence Committee (JIC).

[10] History of COSSAC, 1943-1944, The Historical Sub-Section, SHAEF May 1944, p. 23, Historical Manuscripts Collection, 8-3.6A CA. <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023].

[11] Kepher, *COSSAC*, p. 122.

[12] History of COSSAC, 1943-1944, The Historical Sub-Section, SHAEF May 1944, p. 22, Historical Manuscripts Collection, 8-3.6A CA. <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023].

Combined Chiefs of Staff.[13] 'RANKIN Case A' assumed Germany would be so weakened by action in other theatres that an early landing in Western Europe might take place with the limited resources available to the Allies. 'RANKIN Case B' allowed for a sudden withdrawal of German forces from France and Norway, followed by an immediate Allied occupation of those countries in response. 'RANKIN Case C' prepared for a sudden unconditional surrender of German forces and the cessation of organised resistance in Europe. Case C stipulated that the Allies needed 'to occupy as rapidly as possible appropriate areas from which to take steps to enforce the terms of unconditional surrender laid down by the Allied governments'.[14] RANKIN Case C was discussed in detail at the second Cairo Conference held in early December 1943, with General Brooke, CIGS noting that six weeks would be needed to prepare the necessary shipping to move forces and equipment to the continent.[15] The final version of operation RANKIN Case C was completed and issued on Friday 14 January 1944 during the last meeting of COSSAC.

The Combined Chiefs of Staff considered a German collapse towards the end of 1943 probable, yet by early 1944, it was believed that RANKIN conditions were increasingly less likely to be manifest prior to launching OVERLORD.[16] RANKIN was not abandoned as both SHAEF and the Combined Chiefs of Staff believed German forces were even more likely to collapse after the Allies had landed in Normandy. Logistical planning

---

[13] QUADRANT Conference, August 1943, Papers and Minutes of Meetings, US Department of Defence, Minutes of the Combined Chiefs of Staff meeting 115, Quadrant Conference, Chateau Frontenac, Quebec 23 August 1943, p. 483. <https://www.jcs.mil/Portals/36/Documents/History/WWII/Quadrant3.pdf> [accessed 27 November 2023].

[14] History of COSSAC, 1943-1944, The Historical Sub-Section, SHAEF May 1944, p. 23, Historical Manuscripts Collection, 8-3.6A CA. <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023].

[15] TNA CAB 80/81, Chief of Staff Committee, RANKIN Case C Shipping Requirements, COS (44) 198 (O), 24 February 1944, p. 1. The five page memorandum provides a detailed breakdown of logistics over the two month period, with figures broken down by area: Channel Islands; Norway; northwest Germany and southern Germany.

[16] History of COSSAC, 1943-1944, The Historical Sub-Section, SHAEF May 1944, p. 26, Historical Manuscripts Collection, 8-3.6A CA. <https://history.army.mil/documents/cossac/cossac.htm> [accessed 1 July 2023].

for RANKIN continued throughout 1944 with the Chiefs of Staff Committee preparing all international shipping, both Royal and merchant navies. Both were required to complete the transfer of the Allied armies to the continent and they predicted this would cause all imports to the UK to cease for up to three months.[17] To provide Allied forces with maximum warning of an impending move into Europe, the JIC issued appreciations at the start of each month assessing the possibility of a German collapse. These were largely based on interpretation of GC&CS decrypts, with Cavendish Bentinck confirming that 'ULTRA was central to its operations'.[18] Analysing the RANKIN appreciations issued by the JIC and preserved in TNA CAB 81 files, reveals that on no occasion do the JIC foresee an imminent collapse, withdrawal or reduction of German forces from Western Europe.

Major-General Eisenhower relinquished his command of AFHQ in Algiers, taking up his position as Supreme Commander Allied Expeditionary Force (SCAEF) on 17 January 1944. With the Supreme Commander now in post, COSSAC accordingly became the Supreme Headquarters Allied Expeditionary Force (SHAEF). Eisenhower now held command of Allied forces committed to OVERLORD and should circumstances dictate, he was also charged with effecting immediate entry into the Continent with whatever forces were at hand as defined in RANKIN Case C.[19] RANKIN could be launched in as little as six weeks while OVERLORD was scheduled for May 1944. Planning for both operations would now proceed in parallel for 'whichever operation eventuates' - 'the only difference being timing.'[20] RANKIN stated that key military and research establishments were to be identified, seized at short notice and their contents or personnel evaluated or evacuated.

---

[17] TNA CAB 80/81, Chief of Staff Committee, RANKIN Case C Shipping Requirements, COS (44) 198 (O), 24 February 1944, p. 4.

[18] Goodman, *The Official History of the Joint Intelligence Committee*, p. 97.

[19] Kepher, *COSSAC*, p. 144.

[20] TNA CAB 80/79, Chiefs of Staff, Outline plan for political/psychological warfare for RANKIN Case C. L C Hollis, 2 February 1944, Terms of Reference.

Preparing for this eventuality would influence intelligence target collation for the remainder of the war.

4.02   ERDS - Locating Germany's Research Facilities

In March the Weapon Development Committee at the War Office formed the Enemy Research and Development Sub-Committee (ERDS). Their task was to locate and catalogue all development facilities throughout the German Reich, where important research work had taken place. Representing the Ministry of Supply (MoS) was R. P. Linstead in his position of Deputy Director Scientific Research (DDSR). Patrick Linstead would chair three wartime committees tasked with identifying and collating military intelligence targets throughout liberated Europe and Germany during 1944 and 1945 - the IPC, CIPC and CIOS. These three committees will be analysed throughout this chapter. London born Linstead, became an internationally recognised Organic Chemist during the 1930s, lecturing at Imperial College and later accepting the role of Chair of Organic Chemistry at Harvard in 1939. He was an Americanophile with a passion for US History, specifically the US Civil War and would often impress US colleagues with his knowledge of their country's heritage. He established links with the British government in 1940, successfully liaising on their behalf with the US government regarding synthesis of RDX explosives in the US.[21] Returning to the UK in 1942 and now recognised by the UK government Linstead accepted the role of Deputy Director Scientific Research. His excellent working relationship with US staff made him the ideal choice to chair the Anglo-US CIPC and CIOS committees between 1944 and 1945.

---

[21] Reginald Patrick Linstead FRS (1902-1966), became involved in the RDX program while in the US, whereby the British were establishing US manufacture of 'Research Department Explosive' (RDX). RDX was one and a half times as powerful as TNT. For further reading, please refer to <https://royalsocietypublishing.org/doi/pdf/10.1098/rsbm.1968.0014> [accessed 14 July 2020].

Mark Turner of the Foreign Office, Head of Economic Intelligence Planning staff and Assistant Secretary, Ministry of Economic Warfare (MEW) wrote in March to outline the objectives of the ERDS and proposed that Dr Noton represent the MEW. Noton would work alongside Linstead for the duration of the War and after as a senior member of BIOS to 1947. In addition to his MEW duties, Noton would also sit on parallel Admiralty and Air Ministry target identification committees, though he was quick to point out that these separate committees should be combined on an 'inter-service' basis as soon as possible, acknowledging that 'many establishments will concern more than one science'.[22] Within six weeks of Noton's prophetic observation, the inter-service Intelligence Priorities Committee (IPC) was formed, bringing target collation under the control of a single body.[23]

Noton directed the ERDS on 7 April, to separate target research facilities into two subject groups. These were:

Group I: radio directed missiles, radio proximity fuses, rockets; radar, ranging and fire control, chemical warfare, bacteriological warfare, propellants, atomic power; drugs, anti-malarial, anti-louse and penicillin.

Group II: novel land transport; special types of guns – anti-tank and recoilless mechanisms, AFVs, land mines, location and ranging devices, shaped and hollow charge weapons, airborne equipment, flame-throwers and incendiary projectiles, synthetic rubber use, infra-red equipment, landing craft and amphibian equipment.

The deadline for submission was set for 26 April 1944. Noton explained the reason for the urgency as…

the committee were planning to immobilize a number of Germany's key research and development establishments as soon as the armistice is concluded and they wish to

---

[22] TNA FO 935/1, letter outlining the purpose of the new committee and proposing that Mr Noton represents the MEW. Mark Turner, 31 March 1944.

[23] Dr C H Noton (dates unknown). His involvement with intelligence identification and 'listing' would continue with intelligence targeting committees during the War with the IPC, CIPC, CIOS and CAFT and BIOS after the War. With each committee he kept clear, detailed notes and carefully filed correspondence, much of which have survived and is held in the National Archives at Kew. His input is often easy to determine by his characteristic handwriting and his habitual use of turquoise ink.

draw from us all our information on the nature, location, staff etc., of what we consider to be the chief centres of research and development activity...[24]

Noton's comments suggest the ERDS were preparing for the emergency launching of RANKIN Case C and not focusing on targets merely within the OVERLORD lodgement.

Within ten days of Noton issuing his instructions, service ministries and work groups began to return schedules detailing the locations of many of the key German research centres. The Inter Service Topographical Department (ISTD) based in Hertford College, Oxford had provided details of research establishments, researcher's names, position and locations. The ISTD had been compiling a contact registry since 1941, recording hundreds of European companies and proved to be a valuable resource for the teams compiling the RANKIN target lists. Premier research establishments such as Berlin's Kaiser Wilhelm Institute were thoroughly analysed, with scientists and researchers recorded. Journals examining the institute were loaned by ISTD, including editorials published in French and German scientific periodicals. Many German and European scientific journals were still being published throughout the War. These were reviewed by émigré German scientist Dr Demuth who assisted Noton with numerous investigations on behalf of the MEW.[25] UK based research establishments forwarded any information they possessed on their European and German counterparts. The National Physical Laboratory, the Chemical Research Association, the Fuel Research Station, the British Non-Ferrous Metals Research Association all contributed. After a meeting with the MAP on 15 May, the Air Ministry team forwarding copies of their own research for Noton to include in the MoS Black List.[26] Acknowledging that RANKIN Case C applied to the whole of Europe,

---

[24] TNA FO 935/1, letter listing the two research groups and stating objectives, C H Noton, 7 April 1944.

[25] TNA FO 935/1, Research Establishments, Germany, A W Bechter writing to Dr C H Noton, 5 April 1944.

[26] TNA FO 935/1, 'Items Under Development in Germany' Air Vice-Marshal R O Jones, MAP to CH Noton, 17 May 1944. The list was edited by Noton and returned to Jones for publication 24 May 1944.

the ERDS agreed to extend the register of research establishments to include sites in the

Baltic States, Hungary, Rumania, Czechoslovakia and Italy. This change was reflected in

the final list of Laboratories that included sites in Finland, Estonia, Lithuania,

Czechoslovakia, Rumania, Hungary, Poland and Jugoslavia [*sic*].

Noton published the first edition of the RANKIN target list under the title of the

'Ministry of Supply, Black List of Enemy Research and Development Centres'. The

publication date is given as 'May 1944', post-dating the inaugural meeting of the

Intelligence Priorities Committee (IPC) as the list includes the IPC title. The Black List

comprised seventy-eight pages, grouped under the sector headings proposed by Noton in

early April. A further twenty-seven pages detailed German research centres in occupied

territories outside Germany. This first edition of the IPC Black list included only military

targets, with those compiled by the navy and air force to be incorporated later.[27]

NID decided to create a dedicated team based in the Admiralty who would create

naval target lists for RANKIN Case C, forming NID 30 on 1 February 1944.[28] Naval

targets were compiled over a three month period and published separately to Noton's list

by Fleming on 6 May 1944. The document was titled target list 'NID 0050951/44' , 'No 30

Assault Unit, Target List for Operations Overlord and Rankin Case C'. Contents were

accurate up to 15 April 1944. Many pages throughout this document were stamped with

the word BIGOT, or 'British Invasion of German Occupied Territory' to emphasise to the

---

[27] TNA ADM 223/501, War Office – Ministry of Supply, Black List of Enemy Research and Development Centres, First Edition, May 1944.

[28] Hinsley, *British Intelligence in the Second World War*, III, p. 470.

reader that this document carried the highest security rating.[29] Reviewing the distribution list, copy number one was reserved for Fleming with the majority of the thirty-eight copies issued to other departments within Naval Intelligence. Additional copies were issued to Harling at the ISTD, Lieutenant Glanville with 30AU and 'Mr Birch' at 'BP'.

With cryptographic pinches still a necessity, GC&CS and Frank Birch were being appraised of all potential targets for 30AU. The list was compiled in readiness for RANKIN Case C, with forty pages of targets, split into different departments of the Royal Navy, Mines, Torpedoes, Booms, Submarines. It included target locations across the whole of Europe including Jersey, Kiel, Flensburg, Swinemünde on the Baltic coast and Berlin. The BIGOT security rating enabled the compiler of the list to openly name 'ENIGMA' cyphering machines as targets, along with 'Spools' or Enigma wheels and indicators of settings (code books). Notes stated that ENIGMA targets could be found on warships, *Vorpostenboote* [armed trawlers], in Atlantic U-Boat bases or in any box or office marked 'Oberschreibers-maat Fritz Frank' - Chief clerk's mate Fritz Frank.[30] These accompanying notes emphasised that ENIGMA pinches were still a priority in the summer of 1944. Should material be discovered, the unit was ordered to immediately break off an attack and ensure the captured item was returned to the Admiralty. It was emphasised that troops should never meddle or play with the Enigma equipment, being too easy to lose settings or plug positions. Recovered code books had to be kept dry as the print was water soluble and once artefacts had been recovered, it was stressed that:

---

[29] TNA ADM 223/501, No 30 Assault Unit, Target List for Operations Overlord and Rankin Case C, NID 0050951/44, 6 May 1944. BIGOT would commonly be stamped on memos issued by the Chiefs of Staff and JIC from 1943 onwards. This acronym denoted a document with a higher security rating than 'Most Secret' and was introduced by Churchill for any highly sensitive plans relating to the invasion of occupied territory. It was first applied to documents relating to the landings in Sicily in 1943.

[30] TNA ADM 223/501, No 30 Assault Unit, Target List for Operations Overlord and Rankin Case C, NID 0050951/44, 6 May 1944, Part 1, Documents, Notes, p. 1.

The necessity for avoiding or eliminating witnesses to successful action and for the demolition of any building or ships cabin which has yielded results, and which is likely to be re-occupied by the enemy is emphasised.[31]

4.03   ISTD - Inter Service Topographical Department

The contact registry of the Inter-Service Topographical Department (ISTD) had proved to be an extremely detailed resource for the compilers of the RANKIN target lists, but why and by whom had this information been collected? To understand the background of ISTD, it is necessary to step back to 1940 before the fall of France. The creator of what would become ISTD, DNI Rear-Admiral Godfrey, stated that all intelligence would one day become relevant and should be retained, compiling topographical and general intelligence on any theatre where the army, navy or air force might be deployed. Godfrey noted in his memoirs that ISTD was paid for and run by the Admiralty - not the War Office - yet the information amassed mostly dealt with land warfare, political objectives and personnel.[32] McLachlan notes that the three service departments had been disinterested in topographical intelligence at the start of the War:

it was necessary to tear the War Office away from its preoccupation with enemy order of battle, the Air Ministry from its obsession with German industrial bombing targets, and the navy from its belief that rocks, shoals, shallow water and beaches are hazards to be avoided by ships, not overcome by them.[33]

Godfrey envisaged that his new department should provide detailed intelligence going far beyond mere cartographic data. Maps were already available from Royal Geographical Society (RGS) or the General Staff Geographical Service (GSGS) at the War Office, however there were substantial gaps in the RGS and GSGS reference libraries, with no topographical data available. Godfrey's need for topographical and geographical

---

[31] TNA ADM 223/501, No 30 Assault Unit, Target List for Operations Overlord and Rankin Case C, NID 0050951/44, 6 May 1944, Part 1, Documents, Notes, p. 9.

[32] TNA ADM 223/214, History of 30AU, Preface Note by John Godfrey, 5 September 1970.

[33] McLachlan, *Room 39,* p. 292.

handbooks was handled by Oxford Professor Kenneth Mason of Hertford College, Oxford.[34] Mason's role for the navy was formalised when he was made head of Section V of Naval Intelligence Division (NID 5), later renamed the Inter-Service Information Service (ISIS). The handbooks produced were noted for accuracy and reliability with Boyd noting that Mason's 1944 handbook describing Iraq was still considered the best guide to that country by the British military and intelligence officials, during operations in 2003.[35]

Godfrey initiated the creation of what he hoped would be an inter-service topographical intelligence gathering team, providing intelligence for all service departments. The need for the department was identified during the Norway debacle, where there was a lack of topographical references detailing the Norwegian landing areas, other than a handful of Raphael Tuck scenic postcards illustrating the Scandinavian coastline.[36] Even basic maps were unavailable, with some British officers attacking Narvik in 1940 carrying the 1912 edition of the German 'Baedeker' tourist guide book to orientate their forces.[37] The progenitor of the ISTD, Section VI of Naval Intelligence Division (NID 6), was constituted on 27 May 1940. The Department's mandate was expanded in February 1941 to include the production of reports detailing topographical intelligence for all ministries, but principally for the Joint Planning Staff and Combined Operations.

---

[34] Lieutenant-Colonel Kenneth Mason MC (1887-1976), explorer, surveyor and veteran intelligence officer of the First World War. He supervised the mapping of the Himalayas before becoming the first Geography Professor at Hartford College, Oxford. The reports he prepared for Rear-Admiral John Godfrey were the precursor for the published 'Naval Intelligence Division Geographical Handbook Series' printed between 1941 and 1945, covering many conflict areas of the War and the main output of what would be titled NID 5. Eventually 58 volumes were completed and published before post-war Admiralty funding cuts ended the project.

[35] Boyd, *British Naval Intelligence*, p. 387.

[36] Robert Harling, *Ian Fleming: A Personal Memoir* (London: The Robson Press, 2015), p. 19. Postcards created by Raphael Tuck & Sons of London, many depicting scenes in colour were printed in Bavaria, Germany.

[37] CHU GBR/0014/GDFY 1/7, p 352, point 15.

Commanding this fledgling team was Lieutenant-Colonel Sam Bassett RM.[38] He was

tasked with collating topographical, geographical and cartographic intelligence plus

exploiting any available source of intelligence such as shipping companies, newspapers,

travel firms, explorers and universities. Godfrey worked on the '…underlying assumption

that somewhere in Great Britain, there was an authority on any subject, or place, if one

could only find him or her'.[39] NID 6 started to assemble a reference library of data

detailing research facilities, companies, addresses and employee lists – often with little

immediate relevance but assuming that one day the data would prove useful. Intelligence

was enhanced by NID 6 working closely with CSDIC - Combined Services Detailed

Interrogation Centre - who interviewed refugees and enemy prisoners of war.

With the German invasion of the Low Countries and France in the spring of 1940,

Section VI raced to compile any intelligence they could lay their hands on. The French

coast was suddenly of cardinal interest, with Bassett asked to forward all information held

on the channel ports – especially Dunkirk. He reported to Godfrey that as with Narvik a

month earlier, little information was on file. The evacuation of troops from Dunkirk

(operation DYNAMO) was in full swing - emphasising to Bassett that his access to the

French channel coast would soon be lost. He immediately organised two survey parties to

observe and photograph French ports and beaches between Dunkirk and Cherbourg

between 11 and 18 June, always in great haste and often just ahead of the advancing

enemy. Several naval Captains familiar with the coast were interviewed to pool their

knowledge and combined with photographs, a report was prepared and issued to the COS.

Godfrey referred to this file as 'thin, inadequate and shabbily dressed compared to the

---

[38] CHU GBR/0014/GDFY 1/7, p 287. Lieutenant-Colonel S J Bassett RM CBE (1890-1974), was once a pupil of John Godfrey when he was teaching at the Naval Staff College and established his reputation undertaking a valuable coastal reconnaissance in Madagascar. Godfrey had a high opinion of his abilities and was keen to secure his services as head of NID 6.

[39] CHU GBR/0014/GDFY 1/7, p 351, note by John Godfrey.

elaborate productions prepared for the return to France in 1944' but it served its urgent purpose and illustrated the value of Section VI. This document established NID 6 as *the* topographical intelligence hub that was to support all future operations. Combined Operations Headquarters (COHQ) was created on 12 June 1940 and the following day, NID 6 was introduced as *the* source of intelligence for all future raids.[40]

NID 6 moved from the Admiralty to Hertford College, Oxford on 10 October 1940, adopting the new title of Topographical Clearing House (TCH). Oxford was chosen over other provincial sites as Naval Intelligence were already using the Oxford University Press (OUP) to print the Admiralty's code books and other sensitive literature. The reproduction of naval documents was to monopolise two thirds of the output of the OUP.[41] TCH were supported by the Intelligence Section (Operations) or IS(O) who were created by the JIC and adopted an administrative role, supplying secretariat services to a number of the committees discussed in this dissertation. The TCH title was dropped in August 1941, replaced by Inter-Service Topographical Section (ISTS), reflecting the brief to provide information for all three services.[42] The title was changed once again in October 1941, to Inter-Service Topographical Department - which would remain until the department's closure in 1945.

Returning to 1943, Fleming worked closely with ISTD, where fellow RNVR officer Lieutenant Robert Harling headed the contacts registry for two years. Fleming had proposed Harling for the ISTD post after he had successfully employed his typographical

---

[40] CHU GBR/0014/GDFY 1/7, pp 357-358.

[41] CHU GBR/0014/GDFY 1/7, p 385. Oxford University Press (OUP) printed the code and cypher books for the Admiralty, holding the necessary security clearance to produce publications and maps for the armed forces. John Godfrey's relationship with the OUP, and the University printer Dr John Johnson, was the reason Oxford was chosen as a location for the ISTD over Cambridge.

[42] CHU GBR/0014/GDFY 1/7, p. 366, point 58.

skills to redesign Fleming's monthly navy intelligence bulletin. The two officers nurtured

links with British industry and financiers who all provided detailed intelligence on their

competition in Europe.[43] Links were established with engineering firms and architects who

had undertaken pre-war contracts in Europe and were able to provide site intelligence and

drawings.[44] Harling's team recorded details of all aspects of a subject town including

factories, manufacturers, research centres and any military presence. It was this

information that was made available to assist the MoS, MEW and NID throughout early

1944, enabling the RANKIN Case C target lists to be assembled so quickly and with such

detail.

Much of the information NID 30 used to compile their RANKIN Case C Target list

NID 0050951/44 was taken from a compendium of German industry running to three

hundred and twenty-five pages and titled 'List of Industrial Concerns Working for the

German Navy'.[45] This directory has survived in TNA along with the RANKIN list and

details an estimated five thousand companies. Many companies are no doubt suppliers of

the German navy, but there are also details of steel works, Coal Mines and IG Farben

facilities across Germany. [46] Most major assemblers of Armoured Fighting Vehicles are

included along with Germany's leading aircraft manufacturers.[47] The directory was

compiled for NID 1, the section of Naval Intelligence headed by Commander Tower and

---

[43] In 1942, Fleming, Harling and Godfrey gained the support of some of the larger companies in the UK including Unilever; John Brown; Shell; Lloyds Bank; ICI and Hambro's.

[44] Harling, *Ian Fleming*, p. 20.

[45] TNA ADM 233-501, Alphabetical list of German industry with hand written note ' List of Industrial Concerns Working for German navy, NID 1', no date or source stated.

[46] IG Farben AG were an amalgamation of Germany's largest chemical dye manufacturing companies, formed into a 'community of interest' during the First World War and incorporated in 1926.

[47] A selection of the assembly firms specialising in Armoured Fighting Vehicles: Altmärkische Kettenwerk GmbH (ALKETT) of Berlin; Henschel & Sohn of Kassel; Vogtländische Maschinenfabrik AG (VOMAG) at Plauen; Maschinenfabrik AG (MAN) of Augsburg. Aircraft manufacturers are also included in the list: Fieseler Flugzeugbau, Kassel; Erla of Leipzig, Junkers of Breslau, Focke-Wulf of Bremen, Marienburg and Sagan.

responsible for information pertaining to Germany, Scandinavia, unoccupied Vichy France and the Low Countries.

4.04 IPC – Intelligence Priorities Committee and the Normandy Lodgement

SHAEF wrote to the JIC on 8 May 1944, requesting that they create a coordinating 'Committee on Intelligence Priorities' that was to oversee the drafting of target lists, prioritising requests received from any government or service ministry. By channelling all intelligence requests through this single body, it was hoped by the JIC that duplication by different government or service ministries should be eliminated and conflicts of interest minimised. Noton had already highlighted the inefficiency of the different service ministries creating their own intelligence target lists in April, advocating an inter-service body be created. Responding to the request by SHAEF, the JIC called a meeting on 19 May 1944 to form…

> a special sub-committee to arrange for the drawing up of combined lists of intelligence targets, first of all for the [Normandy] lodgment area, for the information of SHAEF'. SHAEF were anxious to have a clear directive as to what was required, from, if possible, an inter-service inter-Allied body.[48]

The meeting was attended by representatives of the three services, MoS and MEW. Fleming represented the Admiralty with Cavendish-Bentinck in the Chair. The original SHAEF letter requesting the formation of the priorities committee, issued to Bentinck on 8 May is not present in the surviving files however, much of the content can be inferred from the subsequent correspondence between Bentinck and SHAEF. The letter reference SHAEF/33UX/Int was probably issued by the Assistant Chief of Staff G2 (Intelligence) Division, Sir John Whiteley[49] or possibly his deputy, US Brigadier-General Thomas Betts,

---

[48] TNA CAB 81/144, Special Sub-Committee on Intelligence Priorities, First Meeting 19 May 1944, p. 1.

[49] General Sir John Whiteley (1896-1970). His position of Assistant Chief of Staff G2 was handed to his Mediterranean colleague Brigadier-General Strong on 19th May 1944 with Whitely taking up his preferred G3 position.

who will be discussed in detail later in this chapter. Bentinck was keen to establish what progress had been made by the army and air force with collating target lists.[50] He was aware through the JIC, that NID had published their list of European targets in preparation for RANKIN Case C, two weeks earlier. Reviewing the distribution of list NID0050651/44, the JIC received a single copy, with additional copies issued to other members of the JIC , Major-General Sinclair DMI and RAF Air Vice-Marshal Inglis.[51] At the time of this meeting, Noton was still finalising the first edition of the one hundred and sixty page 'Ministry of Supply Black List of Enemy Research and Development Centres' The completed Black List would be published by the end of May, along with the list of Air Force targets. Noton did not attend this meeting which is surprising considering what he had accomplished since the beginning of April. The MEW was instead represented by Noton's superior, Mark Turner.

Bentinck proposed that all lists should follow the proven Admiralty model and be divided into three categories: a Black List for items that must be captured immediately; a Grey for less urgent military targets; a third White for long-term research items. These categories were evidently fluid at this point as the JIC considered changing Grey targets to cover material useful to defeat Japan and a White for targets of long-term research.[52] To enable the IPC members to focus on urgent military targets for the Black list, it was suggested that the material appropriate to the Grey and White lists should be excluded from their remit. Bentinck suggested that Grey and White list targets should be dealt with by the EIPS - chaired by Mark Turner of the MEW - though he noted that this body would

---

[50] TNA FO 935/19, JIC Special Sub-Committee on Intelligence Priorities, First Meeting 19 May 1944.

[51] TNA ADM 223/501, No 30 Assault Unit, Target List for Operations Overlord and Rankin Case C, NID 0050951/44, 6 May 1944, Distribution List.

[52] TNA CAB 81/122, JIC Meeting Notes, 23 May 1944, Constitution of the Intelligence Priorities Committee.

only be concerned with targets within Germany.[53] Perhaps non-military targets in the

occupied territories should be added to the Black List Bentinck noted at this inaugural

meeting that, when in the future, the focus moved from military intelligence targets to

'commercial intelligence about enemy industry', the military committee being assembled

now 'would not be suitable or adequate'.[54] This is an important statement as it is the

earliest reference suggesting that there was the anticipation of the wider exploitation of

German industrial, economic and commercial targets after RANKIN Case C had been

launched, or after Germany had been defeated.

The JIC met on 23 May to approve the formation of the Intelligence Priorities

Committee (IPC) and define what targets should be included on the Anglo-US

consolidated Black List. The JIC defined Black List targets as:

> Such material, personnel and information of military or political importance, either
> of great value to the Allies for operational purposes, or constituting a dangerous
> potential threat in the future, as justify urgent action on the part of the Allies for
> their seizing. [55]

The committee agreed that the IPC was responsible for preparing a consolidated target list

for both SHAEF – responsible for Western Europe, and for the Supreme Allied

Commander Mediterranean (SACMED) – responsible for the Italian theatre. As discussed

in the last chapter, target lists were prepared by the IOSS in Italy, though they would

accept any target proposals passed to them by the IPC. The JIC emphasised that

intelligence target lists should cover all 'enemy occupied territory in Europe' emphasising

---

[53] NUF CSAC 80.4.81/H.275, The Economic and Industrial Planning Staff (EIPS) were set up under the responsibility of the Foreign Secretary Anthony Eden in April 1943. The interdepartmental body prepared papers for the Armistice and post-war committee and foreign office. They analysed the long-term economic and industrial implications for post-war Germany and how reparations should be extracted. Definition provided by Geoffrey Vickers, MEW, Foreign Office in a letter to Lord Cherwell, 7 October 1944.

[54] TNA CAB 81/144, Special Sub-Committee on Intelligence Priorities, minutes of first meeting 19 May 1944, p. 2, point iii.

[55] TNA CAB 81/122, Joint Intelligence Committee, JIC (44)224, 30 May 1944, Intelligence Priorities Committee, Constitution and Procedure, point 14.

the continuing importance of RANKIN Case C, despite the imminent launch of

OVERLORD. It was agreed that the committee would be expanded to include US

representation in the future. When the US joined, each committee member should be

partnered or 'paralleled' by an opposite British partner. The makeup of the 'Combined'

committee was to comprise:

British	United States
1 or 2 naval representatives	1 or 2 naval representatives
1 or 2 army representatives	1 or 2 army representatives
1 or 2 air force representatives	1 or 2 air force representatives
1 representative of MEW	1 representative of OSRD
1 Foreign Office Representative*	1 US Embassy Representative*
*Only to attend when required	

The immediate priority was the compilation of the consolidated target list for the

lodgment area thus it was agreed to proceed with a British only committee under the title

of the IPC, whose would be responsible for prioritising Black List targets. Once compiled,

the target list would be passed to SHAEF to expedite. Other non-urgent military targets

were discussed, with the EIPS proposed as the body to compile the long-term Grey and

White List targets in Germany. These targets were defined thus:

Grey List targets
Material and intelligence required to defeat the Japanese or for general research
purposes, of such a nature that the Germans would not take particular steps to
conceal it from us after their defeat.

White List targets
Information for long-term research purposes, and also information such as
mobilisation files and plans whose seizure would make it more difficult for the
Germans to recreate their armed forces.[56]

The inaugural meeting of the IPC took place the following day on 24 May with the

first item on the agenda being the production of a consolidated Black List of targets for the

---

[56] TNA CAB 81/144, Special Sub-Committee on Intelligence Priorities, minutes of first meeting 19 May
1944, p. 4.

Normandy lodgement.[57] Lists had been prepared by all service departments, agreed on 19 May, then forwarded to SHAEF by Bentinck. The Admiralty list was extensive, with a footnote stating that the contents were distilled from the original NID first edition RANKIN Case C register issued on 6 May.[58] Top targets on the NID list were the capture of enemy codebooks, cyphers, signals documents, cypher machines and radar - the priorities for 30AU remained unchanged from the days of HUSKY the year before. The list continued with operational orders for intelligence pertaining to U-boats, port demolition plans, naval equipment handbooks and anything bearing a secrecy category *Geheime Kommando Sache* [Secret Commando Operation]. Regarding equipment, the list included nineteen items - from infra-red apparatus to rocket fuel, beach defences, mines and torpedoes, radar and counter-radar equipment and training manuals.

The combined War Office and British Air Ministry list was modest compared to that of the Admiralty – a mere four groups. The first included Radar equipment, fire control, coastal defence and Radar jamming apparatus. The second group targeted anti-aircraft weaponry, while the third prepared troops to look for secret weapons, infra-red apparatus, beach and coastal defences. The fourth group identified intelligence pertaining to long-range rockets and pilotless aircraft, especially the 'ski-sites' being constructed near the French coast from Cherbourg to Calais. Although appearing on the army's intelligence list, several ski-sites in Normandy were allocated to 30AU to capture, survey and photograph. Cavendish-Bentinck of the JIC issued these lists to 'cover all British Requirements' to SHAEF on 25 May 1944.[59]

---

[57] TNA CAB 81-145, Minutes of First Meeting of the Intelligence Priorities Committee, 24 May 1944.

[58] TNA FO 935/19, Admiralty List of Naval Intelligence and Material Requirements for Assault Phase, List of targets, both Documents and Material, targets taken from naval Document NID0050951/44, 'Target list for Operations OVERLORD and RANKIN Case C', dated 6 May 1944.

[59] TNA FO 935/19, Letter to Assistant Chief of Staff, G2 Intelligence) division, SHAEF, JIC 763/44, 25 May 1944, V. Cavendish-Bentinck.

4.05   Ski-sites, CROSSBOW and *Vergeltungswaffe*

During 1943, RAF Photo Reconnaissance Units (PRU) repeatedly surveyed France's coastal region from Britany to the Pas-de-Calais, recording all German construction works, and especially those within 150 miles of London and Bristol.[60] As 1943 ended, less than ten percent of this area remained to be photographed.[61] Construction sites proliferated as Hitler's 'Atlantic Wall' of intersecting coastal defence structures was strengthened, including an increasing number of perplexing rectangular compounds, all built to a similar design. These mysterious sites started to appear in the second half of 1943 with thirty-eight identified by early November rising to seventy-two by the end of the month.[62] They all featured three two hundred and sixty-eight feet long concrete buildings with a curved entrance resembling a 'ski' shape when viewed from above. RAF photo interpreters coined the term 'ski-sites' to describe these compounds.[63] The term was later adopted by the JIC and Chiefs of Staff in their correspondence. Although the purpose of the ski-sites was not understood, it was noted that the majority were constructed, irrespective of local topography, one hundred and thirty miles from central London and aligned with Tower Bridge – implying long range weaponry.[64] Eight ski-sites were also being built near Cherbourg, aligned with Bristol Cathedral - one hundred and forty miles away.

The BODYLINE committee created in April 1943 and chaired by Duncan Sandys, had been collating intelligence on the German rocket program with attention focussing on

---

[60] RAF Photo Reconnaissance Units flew unarmed Spitfires and Mosquitos over enemy territory to photograph intelligence targets. In this case, regular sorties by the RAF allowed the construction of ski-sites and Atlantic Wall bunkers to be closely monitored. The RAF operated five PRU squadrons by October 1942, numbers 540, 541, 542, 543 and 544.

[61] TNA CAB 81/119, CROSSBOW, Sixth Report by JIC, JIC (43) 531 (O) (Final), 1 January 1944.

[62] Johnson, Brian, *The Secret War* (London: BBC, 1978; repr 1979), p. 146.

[63] Steven Zaloga, *V-1 Flying Bomb 1942-52, Hitler's Infamous 'Doodlebug'* (Oxford: Osprey, 2005), p. 13.

[64] TNA CAB 81/119, CROSSBOW, First Report by JIC, JIC (43) 483 (O) (Final), 24 November 1943.

the research facilities at Peenemünde on the Baltic coast.[65] Fearing the deployment of

rocket technology, the JIC were tasked in October with advising the Chiefs of Staff when

Germany would commence attacks on the UK. Questioning the efficiency of the original

Sandys committee, the JIC created a duplicate BODYLINE sub-committee chaired by Ian

Fleming to review all SIS and Sandys-produced reports and to provide the data that would

allow the JIC to report accurately to the COS.[66] Unsurprisingly, Sandys complained but

was advised by the Chiefs of Staff that the JIC sub-committee should temporarily take

charge of the intelligence analysis. Both parallel Sandys and Fleming committees updated

their titles to CROSSBOW on 27 November before attacks were made on ski-sites in

France. During January 1944, the JIC were satisfied that their CROSSBOW sub-committee

under Fleming had completed the task of assessing all available intelligence and it was

disbanded. The intelligence Fleming had provided enabled the JIC to issue their

prognostications based on the most accurate information, while future intelligence

gathering was handed back to Sandys and his original CROSSBOW committee.[67]

Fleming's interest in the ski-sites remained, with 30AU directed to photograph sites on the

Cotentin shortly after the Normandy landings in June.

The purpose of the ski-sites was finally revealed by PRU images taken of launch

sites near the Peenemünde rocket research establishment, complete with inclined ramp

designed to launch a pilotless aircraft.[68] Dubbed the *Peenemünde 20* by British

---

[65] Williams, *Operation Crossbow*, p. 171. Since early 1943, the investigation into Germany's long-range rocket and pilotless aircraft programs had been given the cricket inspired codename of operation BODYLINE.

[66] Goodman, *The Official History of the Joint Intelligence Committee*, p. 135.

[67] Goodman, *The Official History of the Joint Intelligence Committee*, p. 136.

[68] Williams, *Operation Crossbow*, p. 172. Oblique photographs were taken of the Baltic coast by Squadron Leader John Merifield flying a PRU Mosquito near Zinnowitz, eight miles south east of Peenemünde. Three ski-sites had been built for training and familiarisation of Luftwaffe Flak Regiment 155 (W). This unit under the command of Colonel Max Wachtel (1884-1982), would operate four battalions based at sites in the Calais region in the summer of 1944. With the unit title FR 155(W), the 'W' refers to *Werfer* [launcher] not Wachtel as sometimes suggested. For further reading, please refer to Zaloga, *V-1 Flying Bomb 1942-52*, p. 9.

Intelligence, based on the aircraft's anticipated twenty foot wingspan, the pilotless aircraft or flying bomb was the Fieseler Fi-103.[69] It received the cover title of *Flakzielgerat*-76 [Anti-aircraft targeting device] or FZG-76 implying a more innocuous purpose as a target drone. It transpired that the ski-shaped buildings were storage bunkers where multiple FZG-76 were housed, less their wings and tail-plane. The curved exit was included to protect the tunnel from enemy bomb blast. FZG-76 final assembly and pre-launch set-up took place in an adjacent magnetic free building.

The number of ski-sites had reached ninety-six when the Chiefs of Staff decided that the RAF and USAF would commence the CROSSBOW bombing campaign to destroy the compounds from 5 December 1943. The Chiefs of Staff had decided to wait till construction of the compounds was nearly complete before starting the first bombing. There was scepticism that aerial attacks would be effective, with Alan Brooke noting in his diary that the bombing accomplished little as the air forces could not achieve the required accuracy.[70] PRU reconnaissance in February suggested less than half of the sites were badly damaged, with repairs swiftly carried out.[71] And yet, the Germans decided to abandon some of the damaged sites, while others were partially repaired to act as decoys. In their place, simplified sites dubbed 'modified sites' by the Central Interpretation Unit (CIU) were created, that took little over one week to prepare. This contrasted with the eight weeks needed to construct the original ski-site. Many of the support buildings were dispensed with, making the sites easier to conceal from the regular Allied PRU flights.

---

[69] The Pilotless aircraft was dubbed the Peenemünde 20 by analysts at the Central Interpretation Unit (CIU) who reviewed aerial photographs of ski-sites. They noted the doorway of the final assembly building was always 22 feet wide and assumed the pilotless aircraft would have a wingspan no wider than approximately 20 feet [6.1 metres]. The V-1 had a wingspan of 17 feet 6 inches [5.33 metres].

[70] Lord Alanbrooke, War Diaries 1939-1945: Field-Marshal Lord Alanbrooke (London: Weidenfeld & Nicholson, 2001), p. 511. Entry for 11 January 1944. The first V-1 would be launched from France against London on 13 June 1944.

[71] TNA CAB 80/80, CROSSBOW – Eleventh Progress Report by the Assistant Chief of the Air Staff, COS (44) 182 (O), 21 February 1944.

Unlike the original ski-sites which were built using French labour, the new modified sites were only built by German engineers maintaining tight security.

When the campaign to launch the FZG-76 commenced on 13 June 1944 (Operation EISBÄR [Polar Bear]), the Germans launched multiple missiles from sixty-three of their seventy-two hidden sites. Delivering a payload of 850 kilograms of Amatol, the FZG-76 was later dubbed the *Vergeltungswaffe Eins* [vengeance weapon one] or V-1 during propaganda radio broadcasts to the German population on 23 June 1944, This title was officially confirmed by Hitler on 4 July 1944.[72]

British intelligence was also observing seven 'large sites', five near Calais and two south of Cherbourg on the Cotentin that they believed were associated with long-range rockets being developed in Germany. Compared to the ski-sites, their construction was on a monumental scale with tunnels leading from rail heads into colossal concrete bunkers. Their true purpose was revealed after the abandoned sites were captured later in 1944. The underground site at Mimoyecques was intended to house a battery of multi-chambered cannon aimed at London known as the *Vergeltungswaffe Drei* [vengeance weapon three] or V-3. The two sites on the Cotentin and two in the Pas-de-Calais were heavily fortified bunkers designed to assemble and launch the V-1, while the remaining three sites were intended as heavily protected launch sites for the *Aggregat-4* or A-4 rocket, known to German propaganda as the *Vergeltungswaffe Zwei* [vengeance weapon two] or V-2.[73] Allied Intelligence had been monitoring the equipment's development for many months but lacked information stating when or how the weapons were to be used. The Chiefs of Staff met weekly to appraise V-I & V-2 progress and decide how best to counter their

---

[72] Zaloga, *V-1 Flying Bomb 1942-52*, p. 9. Hitler would rename the V-1 again in November, this time choosing the name *Krähe* [Crow].

[73] TNA CAB 79-68, JIC (43) 508 (O) Annex pp. 3-4.

threat. Serious thought was given to whether the missiles might be used to deliver chemical weapons - known to be stockpiled by Germany.[74]

Since their posting to Littlehampton at the beginning of 1944, 30AU had been expanded to around three hundred Marines in preparation for operation Overlord. For the landings in Normandy, the unit was divided into three sections - Pikeforce, Curtforce and Woolforce – named after their section commanders Pike, Curtis and Wooley. Specific targets were allocated from the NID30 Black List published back in May, to be secured on D-Day or during the following weeks . Targets were located along the length of the Normandy coast, with the radar sites at Engelsqueville-la Percie between the Omaha beach and the Pont du Hoc and ski-sites located on the Cotentin - both in the US sector.

The Percie radar site had been heavily bombed and yielding little other than enabling dimensions of the equipment to be taken and useful photographs. Scuttling charges had been deployed by the retreating Luftwaffe personnel and sensitive equipment like the dipoles removed.[75] The site was photographed by 30AU on 10 June, with images of the *FREYA* and *WÜRZBURG* surviving in TNA.[76] Other radar sites were targets in the British sector, at Douvres-la-Délivrande and Arromanches. Dunstan Curtis, commander of Curtforce described the Douvres radar site as an underground concrete fort which was heavily defended by over three hundred enemy troops.[77] Too heavily defended to be

---

[74] TNA CAB 81/118, JIC (43) 449 (O), Report by the JIC, Operation BODYLINE, 11 November 1943.

[75] TNA ADM 233-500, Inspection of Radar Station at Pointe de la Perceé, Lieutenant J A C Hugill, 12 June 1944.

[76] TNA ADM 202/598, Images and register of photographs of German radar equipment Pont De La Percée.

[77] TNA ADM 233-500, The radar station, codenamed Distelfink by the German authorities (Goldfinch), was manned by two hundred and thirty members of the Luftwaffe 'Luftnachrichten-Regiment 53' operating five Radar arrays. One was the giant *WASSERMANN* FuMG 402, christened the 'hoarding' by Allied intelligence. Two were the *FREYA* FuMG 80, early warning device and the last two were the seven metre wide parabolic *WÜRZBURG Riese* FuSE 65 short range radar, a larger version of the *WÜRZBURG* D temporarily captured at Bruneval in February 1942.

occupied on D-Day, the site was bypassed by the attacking force of 41, 46 and 48 Commandos and isolated until an assault force could be assembled.[78] 30AU were diverted to investigate nearby ski-sites, now dubbed CROSSBOW sites after the British intelligence committee investigating German Vergeltungswaffe.[79] A number were located south of Cherbourg on the Cotentin Peninsular, all aligned with Bristol Cathedral in the UK, with three photographed by 30AU.[80] They recorded storage and railway facilities and concrete plinths designed to accept the V-1 prefabricated metal launch ramp. These ramps were not shown in 30AU's photographs, as these were yet to be installed at the Cotentin sites.

Although behind the Allied front line, the Douvre radar station remained defiantly in German hands until heavy armour was available to assault the site's defences. Douvre remained an important intelligence target so members of 30AU returned to the site later in June to participate in the final assault – this time supported by British Petard firing A22 Churchill AVRE and mine-clearing M4 Sherman flail tanks.[81] Fighting alongside 30AU were X Troop of No. 10 (Inter-Allied) Commando – now attached to 41 Royal Marine Commando. Some of these commandos were the same German speaking members of X Troop who attached to 40 Commando, attacked Dieppe during operation JUBILEE in August 1942.[82] The 30AU commandos were led by Lieutenant Glanville along with RAF

---

[78] Van der Bijl, *Commandos in Exile*, p. 99.

[79] For further reading, please refer to Williams, *Operation Crossbow.*

[80] TNA ADM 202/598, Images and register of photographs of German Ski-sites A 136, A 137 and A 145. No location is recorded but by the dates the images were taken, they would have been three of the eight sites located in the Cotentin. These were: two at Flottenmanville; one at Bristellerie; one at La Glaceriie; three near La Sorellerie and Masnil Au Val. Source TNA CAB 79-68, JIC (43)508 (O), CROSSBOW Third Report by Joint Intelligence Committee, 11 December 1943. Most of these Ski-sites still exist today.

[81] Most British tanks received a 'General Staff specification' number – A22 in the case of the Churchill tank. The contraction AVRE denoted an Armoured Vehicle Royal Engineers, whereby a standard Mark III or Mark IV Churchill had the turret armament replaced by a 290 mm petard spigot mortar. Designed to fire over distances up to two hundred yards [180 metres], the mortar was used to eliminate fortified bunkers such as those found at Douvre. Flail tanks were fitted with a landmine clearing device that employed heavyweight chains - spinning at the front of the vehicle – that would force a path through a minefield.

[82] Garrett, *X Troop*, pp. 166-174. The captain of the unit whom encountered in Chapter II at Harlech Castle in the summer of 1942, now Major Bryan Hilton Jones, was killed attempting to capture the radar site at Douvre.

intelligence officers who had billeted with Glanville in readiness for the fall of the station. With the surrounding minefield successfully breached, the station fell at about 1800 hours on 17 June.[83] Two hundred and twenty-seven Luftwaffe personnel surrendered. Curtis assumed before the assault that the German defenders had probably destroyed any intelligence of value however, once inside the underground bunker 30AU started to assemble a huge hall of artefacts.[84] They had managed to catalogue many items when looting of the bunker broke out, organised by an unidentified British army major who was intent on liberating tables and chairs for his own HQ. With the looters discarding the contents of desks on the floor, any attempt to maintain a forensic examination of the bunker ceased.

The troops looting the bunker were equipped with SHAEF 'Special Passes', which Curtis noted were so numerous as to have no real value. He feared that valuable material may have been lost and at the very least, the time spent assessing the site prolonged. While 30AU prepared the final inventory and discovered that a chest containing equipment manuals that had been recorded when 30AU arrived in the bunker had disappeared, removed by the British major. Accepting this loss, the haul still turned out to be worthwhile. Once in British hands, the bunkers at Douvre were repurposed to store a large quantity of British invasion currency with the site known as the Bank of Normandy.[85]

The inventory of documents and user manuals ran to one hundred and fifty-five items, covering many electronic components and weaponry. Paperwork detailing

---

[83] TNA ADM 202/308, 30AU War Diary, D.+11, Saturday 17 June 1944, report dated 30 June 1944.

[84] TNA ADM 223/500, 30 Assault Unit, Report No 2, 19 June 1944, Commander Dunstan Curtis.

[85] With the British advance planned through Franc, Belgium, the Netherlands and Germany, currency for all countries was required. On 14 August 1944, £89 million worth of currency was shipped by the Royal Army Pay Corps and stored at Douvre, nearly one billion in modern money. The Douvre bank was closed on 15 September 1944 when deposits of £32 million were moved to the Banque de France in Paris.

communication equipment, radios, and radar arrays were secured, including operator's manuals for the *FREYA*, *WÜRZBURG* A, C, D & Reise. Weapons guides detailing machine guns and machine pistols were found, including guides for obsolete weapons, hinting that outdated equipment was being issued to defenders of the Atlantic Wall.[86] The haul of physical artefacts was even more impressive, with service parts for both the *FREYA* and *WÜRZBURG* arrays including spare Dipole, cathode ray tubes and numerous valves and fittings. Specimen Dipoles were also captured for the *WASSERMANN*. The 30AU team found a secret room within the bunker and recovered a damaged GAF Enigma machine, GAF wheels I, II, III, IV, V and a scrambler wheel type R. All were returned to the Admiralty. At an unnamed radar site in Brittany, a set of Naval Enigma wheels were also recovered.[87] This extensive haul, combined with the map recovered at the Arromanches Radar site that detailed every radar installation in Western Europe - past, present and planned, justified 30AU's months of training and preparation. The Douvre operation emphasised the urgent need for specific troops to guard and secure sensitive sites and prevent rogue majors in need of office furniture destroying vital intelligence. The need for an S Force or equivalent could not be more apparent yet the lessons learned in Italy were still not being applied in France.

4.06   TICOM and 30AU - Cryptographic Intelligence Capture

Although 30AU were to operate in Europe until the end of the War, securing many important items of Naval Intelligence, their role in targeting cryptographic intelligence was reduced following the liberation of Paris in late August 1944.[88] Analysis of 30AU targets

---

[86] TNA ADM 223/500, three-page document ref B 47 B titled 'Miscellaneous Documents Collected from the Control Station of German "Radar" at Douvre', 17 June 1944.

[87] TNA ADM 223/213, History of SIGINT Operations Undertaken by 30 Commando / 30AU, point 11. The Enigma components captured at Douvres were identified as versions used by the German Air Force (GAF). The location of the Radar site in Brittany is not specified.

[88] TNA ADM 223/213, History of SIGINT Operations Undertaken by 30 Commando / 30AU, point 13. TICOM teams took over SIGINT captures after the Liberation of Paris on 25 August 1944.

in Paris reveals sites storing or manufacturing naval equipment, Marine Headquarters,

OKM (West), including accommodation for Admiral Doenitz and Gestapo headquarters.[89]

Locating cryptographic artefacts was henceforth assigned to TICOM teams – a contraction

of Technical Intelligence Committee – that comprised British and later US staff from

Bletchley Park who would investigate German cryptography during the last year of the

war. The remit of TICOM was four fold; to understand the extent of the German effort to

break Anglo-US cyphers; to ensure that knowledge of any German successes against

Allied cyphers did not get into the wrong hands; to learn from and employ any German

cryptographic technology that appeared to give the Allies an advantage; to understand any

technology that might have been have been passed to Imperial Japan or could be used

against that country.[90]

With TICOM in the field, 30AU were no longer the primary resource used to

secure cryptographic targets, though they were still briefed by BP to look out for sought

after Enigma artefacts. The Luftwaffe's new *Umkehrwalze D* [Reversing Rotor D] was an

example.[91] Referred to insouciantly by cryptographer Stuart Milner-Barry as 'Uncle D' or

'Uncle Dick', this new item was an Enigma reflector wheel, whose internal wiring could

be re-ordered by the operator in the field. Introduced by the Luftwaffe during 1944, it was

also used by elements of the German navy who needed to communicate with the air force.

'Flemings Party' [*sic*] were briefed in August 1944 to look out for wheels and books

---

[89] TNA ADM 1/15798, Appendix A, First Priority Targets, Item 1, 25 October 1944.

[90]. Randy Rezabek, 'TICOM: The Last Great Secret of World War II', Intelligence and National Security, 27, 4, (2012) 513-530 (p. 515), <https://zenodo.org/records/898714> [accessed 18 January 2024].

[91] TNA HW 50/71, GC&CS Historical notes regarding Unkehrwalze D. A debate between Hugh Alexander and Stuart Milner-Barry established that BP were already able to read large amounts of the Luftwaffe's traffic, while a raid to capture the Uncle D device might cause the Luftwaffe to change their keys resulting in a blackout of 'large groups of air traffic', 6 April 1944. By the end of the month, there was a growing desire to attempt a pinch raid, but a final note by Sir Edward Travis, head of GC&CS states 'no action', 30 April 1944.

containing 'Uncle D Settings'.[92] Although concentrating on naval targets, 30AU continued to secure cryptographic code books and keys right up to the end of hostilities. Captured documents were processed by NS-VI, (NID 12A) and added to the document repository, with accession lists preserved at TNA. One example notes the seizure by 30AU of Enigma keys at Buxtehude west of Hamburg, recorded by NS-VI on 3 May 1945.[93]

4.07   CIPC – US Staff Joins the IPC Under Brigadier-General Betts

Members of the IPC attended a one-off meeting in the War Office on 12 June 1944, along with representatives of SHAEF, the War Office and branches of Anglo-US Military Intelligence.[94] The purpose of the meeting was to reassert the objectives of the IPC, provide an update with current progress with the consolidated Black List, and to allocate responsibility for future actions. Importantly, the US were present ahead of their full participation in a 'combined' IPC. Linstead outlined how the Black List dossier would be passed to SHAEF to prepare the field forces required to capture and guard targets. When the capture of a target was imminent, SHAEF would approach the IPC to source the necessary 'expert personnel' that would be required to travel to assess the target. Linstead outlined the need to allocate responsibility for four main areas. Firstly, who within SHAEF would inform IPC once a target had been captured and available for investigation. Secondly, who should contact then discuss evaluating targets with these experts, thirdly would administer these experts – organise their passage to the continent etc., and finally who would provide drivers and transport once experts were abroad but needed to travel to the target sites. In the distant future, the Target Force or T Force when eventually formed by SHAEF in the early months of 1945, would be charged with, and ultimately excel at

---

[92] TNA HW 50/71, GC&CS Historical notes regarding Unkehrwalze D. Notes regarding 30AU briefed regarding 'Uncle Dick' capture, 14 August 1944.

[93] TNA HW 8/116, Captured Enemy Documents Accession Lists, PU/G/1-62, Top Secret 'U', Buxtehude via 30AU, ULTRA/Zip/NS/PU/G/9, 3 May 1945.

[94] British Military Intelligence departments MI1, MI 10 and MI 14 were present.

providing these services. However, in the summer of 1944, it was not clear who within SHAEF should undertake these duties.

Representing SHAEF was US Brigadier-General Betts, recently appointed deputy to the SHAEF head of Intelligence Major-General Strong. Betts had previously been a member of COSSAC , with a good appreciation of the challenges facing the combined command.[95] Betts stated that SHAEF intend to create a dedicated G2 team, provisionally titled 'S Section' who would perform the staff work as intelligence targets were captured.[96] Betts assumed most duties were to be handled by existing SHAEF G2 staff but suggested that the Admiralty and Air Ministry may have wished to allocate officers to expedite their specific needs. Acknowledging the remaining three staffing requirements outlined by Linstead, Betts continued that an assault unit should be tasked with the physical capture of targets, known within SHAEF as 'S Force'. It is interesting that Betts repeatedly refers to S Force, as it was a term not associated with the European Theatre of Operations (ETO), yet Betts is clearly aware of the precedent set by General Smith in Italy. Fleming representing Naval Intelligence at the meeting, advised that the Admiralty already had a naval 'S Force' in the field – referring to 30AU, who had been active in large numbers in Normandy since 6 June. It should be noted that FSS also participated in the Normandy landings and the immediate build up, each attached at Divisional and Corps level to provide HQ security, collect strategic intelligence, seek enemy agents or collaborators and process any intelligence material that happened to be acquired.

---

[95] Brigadier-General Thomas Betts (1913-1977), G2 Intelligence Officer COSSAC & SHAEF, 1944-1945, deputy to Major-General Kenneth Strong 1944-1945, Chairman CIOS 1944-1945.

[96] TNA FO 935/19, 'Minutes of Meeting Held in Room 350, War Office Main Building on Monday 12 June 1944', Issued by MI 17 Secretariat, 15 June 1944, Point 2.

The gathering at the War Office on 12 June was the first record of Betts attending an Anglo-US meetings to discuss targeted intelligence and the expansion of the IPC to accommodate US representatives. He would eventually be appointed Chairman of the Combined Intelligence Objectives Sub-Committee (CIOS) by SHAEF in August, with Linstead as his deputy. Manpower shortages in France prevented the S Force Betts had discussed from being formed as a permanent force until the end of the year. Until then, intelligence targets that required capture or guarding were handled by any local troops deemed spare with predictably mixed success. The seniority of Betts within SHAEF brought the required gravitas to the intelligence gathering committees, ensuring their endeavour was taken seriously by senior Anglo-US field officers. In addition, his experience and expertise operating with the British meant he was a popular choice to chair CIOS. Understanding a little of his background reveals him to be an Anglophile who felt the US intelligence community had much to learn from the British.

Thomas Betts was trained as a G2 intelligence officer, joining the tiny staff of the US War Department in 1938. Tasked with handling the cables received from Military Attachés around the world, he also liaised between the War Department and the State Department, processing the latter's communications. Roosevelt's Secretary of State, Cordell Hull would stroll in to see him each Sunday morning and chat about developments with the European War. At this time, the G2 intelligence staff had only increased from fifteen to thirty, only reaching one hundred in November 1941. [97] America entered the war the following month with Betts attending the Anglo-US conferences the following year. Betts was greatly impressed by the competency of the British G2 staff yet was

---

[97] The Eisenhower Presidential Library, Thomas J Betts Papers. pp. 72-79. <https://www.eisenhowerlibrary.gov/sites/default/files/research/oral-histories/oral-history-transcripts/betts-thomas.pdf> [accessed 10 June 2021]. Brigadier-General Thomas J Betts, 1913-1977; Intelligence Officer Cossac & SHAEF, 1944-May 1945; Director of Intelligence, U.S. Group, Control Council for Germany, May 1945.

apprehensive that he would be out of step with the British delegation. To better prepare, he developed the concept of pairing with his British G2 opposite number, an officer named Bill Piggott, who he would meet ahead of the main sessions and agree policy. They unofficially termed themselves the 'Combined Intelligence Committee' or CIC, attending subsequent conference sessions 'with the same story for whatever situation presented itself'. The title wasn't questioned, and the Betts and Piggott continued to work together under the CIC title at the QUADRANT (Quebec) and SEXTANT (Cairo) conferences.[98] During these Anglo-US meetings, Betts met and worked alongside the senior British intelligence officer within AFHQ; Major-General Kenneth Strong - establishing a close rapport that Strong would remember when the opportunity to work with the US presented itself in the future.[99] Like Betts, Strong was keen to strengthen relations between British intelligence and US G2 officers, setting up a training facility in Algiers and staffed by intelligence officers with recent battlefield experience. Strong felt it was essential for continuity of process, that US intelligence officers worked in the same way as the British and were taught Anglo-US field craft.[100]

US General George Marshall introduced Betts to the British head of COSSAC Lieutenant-General Morgan.[101] Marshall was aware of the working relationship Betts had nurtured with various British officers, especially Piggott and Strong and was keen for Betts to be involved with the Anglo-US teams planning RANKIN and OVERLORD. Betts was

---

[98] The Eisenhower Presidential Library, Thomas J Betts, Papers, pp. 114-119.

[99] The Eisenhower Presidential Library, Thomas J Betts, Papers, p. 155.

[100] Strong, *Intelligence at the Top*, pp. 98-99. Strong's school addressed one of General Eisenhower's frequent complaints that very few US officers had received training in intelligence duties, making the US Intelligence machine ineffective in the field. Using officers with recent field experience as instructors, the school proved very successful ensuring unified process for all participants. The US officers proved to be very fast learners, with Strong's school greatly impressing Eisenhower. As President, Eisenhower pursued intelligence training based on Strong's model into the post-war period, with the national Central Intelligence Agency and the Military Defence Intelligence Agency within the Department of Defence in the Pentagon.

[101] General George Catlett Marshall Jr (1880-1959), Chief of Staff to President Roosevelt and later US Secretary of State.

duly appointed to COSSAC with a promotion to Brigadier-General. Initially working as the assistant to the British Major-General P.G. Whitefoord, then later General Sir John Whiteley, Betts headed a team of six technical Intelligence Staff who assessed and compiled information regarding German technology of War, new innovations and designs etc. His appreciation of Germany's latest military and scientific technology made Betts the ideal choice to join the US contingent within the CIPC and later accept the chairmanship of CIOS.

In March 1944 Betts toured the Mediterranean at the request of Bedell Smith observing British staff for six days at AFHQ in Algiers.[102] He was 'educating himself with vital and supersensitive material, that was a high art with the British.' He was referring to Enigma and Ultra decrypts. Betts was one of only a few US staff officers who were 'indoctrinated' into the workings of GC&CS and privy to the issue of Ultra transcripts. Betts then travelled to Italy to visit his close friend Colonel George 'Budge' Smith, commander of S Forces in Italy. Although Betts does not detail their conversations precisely, he does state that he spent his time with Smith getting to understand his command and learning from Smith the importance of the S Force in freezing intelligence targets to prevent looting. On 19 May 1944, Strong was advised he would be returning to the UK to take over as General Eisenhower's Intelligence Chief, though his US deputy would remain in Algiers.[103] Arriving at SHAEF Headquarters on 23 May, Strong immediately offered Betts the position of his deputy, writing warmly about Betts in his memoirs:

> Brigadier-General Thomas J Betts of the American army was a tower of strength […]
> Tom had been at Supreme Headquarters for a long time before I arrived and was

---

[102] General Walter Bedell Smith, (1895-1961), Eisenhower's Chief of Staff in AFHQ and later within SHAEF and later ambassador to the Soviet Union.

[103] Strong, *Intelligence at the Top*, p. 127. Strong's AFHQ deputy, U.S. Colonel Thomas E. Roderick did not return to the UK with Strong. He remained in Algiers taking over the position of Chief of the Intelligence Staff AFHQ from 1 March to 21 September 1944.

one of the most popular officers, with excellent contacts among both the British and the Americans. He never tired of repeating his basic principle that a battle was not a matter of ground, air or naval forces but was an undertaking in which all forces should cooperate.[104]

The success of the Allied landings in Normandy on 6 June 1944 emphasised the urgency to finalise lists of intelligence targets within the lodgement. The JIC issued a report to the War Cabinet, dated 7 June 1944, urging the full participation of their US Allies by expanding the IPC to include US members. The expanded committee was to function under joint Anglo-US chairmanship being renamed the 'Combined' Intelligence Priorities Committee or CIPC. The designation 'Combined' by the summer of 1944 was the term applied to any committee or body that included US and British members and represented Anglo-US affairs.[105] The framework established under the IPC to compile lists of targeted intelligence in preparation of launching RANKIN Case C remained unchanged. Patrick Linstead still chairing the meetings along with representatives of the British Admiralty, War Office, Air Ministry and Dr Noton of the MEW. The US team was headed by Betts and officers representing SHAEF. The US navy and Tactical Air Force were also represented, along with two staff from the US Embassy, countering Dr Noton's MEW presence. A single representative of the US War Department was present – Boris Pash, of the US ALSOS team in Europe. The first meeting of the CIPC took place on 17 June 1944 with the size of the committee expanded to include:

British	United States
1 or 2 naval representatives	1 or 2 naval representatives
1 or 2 army representatives	1 or 2 army representatives
1 or 2 air force representatives	1 or 2 air force representatives
1 scientific non-service representative	1 representative of OSRD
1 MEW representative*	1 representative of the Office for Economic Warfare*
1 Foreign Office representative*	1 State Department representative*
*Only to attend when required	

---

[104] Strong, *Intelligence at the Top*, p. 134.

[105] TNA FO 1082/1, Control Commission for Germany, Glossary of Abbreviations, Contractions, Code Names, Etc., published by the Foreign and Commonwealth Office, 1984, p. 50.

Linstead advised that the chair was to be shared between Betts and himself. He would be in charge when planning matters dominated, while Betts would occupy the chair when operational matters were on the agenda. Comments by Betts were supportive of the intelligence target work already completed by the IPC, stating that the way the current list was being prepared was precisely what SHAEF needed, though target prioritisation was now required. Once items on the Black List were prioritised, the document could be issued to SHAEF who would organise target capture. Betts also suggested that a 'territorial division' of the target list 'was exactly what was required by SHAEF', in other words the list should not only be sorted by target type, but duplicated and sorted geographically.[106] The CIPC might also be consulted regarding appropriate technical experts to investigate an intelligence target, but SHAEF was ultimately responsible for selecting investigators and despatching them to intelligence target sites. The role of ALSOS was discussed with Colonel Pash advising that his team's primary concern was scientific research for this war and the next. It is not clear whether he elaborated further or simply cloaked his activities euphemistically with his repeated referencing of 'scientific research'. Linstead diplomatically proposed that ALSOS should collaborate with the CIPC, who would pass on appropriate target information to ALSOS. The agreement was reciprocated, with Pash prepared to pass on target information and reports that were more appropriate for CIPC. Betts emphasised that the committee should 'only concern itself with items affecting the prosecution of the war and should not extend itself to the collection of commercial or political intelligence'.[107]

---

[106] TNA FO 935/20, Combined Intelligence Priorities Committee, First Meeting, 17 June 1944, point 4, Betts commenting on status of work so far carried out by British IPC.

[107] TNA FO 935/20, Combined Intelligence Priorities Committee, First Meeting, 17 June 1944, point 3, Functions of the Committee.

The second CIPC meeting was held on 22 June and was attended by Major Cave in the capacity of SHAEF G2. Cave's experience as Advance G2, AFHQ and his involvement with George Smith's S Force should have provided the CIPC with valuable field experience. The primary concern of the meeting was to set up 'working parties' that would be responsible for reviewing the RANKIN target lists compiled by the IPC and vetting new intelligence targets proposed by service and government ministries. The CIPC were under pressure from SHAEF to issue a consolidated Black List as quickly as possible.[108] Targets were sorted into the twenty-eight IPC categories, then grouped and sub-divided into seven working groups.[109] Naval targets were to be handled by the Admiralty in conjunction with US navy representatives, while military targets were initially to be handled by the War Office, though in time these would be allocated to additional working parties.[110] Working parties were to be manned by representatives of the British and US services and appropriate ministries. The US Office for Scientific Research and Development (OSRD) was well represented with over twenty civilian representatives in different working parties. Members of the CIPC joined separate working parties as members or chairmen. Professor Patrick Linstead, chairman of the CIPC was also chairman of Working Party D – explosives, metallurgy, chemicals, pharmaceuticals and plastics. US Bennett Archambault, head of the OSRD mission in London and CIPC member was also the chairman of Working Party A investigating Radar. British scientist Robert Watson-Watt was also a member of this group.[111] Only chemical weapon targets were to be handled by the entire CIPC committee. Linstead confirmed that low priority economic targets were to be added

---

[108] Combined Intelligence Priorities Committee, Second Meeting, 22 June 1944, point 3, Notes for Guidance of Working Parties, General Betts advised that SHAEF required a consolidated Black List within two months. It would be issued to SHAEF by CIPC on 4 August 1944.

[109] The number of working groups was increased to twelve by April 1945. For a detailed breakdown of the CIPC and later CIOS Black List categories, please refer to Appendix VI.

[110] TNA FO 935/20, Combined Intelligence Priorities Committee, Second Meeting, 22 June 1944. See also CAB 81/146.

[111] Sir Robert Watson-Watt (1892-1973), British scientist and pioneer of radio direction finding and Radar and scientific advisor to the MAP.

to a 'Grey List', but this would fall outside the purview of the CIPC and SHAEF. Linstead stated that the Grey List would be the responsibility of the Control Commission.[112]

The first edition of the compendious Black List was issued by the CIPC on 4 August 1944 and contained consolidated targets proposed by government departments and all three services. The original IPC target classification structure that would remain fundamentally unchanged until the end of hostilities.[113] The reliability of the intelligence was graded, and targets prioritised. Top priority targets represented about five percent of the targets, second priority about twenty percent and third priority, about seventy-five percent of total items. The viability of the target intelligence was rated, according to the reliability of the source and the probability of the information. Reliability was rated A to E while probability was rated one to five, however if the probability was unknown, it was assessed as zero. Thus, A1 targets were the highest rated, E5 the lowest, with the source of the intelligence noted – MoS, Admiralty, ALSOS et cetera. [114]

Shortly after the issue of the consolidated Black List, an alternative version was circulated with targets grouped geographically - as requested by Betts at the first meeting of the CIPC on 17 June. Targets were first grouped by country (Belgium, Denmark, France, Germany, Holland and Norway) and then by zone.[115] As with the original IPC and naval target lists completed in May, the new Black Lists were completed in readiness for RANKIN Case C, with targets across the whole of occupied Europe included. Countries

---

[112] TNA FO 935/20, Combined Intelligence Priorities Committee, Second Meeting, 22 June 1944, p. 2.

[113] TNA FO 1031/72, Classification of T Force Records, Appendix A to ODI/FIAT/E/321.01-83, 16 July 1945.

[114] TNA FO 1050/1417, Combined Intelligence Priorities Committee, Black List, as amended by Working Parties, 4 August 1944. Introductory notes detailing the 28 sub-sections, followed by targets grouped by section number. Approximately 370 pages.

[115] TNA FO 1050/1419, Combined Intelligence Priorities Committee, Black List of Targets, arranged in Geographical Zones. August 1944.

were subdivided into target zones based on large conurbations – Belgian for example was divided into four zones: Brussels; Central Belgium; Bruges, and Ostend. Patrick Linstead, reviewing the creation of these first Black Lists, noted that they were compiled 'as a matter of great urgency to cover the possibility of a German Collapse.'[116] Supplements to the Black Lists were then issued on a monthly basis, refining or adding targets and deleting spurious data.[117] Specific groups of target subjects were researched and added to the Black List via these regular supplements. For example, a list of manufacturing sites across occupied Europe, known to be developing synthetic rubber, plastics, bullet-resisting glass, oxygen producing equipment and anti-fouling paints for marine use, were added to the Black List in an eighteen page supplement issued on 8 December 1944.[118] In late 1944, the CIOS committee that had replaced the CIPC from 21 August 1944, had decided to issue a second edition of the Black list that incorporated all active supplements. The new second edition of the CIOS Black List was issued in the second half of February 1945.[119]

4.08   CIOS - Combined Intelligence under Combined Command

The IPC had been created in May at the request of the JIC and later expanded to accommodate US representation in June. Although the enlarged Anglo-US CIPC had worked efficiently since its formation on 17 June, compiling and publishing the 'first edition' of the consolidated Black List on 4 August, it was still subordinate to the British JIC instead of the more appropriate Combined-Command SHAEF. CIPC members accepted that the committee was a stopgap and would be replaced in due course by a

---

[116] TNA FO 1031/51, Report of the Combined Intelligence Objectives Sub-Committee for 1944, p. 2, Work on the Black List, Professor Patrick Linstead and Brigadier-General T J Betts.

[117] TNA FO 1050/1420, Combined Intelligence Objectives Sub-Committee, Black List of Targets, arranged in Geographical Zones, Amendment One, 12 September 1944, Amendment Two, 10 October 1944, Amendment Three, 8 November 1944.

[118] TNA FO 935/2, CIOS Black List Supplement, 8 December 1944.

[119] TNA FO 935/25, Distribution of 2nd Edition of CIOS Black List, C M Warburton, C 108/105/2/8, 28 February 1945.

permanent body formed by the Combined Chiefs of Staff and subordinate to SHAEF. The format of this replacement committee was proposed by the Combined Intelligence Committee on 12 June 1944 and was given the working title of Combined Intelligence Objectives Sub-Committee or CIOS. This new formation would eventually continue the work of the CIPC, reviewing intelligence targets of military significance proposed by the British and US government departments.[120] The precise function and role of this new committee was debated throughout July.

In early August, the CIPC were approached by SHAEF and asked to advise names and the number of investigators needed to investigate targets in the French capital. The CIPC constitution, only extended to prioritising intelligence targets, with the formation of field investigation teams being the responsibility of SHAEF. On 14 August, the CIPC circulated a seventeen-page extract from the Black List detailing targets in Paris and requested that an estimate of the required number of investigators be provided by commissioning ministries in two days.[121] At the sixth meeting of CIPC, an estimate of eleven multi-service Anglo-US field teams were proposed, initially totalling one hundred and seven investigators, plus a further six representing ALSOS.[122] These teams were to assemble and depart Northolt airfield on 28 August 1944. This inaugural investigation trip was not without its problems. Fifty-two investigators eventually flew to Paris, while eight failed to arrive at the airfield. Inadequate transport was laid on between Chartres Airport and Paris, with Twelfth Army Group unable provide transportation. It was quickly apparent that several specialists on the team had not been adequately briefed by the

---

[120] TNA FO 935/21, Establishment of Combined Intelligence Objectives Sub-Committee, CM-IN-9953, SCAF 50, 12 June 1944.

[121] TNA FO 935/20, CIPC Field Teams for Paris, Major M McLaren, CIPC (44) 7, 14 August 1944, seventeen pages of Paris targets attached.

[122] TNA FO 935/20, Minutes of Sixth Meeting of CIPC, 16 August 1944, point 5, Field Teams for Paris, pp. 4-6.

commissioning ministry and were unaware why they were in Paris. Despite these setbacks, the SHAEF representative who oversaw the investigation team on behalf of CIPC deemed the mission a success, with valuable information recovered.[123] Lessons were learned and applied with subsequent investigators despatched to the field.

At the meeting of the CIPC on 16 August 1944, the chairman Brigadier-General Betts read out a telegram from the JCS to SHAEF instructing that a new Combined Intelligence Objectives Sub-Committee (CIOS) should be formed that would absorb the current CIPC.[124] Terms of reference were subsequently issued by the Combined Intelligence Committee (CIC) in Washington on 21 August and authorisation for the formation of CIOS. The inaugural committee meeting was held on 6 September. CIOS comprised fifteen members, seven US, seven British, with Brigadier-General Betts designated Chairman by General Eisenhower, while remaining deputy to Major-General Strong, head of Intelligence within SHAEF. Professor Patrick Linstead, present on 6 September representing the MoS, was elected as Deputy Chairman by acclamation. Targets requested by agencies or government departments often lacked precise geographical information and the working parties were expected to spend additional time researching all available archives. ISTD represented at this inaugural CIOS meeting, advised that they did not have the manpower to research each new target in the available time when target location details were not available. ISTD's comments were supported by IS(O) although it was agreed that targets could not be withheld simply because locational information was incomplete.[125]

---

[123] TNA FO 935/25, SHAEF, Progress Report Paris Field Teams, GBI/T/322 (Twelfth Army Group), Colonel A S Knight, SHAEF T Sub-Section, 6 September 1944.

[124] TNA FO 935/20, Minutes of Sixth Meeting of CIPC, 16 August 1944, point 4, Formation of Combined Intelligence Objectives Sub-Committee, p. 3.

[125] TNA FO 935/21, CIOS first meeting, p. 3, Need for More Explicit Target Data for Germany.

The working party format changed little as the CIPC evolved into CIOS, although a few of the groupings were adjusted and additional groups created to increase the total to twelve - plus unspecified naval research teams. After the seventh meeting of CIOS held in November, a complete listing of CIOS Black List working party members was issued totalling one hundred and forty-two individuals, seventy-four British and sixty-eight representing the US. Jumping forward for a moment, in April 1945, an expanded list was issued at the seventeenth meeting of CIOS with members totalling two hundred and six members, one hundred and six British and one hundred representing the US. Analysis of the membership reveals that of the British members, forty-nine percent were military, fifty-one percent civilian. For the one-hundred US members, seventy-five percent were military, twenty-five percent civilian – the later mostly representing OSRD.[126]

It was now the responsibility of CIOS to despatch investigation teams to Europe and ensure the investigators prepare their reports for the commissioning ministries or agencies. With the success of the CIOS Field Team despatched to Paris on 28 August, teams were subsequently sent to Brussels, Eindhoven, Stolberg, Aachen, Flushing and Strasbourg. By the end of 1944, one hundred and ninety-seven investigators representing fourteen British and US agencies had been despatched to investigate one hundred and fifteen targets.[127] To appraise the committee of investigator's progress on the continent, a regular report updating the CIOS secretariat was requested. Examples of the latest jet engines were investigated with examples of the V-1 pilotless aircraft captured. Other captures included wing technology used on rocket aircraft; the latest torpedoes; details of the new German Radar and pharmaceutical products including anti-malarial drugs.

---

[126] For a detailed breakdown of the CIOS Black List Working Party members in late April 1945, please refer to Appendix VII.

[127] TNA CAB 81/127, War Cabinet, Joint Intelligence Committee, Report by the JIC regarding the future of CIOS, incorporating a review of CIOS performance by Patrick Linstead, JIC (45) 65, 22 February 1945, II Work of CIOS during 1944, Investigation of Targets.

Inspectors investigated petro-chemical facilities specialising in synthetic rubber tyre production and several new developments with tank technology were discovered.[128] The intelligence these investigators obtained provided up-to-date information on German developments, enabling the Black List to be further refined. The Black List format and target breakdown developed by the IPC and retained by CIPC, remained unchanged by CIOS. The technical information obtained was returned to the commissioning Government ministry in the form of a detailed written report – with two hundred and eleven completed in 1944.[129] The information these reports contained proved of immediate use to the commissioning ministry or trade association, although how they used the intelligence or whom received copies was not specified to CIOS. The function of CIOS was merely to ensure the information they obtained was collated then passed to the commissioning Government department or agency.[130]

The battle of Normandy was entering its second month, with the Combined Chiefs of Staff anticipating that the German forces would soon collapse. RANKIN Case C was still very much an active operational plan, with intelligence targets being added to the CIOS Black List in readiness for a swift occupation of Western Europe. In Italy on 9 August, while German forces were preparing to withdraw from Florence, the Chiefs of Staff issued a directive to AFHQ advising that RANKIN Case C should be extended to cover the anticipated collapse of German forces in northern Italy and the adjoining countries. IOSS were to research and collate intelligence targets within the expanded area that would

---

[128] TNA FO 1031/51, Report of the Combined Intelligence Objectives Sub-Committee for 1944, Significant Discoveries of CIOS Field Teams in 1944, Appendix A to CIOS Report for 1944, Professor Patrick Linstead and Brigadier-General T J Betts.

[129] TNA CAB 81/127, War Cabinet, Joint Intelligence Committee, Report by the JIC regarding the future of CIOS, incorporating a review of CIOS performance by Patrick Linstead, JIC (45) 65, 22 February 1945, II Work of CIOS during 1944, Technical Reports.

[130] TNA CAB 81/126, War Cabinet, Joint Intelligence Committee, Combined Intelligence Objectives Sub-Committee – Basic Directive, JIC (44) 459, p. 2, point 9, 7 November 1944.

necessitate immediate capture as the German forces withdrew. To support RANKIN, the British Chiefs of Staff proposed that the Special Operations Executive (SOE) should be deployed in the region to prevent the escape of German officials, preserve records, and furnish guides and interpreters when required.[131] Eisenhower's Chief of Staff wrote on 17 August endorsing the deployment of the SOE, anticipating that they would operate alongside the US Office for Strategic Services (OSS) in enforcing the terms of an armistice.[132] RANKIN planning in Italy was discussed at the OCTAGON Conference held in Quebec from 12 September.[133] A directive was subsequently issued by the Air Ministry Special Signal Office (AMSSO)[134] on 15 September advising AFHQ that planning for RANKIN should allow for the immediate seizure of Austria; Greece; the Dodecanese and Venezia Giulia.

On 14 July 1944, the JIC had written that with the ceaseless Allied attacks on three major fronts, it was difficult to see how Germany could 'prolong the struggle beyond December'. By 5 September, the JIC stated the Germans have 'nothing but disorganised remnants incapable of holding the Allied advance in strength into Germany itself'.[135] During the preparations for OCTAGON, the Anglo-US Combined Intelligence Committee (CIC) issued a report on 8 September entitled 'Prospects of a German Collapse or Surrender'. The report stated that the present German Government, or any Nazi successor, was unlikely to surrender. Although the causes of a collapse were present, the CIC

---

[131] TNA CAB 80/86, Chiefs of Staff Committee, Function of SOE under RANKIN 'B' or 'C' Conditions, COS (44) 714 (O), Major Colin Mc Vean Gubbins, War Cabinet, 9 August 1944.

[132] TNA CAB 80/86, Chiefs of Staff Committee, Function of SOE/OSS under RANKIN 'B' or 'C' Conditions, COS (44) 737 (O), Lieutenant-General Walter Bedell Smith, 17 August 1944.

[133] Prime Minister Churchill and President Roosevelt met at the OCTAGON Conference held in Quebec between 12 and 16 September 1944.

[134] TNA-FO 1082/1, Control Commission for Germany, Glossary of Abbreviations, Foreign and Commonwealth Office 1984. The Air Ministry Special Signal Office (AMSSO) dealt with messages between the British War Cabinet and Washington.

[135] Howarth, *Intelligence Chief Extraordinary*, p. 188.

believed that the armed forces and wider population were shielded from the true war situation, causing most Germans to still be mobilised for the war effort. The CIC concluded:

> The German Strategic situation has deteriorated to such a degree that no recovery is now possible. In addition to the disintegration of the German front in the West, the crumbling of the German position in the Balkans, and the penetration of German defences in Italy, the general decline in Germany's war potential brought about mainly by Allied bombing and German losses of manpower has contributed largely to this situation. [136]

They stated that once a collapse started, it would spread quickly. The CIC concluded…

> We consider that the organized resistance under the effective control of the German High Command (Oberkommando der Wehrmacht [OKW]) is unlikely to continue beyond 1 December 1944, and that it may end even sooner.[137]

Ironically, on the same day these words were issued by the CIC, an explosion occurred in Chiswick, West London at 6.45 in the evening killing three people. The first A-4 rocket, dubbed *Vergeltungswaffe Zwei* [vengeance weapon two] by the Germans, landing in the UK. For the next six months, a further 1368 V-2 rockets would find targets in the UK with the last hitting Orpington on 27 March 1945.[138]

4.09   ECLIPSE – RANKIN Revised for a German Surrender

RANKIN Case C had assumed a sudden German collapse would be absolute, enabling unopposed movement through Germany and now Italy, after an armistice was in place. Experience gained since the landings in Normandy left the Combined Chiefs of Staff concerned that fanatical elements within the German military might not lay down their arms despite a more general capitulation. The Chiefs of Staff now believed that RANKIN

---

[136] OCTAGON Conference, September 1944, Papers and Minutes of Meetings, US Department of Defence, Prospects of a German Collapse or Surrender, Report by the Combined Intelligence Committee, p. 83. <https://www.jcs.mil/ Portals/36/Documents/History/WWII/Octagon3.pdf> [accessed 25 November 2023].

[137] OCTAGON Conference, September 1944, Papers and Minutes of Meetings, US Department of Defence, Prospects of a German Collapse or Surrender, Report by the Combined Intelligence Committee, p. 84. <https://www.jcs.mil/ Portals/36/Documents/History/WWII/Octagon3.pdf> [accessed 25 November 2023].

[138] Steven Zaloga, *V-2 Ballistic Missile: 1942-52* (Oxford: Osprey, 2003), p. 33.

needed to be modified to enable the swift capture of key intelligence objectives that lay

deep inside partially hostile territory. Accordingly, SHAEF started revising RANKIN in

July 1944 under the code name of TALISMAN.[139] The primary objectives were the swift

occupation of selected German cities, ports and key intelligence facilities, the disarming of

German forces and the preparation for the United Nations to assist in relief and

rehabilitation of Germany.

Intelligence target lists that included research centres and key military

manufacturing sites needed to be prepared and targets prioritised. To furnish the

information needed to meet this new directive, CIOS extracted priority targets identified on

the existing RANKIN Black List with ISTD providing intelligence regarding the location.

The outline plan for operation TALISMAN was distributed in August 1944. This

anticipated the capture and freezing of similar intelligence sites as had been outlined in

RANKIN Case C, though the capture of these sites was now allocated in advance to

specific units. For example, 30AU were instructed to prepare rations and transport then

embark in a Landing Ship Tank (LST) in the first convoy to Germany tasked with the

capture of Kiel. They should avoid the distraction of capturing inland targets of

opportunity, instead using their expertise to focus on coastal naval targets.[140] TALISMAN

orders stated that 30AU were to operate in partnership with their US equivalent, the

Forward Intelligence Unit (FIU), with both teams under the command of the Allied Naval

Commander-in-Chief, Expeditionary Force (ANCXF). The Anglo-US naval pairing was

established in early February 1945 with the formation of the Naval Intelligence Sub-

Division (NISD) of SHAEF G2 Division. NISD was staffed by British and US naval

---

[139] Major Kenneth McCreedy, *Planning the Peace: Operation Eclipse and the Occupation of Germany* (Fort Leavenworth, School of Advanced Military Studies, 1995), p. 10, Defence Technical Information Centre , <https://apps.dtic.mil/sti/pdfs/ADA300988.pdf> [accessed 16 August 2023].

[140] TNA ADM 233-500, Letter to Allied Naval Commander, Expeditionary Force (ANCXF) regarding deployment of 30 Assault Unit under TALISMAN conditions, 29 September 1944.

personnel. Their task was to coordinate the activities of 30AU and the FIU during the remaining months of the war, ensuring collaborative operations running alongside T Forces and CIOS investigators who would probably be pursuing similar targets.[141]

Zones of occupation were agreed at the second Quebec conference held in September, resulting in a revised second edition of TALISMAN being issued on 21 October. Suspecting that the TALISMAN code name had been compromised, the operation title was changed to ECLIPSE on the 30 October. A new outline plan for ECLIPSE was issued on 10 November 1944 comprising two phases. The primary phase assumed a surrender of German forces and the securing of important strategic areas deep inside Germany using airborne troops. Major targets were in Berlin, Hamburg and Kiel, Nuremburg, Regensburg and Munich. This phase was the consummation of OVERLORD. The secondary phase would involve the deployment of forces in greater Germany and other occupied countries, to carry out the disarming of German forces.[142] The Bletchley Park based Technical Intelligence Committee or TICOM also planned to use airborne forces to capture cryptographic targets in Berlin. A plan devised in early 1945 involved a TICOM team parachuting into Berlin along with the US 101 Airborne Division who were to protect the investigators for long enough to allow a US relief column to reach the German capital. It was noted that if the Soviets had already advanced into any area of occupation, the movements of the Allies were to be closely coordinated with a Soviet withdrawal.[143]

---

[141] TNA FO 935/22, CIOS/107/3/S, Establishment of Naval Intelligence Sub-Division, G2 Division, SHAEF, 6 February 1945, pp. 1-2.

[142] Operation ECLIPSE, Appreciation and Outline Plan, SHAEF (44) 34, Section III, Outline of Operation ECLIPSE, p. 5. Combined Arms Research Library, <https://cgsc.contentdm.oclc.org/digital/collection/p4013coll8/id/2948/1000> [accessed 1 August 2023].

[143] Operation ECLIPSE, Appreciation and Outline Plan, SHAEF (44) 34, Section IV, Considerations Affecting the Plan, Primary Phase, p. 7. Combined Arms Research Library, <https://cgsc.contentdm.oclc.org/digital/collection/p4013coll8/id/2948/1000> [accessed 1 August 2023].

Eisenhower toured the Western Front in late November 1944. Pausing in the Ardennes Forest, he noted that a mere three US divisions protected a seventy-five mile Front. According to Major-General Strong, Eisenhower commented that there was a danger of a 'nasty little Kasserine' - referring to a surprise attack by German and Italian armoured units in Tunisia in February 1943.[144] General Strong drafted an intelligence digest on 14 December, suggesting that the stockpiles of fuel and huge German reserve assembled in the Eifel, could be deployed in a relieving attack through the Ardennes. Montgomery's staff north of the Ardennes accused Strong of being alarmist, while officers at SHAEF thought Strong unduly pessimistic.[145] Eisenhower's Chief of Staff, Bedell Smith took the intelligence digest seriously, requesting that Strong visit US General Bradley in the Ardennes, to ensure the he was prepared for the danger. Bradley assured Strong he was aware of the German build-up and had certain units earmarked to move into the sector should the enemy attack.[146] On 16 December, Strong was attending a meeting with Eisenhower in Versailles, when his deputy and CIOS chairman Brigadier-General Betts interrupted. Normally phlegmatic, Betts appeared visibly shaken by the intelligence he was to divulge. He advised that large numbers of German divisions had attacked the Ardennes sector and were aggressively moving westward. Hitler's gamble, dubbed the 'Battle of the Bulge' would play out over the next six weeks. Crucially, the German forces in the west were not on the point of collapse, and the war with Germany was not be over during December as Churchill and the Combined Intelligence Committee had so confidently predicted.

---

[144] Strong, *Intelligence at the Top*, p. 154. The battle of Kasserine Pass was launched by German and Italian units in Tunisia between 19 February and 25 February 1943, against inexperienced US troops. This was the first major engagement for the US and revealed shortcomings in their field commanders and battle tactics. Casualties on the German side were just under one thousand, while US casualties exceeded six thousand with around four thousand prisoners taken by the Axis. With supplies running low, Axis forces eventually withdrew from Kasserine Pass and the battle was effectively over.

[145] Strong, *Intelligence at the Top*, p. 156.

[146] Antony Beevor, *Ardennes 1944: Hitler's Last Gamble* (London: Viking, 2015), p. 104.

ECLIPSE was again refined and updated for the planned occupation of Germany in late March 1945. Twenty-First Army Group prepared thirteen pamphlets that clarified aspects of the future occupation and administration of their occupation zone within Germany. These were issued in late March and early April, to be distributed down to Brigade level. Each pamphlet included policy agreed for Administration, Demilitarisation, Disbandment, Transport, Demolition, Prisoners of War and Counter-Intelligence.[147] Donnison, writing in 1961, distilled the tasks detailed in the pamphlets and confronting Twenty-First Army Group as being:

a) to ensure that the Germans have no opportunity of reviving their ability to make war
b) to complete the eradication of Nazism and German militarism
c) to re-educate the German youth.[148]

For any reader to familiarise and absorb the contents of the three hundred pages that made up the thirteen pamphlets was understandably difficult. A solution was provided with the additional publication of a fifty-six page supplement in March 1945 entitled ECLIPSE ABC that provided alphabetical lists of all subjects that were likely to be met by Commanders and their Staffs. These subjects were cross referenced with pamphlet number, page and paragraph.[149]

---

[147] TNA WO 219/2125, Eclipse Pamphlets, 30 March 1945.

[148] Donnison, *Civil Affairs and Military Government*, p. 194.

[149] TNA WO 205/853, Eclipse Pamphlets, ABC and zone maps, March 1945.

Chapter V

From War to Peace:

Commercial Intelligence, the Grey List Panel and the termination of CIOS,

1944 to 1945

> After the war British industry will have a huge task in readjusting itself to supply our own peacetime needs and those of our customers overseas, a task all the harder because of the devotion with which it has applied itself to the task of playing its part in saving the country and, indeed, the world from the mortal danger in which we stood and from which we are now confidently emerging.

Speech by Lord Cherwell, 6 July 1943.[1]

With the Allied victory in Normandy in the summer of 1944, the feeling within SHAEF was that the 'August battles' had 'brought the end of the war … in sight, almost within reach'. With the German *Rückmarsch* [retreat] - the exodus of the German Army from France through Belgium and into Holland, one Canadian soldier referred to the German army's prospects as 'not defeat, but disaster and annihilation'[2] Members of the British Government charged with representing the country's industrial base started to consider the end of the total war-economy and plan ways of resuscitating peacetime manufacturing. Restoring Britain's export trade and raising much needed funds was paramount. CIOS would occupy a central role supporting British manufacturers as they embarked on this transition. CIOS had been formed by the Anglo-US SHAEF in August 1944 to compile the Black List of urgent military targets that warranted investigation. By December, the CIOS remit was expanded by the British and US governments, acting through SHAEF, to compile a register of non-military manufacturers and scientific targets.

---

[1] NUF CSAC 80.4.81/H.237, Scientific Research and Development, Draft for speech to be given by Lord Cherwell to the House of Lords, 6 July 1943, regarding the need for expansion of scientific research particularly in relation to fuel development. Written by C. Jolliffe, Director General of Council of Scientific & Industrial Research (CSIR) and Secretary of Department of Scientific & Industrial Research (DSIR).

[2] Jonathan Fennell: *Fighting the People's War, The British Commonwealth Armies and the Second World War* (Cambridge: Cambridge University Press, 2019), pp. 551-553.

The British and US Governments hoped that the exploitation of commercial and industrial know-how from the defeated Germany could benefit peacetime industry on both sides of the Atlantic. It will be argued that consternation towards the broadening of the CIOS remit beyond military investigations from certain committee members forced the creation of a separate sub-committee focused on purely commercial intelligence targets. Compilation of this new Grey List commenced in the first months of 1945, until it merged with the military Black List in late May.

A key role of CIOS was to despatch investigation teams to liberated sites in Europe to assess and report back on the technological secrets they encountered. To better support the field inspectors in early 1945, CIOS formed roving inspection teams - embedded within each Army Group - who would only request specialist investigators be despatched once they had verified the viability of the target site. The development and function of these CAFT inspection teams will be analysed in this chapter.

With peace in Europe came a chaotic period as enemy forces were individually identified and processed, and displaced peoples migrated across the continent. The Allied occupation zones agreed at Yalta were established, with Anglo-US teams created to support CIOS, facilitate movement through occupation zones and provide investigators with access to target sites. FIAT's role in the incarceration and interrogation of industrialists and engineers will also be analysed.

The combined command of SHAEF was terminated in July 1945, along with all subordinate committees including CIOS. Members of the committee believed their equitable Anglo-US committee would continue in some form after the demise of SHAEF yet were proved incorrect. The reasons post-war investigation teams were instead

established along national lines will be analysed, in anticipation of poor cooperation between the four occupying powers in Germany.

5.01   Post-War Planning - Transition to a Peacetime Economy

In February 1943, Oliver Lyttelton - British Minister for Production, was pushing Churchill for a directive outlining the likely duration of the war, in order to determine the priorities for research and development.[3] Churchill had previously issued his prognostication in March 1943 that the German war would be over before the end of 1944, and the Japanese war before the end of 1946. Eighteen months later Churchill still believed the German war would cease in December 1944. The Anglo-US Combined Intelligence Committee issued a statement to the attendees at the OCTAGON conference in Quebec in September 1944 that 'organized resistance […] is unlikely to continue beyond 1 December 1944, and that it may end even sooner'.[4]

Also, in the last months of 1944, ministers reviewed how the government could assist British industry to transition from total war to a peacetime economy. Lyttelton wrote again to Churchill in November 1944, questioning how best to resource scientific research, suggesting the issue of a new policy statement. Lyttelton proposed to prioritise the use of the UK's 'very scarce scientific manpower', on military projects that would see operational use before the end of 1946.[5] Writing again to the Prime Minister on the following month, Lyttelton proffered a new policy statement, highlighting the time allocated to development work on war related projects. This work, he suggested, prevented designers and draftsmen

---

[3] NUF CSAC 80.4.81/H.236, Scientific Research and Development, draft note to be signed by Lyttelton, February 1943, documents H.236/3-4.

[4] OCTAGON Conference, September 1944, Papers and Minutes of Meetings, US Department of Defence, Prospects of a German Collapse or Surrender, Report by the Combined Intelligence Committee, p. 84. <https://www.jcs.mil/ Portals/36/Documents/History/WWII/Octagon3.pdf> [accessed 25 November 2023].

[5] NUF CSAC 80.4.81/H.236, Scientific Research and Development, draft note to be signed by Lyttelton, 17 November 1944, document H 236/16.

from undertaking preparatory work that would enable a return to civil manufacturing. He proposed that any project that would not be completed or be operational from the middle of 1946, should be abandoned, releasing manpower for the transition towards civilian production. He also proposed that modification work on existing military equipment should be limited to improvements for operational purposes or that would save lives.[6] In the summer of 1944, the EIPS and the British Board of Trade (BOT) had approached civilian industries to assess the time anticipated to return to peacetime manufacturing. For some engineering firms, retooling could take as long as twelve months, while many companies talked of exhausted and overworked plant that would take longer to replace. Textile manufacturers suggested between three and nine months, paper making and print seven months, chemical plants four months, boots and shoes four months.[7]

The transition from a wartime to a peacetime economy affected the workplace as well as the workforce - the factory buildings had become an integral part of the war effort. In early 1942, the BOT was authorised to maintain an 'Emergency Pool' of up to three million square feet of manufacturing space to enable the relocation of bombed out factories. By 1944, this capacity was completely utilised for storage of munitions, with more factories being requisitioned to provide even greater storage. A further two million square feet of factories were approved to be built, to accommodate even more munition storage. By August 1944, one hundred and eighty million square feet was allocated for storage across the UK.[8] With the end of the war in sight, companies needed to start preparing for a civilian existence - yet perversely not too hastily or too obviously. It was

---

[6] NUF CSAC 80.4.81/H.236, Scientific Research and Development, draft note to be signed by Lyttelton, 1 December 1944, documents H 236/23-24.

[7] TNA FO 942/53, Period of Reconversion of Civilian Industry Turned Over to Munitions Production, 16 June 1944, four-page assessment of Britain's manufacturing and engineering industry.

[8] NUF CSAC 80.4.81/H.262, Factory and Storage Accommodation, 3 August 1944, documents H.262/14. A further nine million square feet of storage was required by the end of 1944, with additional pressure resulting from factories damaged in the London area by the German *Vergeltungswaffe Eins* (V-1).

feared that knowledge of a sudden reduction in wartime production in the UK would filter back to US authorities and jeopardise the Anglo-US negotiations regarding 'Stage II Lend-Lease' assistance. With the anticipated duration of the war with Imperial Japan lasting through 1946, the British Government were relying heavily on the continued subsidies that Lend-Lease would provide. Writing in October 1944, Lyttelton suggested it was dangerous to reduce production too quickly, advocating that cuts be postponed for a month or two, until the Lend-Lease negotiations had been concluded.[9]

US President Roosevelt optimistically looked beyond hostilities in Europe, reviewing how to support US industry and provide jobs for returning servicemen. Keen to capitalise on the institutions established during the War and continue to make use of them in peacetime, he turned to his friend Vannavar Bush, the Head of the Office of Scientific Research and Development (OSRD). Bush advocated obtaining 'German technical information of an industrial nature' from liberated territory and Germany, once occupied. Aware of the CIOS investigations into German military targets in liberated Europe, Bush wrote to the Secretaries of the navy and War Office on 28 August 1944, proposing that the investigators' net should be cast wider to accommodate German commercial and economic intelligence. He believed that information gained would not only benefit the US in their ongoing war against Japan but would also help US industry to enhance its trading status and generate employment for demobilised servicemen. Bush anticipated that the UK would be planning to expand its intelligence targeting to include commercial and economic intelligence for similar reasons. Gimbel comments that in this regard, US interests were in complete harmony with those of the British.[10] The US War Department endorsed Bush's

---

[9] NUF CSAC 80.4.81/H.262, Release of Capacity from Munitions Industry, WP (44) 573, document H.262/15.

[10] John Gimbel, *Science, Technology, and Reparations: Exploitation and Plunder in Post-war Germany* (Stanford: Stanford University Press, 1990), p. 6.

ideas, adding that German premises should be investigated by experts, production methods be analysed, technicians be interrogated, files and drawings be seized, and German products dismantled and examined. SHAEF was approached by the US War Department to ask what assistance CIOS would need to carry out these tasks. CIOS discussed the matter in August, proposing the creation of a separate subdivision tasked with collating non-military intelligence and compiling a separate list of industrial and economic targets. It was late December before this Anglo-US committee were created.

In the US, Bush was already contemplating the future, believing that 'a nation could no longer possess military might without technological prowess. Expanding this prowess […] might even prevent future conflict'.[11] He believed that scientific and technological research encouraged engineering innovation, that in turn produced useful and possibly unforeseen products and processes that would then create employment. Keen to harness the support of Roosevelt, Bush circulated a letter containing a number of proposals for post-war research, including to the President's advisor, Harry Hopkins, who edited the document before passing a draft to Roosevelt to review.[12] On 20 November, Roosevelt made public 'his' letter written to Vannevar Bush, outlining 'his' ideas for post-war research. A copy of this letter is held in the archive of Lord Cherwell in Oxford.[13] The President makes a series of points, from the benefits to returning soldiers of jobs resulting from research and military innovation, the fight against disease from improvements in medical science, government aid for private and public research facilities and nurturing the next generation of young scientists. Churchill's reaction to Roosevelt's letter was to

---

[11] Greg Pascal Zachary, *Endless Frontier: Vannevar Bush, Engineer of the American Century* (New York: Simon & Schuster, 1997, Free Press Trade paperback edition 2018), p. 222.

[12] Zachary, *Endless Frontier*, p. 224. The editing process was involved with Hopkins advising how best to solicit the President's support and other staff reviewing the legal implications. A final draft was approved by Bush before it was passed to the President on 17 November 1944.

[13] NUF CSAC 80.4.81/H.243, President Franklin D. Roosevelt writing to Dr Vannevar Bush, 20 November 1944, document H.243/2.

request that Cherwell advise details of British post-war plans for research and development. Cherwell replied to Churchill on 3 December 1944, noting the importance placed on post-war science by the US, yet bemoaning the lack of a coherent programme for equivalent research in the UK.[14] An extensive search of TNA and the Cherwell Archive, reviewing correspondence regarding reparations and CIOS policy, has failed to reveal precisely who in the UK subsequently advocated a broadening of the CIOS remit. Based purely on Cherwell's comments stating a lack of a coherent programme, it is possible that the British move to consider commercial and scientific intelligence simply mirrored US policy. The suggestion that the UK lacked a coherent program is further backed up by a document issued by Major-General Sir Millis-Jefferis dated July 1945. He urged the 'government of the day' to establish inter-service research programs employing the country's best brains and in so doing, apply lessons being leaned from interviews with captured German scientists and researchers.[15]

5.02 The Grey List - Commercial and Industrial Targets

The concept of investigating non-urgent military intelligence targets and compiling them an alternative target register, or Grey List, had been proposed by the British IPC in May 1944 and was originally intended to be a register for non-urgent, long-term military targets. In addition, a White List was also suggested as a register of long-term research and intelligence targets. The priority for the IPC in May, and later for the expanded Anglo-US CIPC throughout June and July, had been the compilation of the Black List of urgent military targets in anticipation of RANKIN Case C. Prior to the publication of the consolidated Black List on 4 August, there was no capacity to review long-term military

---

[14] NUF CSAC 80.4.81/H.243, Churchill to Cherwell, 1 December 1944, document H.243/3 and Cherwell's reply 3 December 1944, H.243/1.

[15] NUF CSAC 80.4.81/H.288, Memoranda by M.R. Jefferis, Note on the Organisation of Development Work in Germany, document H.288/1-3, 8 July 1945.

targets. Targets of a non-urgent, non-military nature, including commercial or economic targets, were excluded from the IPC's remit. It was suggested during meetings in May that such targets would be dealt with by a separate team. The EIPS had been suggested by the JIC as the probable body to research and create a non-military 'Grey List', but no record has been found that would suggest they became involved. This is despite the committee's remit to propose ways to direct the post-war economy in Europe and their detailed understanding of German industry. EIPS for example, proposed the repurposing of German manufacturing capacity for 'the prosecution of the Japanese War' along with appropriate goods and services.[16] This extended to re-assigning German shipping for use against Japan.[17]

With the termination of the CIPC and the formation of the replacement, CIOS, the sub-committee's 'Terms of Reference' were rewritten by SHAEF, with a proposal to create a 'Grey List' of industrial and economic targets in Germany. The definition of a Grey List target and who should compile such a list were subjects of consternation for the members of CIOS. Subtle changes to the wording of the directive were spotted and queried by Dr Noton of the MEW. He was puzzled by the CIOS Basic Directive document issued on 1 September 1944, which detailed the functions of CIOS to 'receive, approve and coordinate all requests from British and US governmental departments for intelligence of military or political significance'. Writing to his superior, Geoffrey Vickers, Deputy Director General of the MEW and member of the JIC, Noton asked directly whether economic targets were now to be included within the Black list under the vague, possibly euphemistic term 'political'. The handwritten reply Noton received from Vickers was wonderfully obtuse.

---

[16] TNA FO 942/53, Report by the Economic and Industrial Planning Staff on issues affecting the economic obligations to be imposed on Germany, Part 1 – Economic Security, p. 1.

[17] TNA FO 942/53, Report by the Economic and Industrial Planning Staff on issues affecting the economic obligations to be imposed on Germany, Part 13 – Restitution and Reparations, pp. 10-11.

Noton was advised that the JIC(Washington) treated 'the words Political and Military […] on the understanding that 'Military' was to be understood in a very wide sense' and any information that was required 'for strategic rather than commercial purposes hence falls within this wide interpretation. Most economic targets shall be excluded [from the Black List] not because they are 'not economic' - but because they are 'not black'.[18]

Two days later Patrick Linstead - co-chairman of CIOS - wrote about the Grey list and what it meant to him. He drew the reader's attention to the work of the original CIPC, quoting the terms of reference, which were restricted to…

> material, personnel or information of military or political importance, either of great value to the Allies for operational purposes at present, or of such a nature as to constitute a dangerous potential threat in the future, justifying urgent action on the part of the Allies for their seizure.[19]

Linstead emphasised that, unlike the CIPC, the new CIOS terms of reference did not include this restricting phrase and that it would now be expected to register less urgent targets, including 'those of economic importance, providing they are of military importance'. How CIOS should address these targets and coordinate with other bodies needed to be clarified. Accepting that the less urgent targets were to be compiled in a 'Grey List', he proposed two definitions: A. Military intelligence, but omitted from the Black List due to its lack of urgency or B. Technical intelligence of importance to national security and for the conduct of total war, which would include items of economic importance that would not normally be described as 'military'. Linstead proposed that if type A, the subject matter was appropriate for CIOS. If type B, then he suggested the targets should be handled by a separate body - not CIOS. He acknowledged it was difficult

---

[18] TNA FO 935/21, Letter by C. H. Noton MEW to Colonel Vickers, 3 September 1944, regarding Basic Directive Appendix A.

[19] TNA FO 935/27, Grey List Technical Intelligence Targets, F. 262 AP, 6 September 1944, Note by R P Linstead.

to draw the line as to what was 'military', but it was important to define the limitations of the new CIOS for the benefit of bodies involved in targeting technical intelligence. He concluded that a clear definition of Grey List targets was required along with an appreciation as to whether CIOS should be involved in considering non-urgent targets.

In an attempt to provide clarity and define the Grey List, a meeting of the JIC and CIOS was held on 19 September to discuss technical intelligence targets, chaired by the JIC Chairman Victor Cavendish-Bentinck.[20] All attendees received a copy of Linstead's musings regarding the Grey List – reissued under JIC (44) 1263 and re-dated 15 September 1944.[21] It was acknowledged that the CIPC had been created to compile the Black List of urgent military targets that were to be sought through SHAEF. The CIOS that replaced CIPC had been given different terms of reference, where it would be expected to include less urgent targets, including those of economic importance – providing they were of military interest. Urgent military items were to be added to the Black List, while less urgent targets were to be compiled on the Grey list. It seems there was still a need to couch Grey List targets in terms of military subjects, although the committee had to accept that military 'was to be understood in a very wide sense' as Noton had already discovered.

One of the first target sectors to be identified for inclusion on a Grey List included libraries and archives - sites that the British Foreign Office deemed worthy of safeguarding after the German collapse. It was suggested that the information held in German libraries and archives would be of great importance during denazification and the breakup of the

---

[20] TNA FO 935/27, Joint Intelligence Committee, 19 September 1944, Meeting on Technical Intelligence Targets.

[21] TNA FO 935/27, Grey List Technical Intelligence Targets, F. 262 AP, 6 September 1944, Note by R P Linstead. Professor Linstead's notes were reissued 15 September 1944, ahead of the meeting of 19 September under JIC/1263/44.

'Military Machine' when Germany was occupied.[22] Experience in the Mediterranean had shown that official archives were targeted by partisans and looters, keen to destroy incriminating records assembled by the German Nazi authorities, after a city was liberated. This wanton destruction was illustrated by an extract from the 'Diary of a Piedmontese Partisan', whose compatriots affected a coup-de-main against Pinerolo on 16 March 1944. On entering the towns official buildings, the partisans immediately captured and burned all 'precept' cards and destroyed many republican documents.[23]

Archive safeguarding had been raised by Michal Vyvyan, the CIOS member representing the Foreign Office and the Political Warfare Executive (PWE). In August 1944, PWE were assisting the Foreign Office by compiling a register of targets for inclusion in a Grey List. As archives and libraries required protection, not exploitation and were not urgent military targets, they could not be included in the CIPC Black List. In anticipation for the eventual occupation of Germany, a register of archive and library targets, including known evacuation addresses, was compiled by the Foreign Office using the 1943 *Taschenbuch fur Verwaltungsbeamte* [Handbook for Administrative Officials] and the *NS-Jahrbuch 1944* [National Socialists Yearbook].[24] Priority targets included the archives of the *OKW*, *OKH*, *OKM* and *OKL*, *das Auswärtiges Amt* [the Foreign Office], The Propaganda Ministry, The Peoples' Court, and Himmler's Office as Reich Commissioner.[25] In all, nearly thirty government or military archives were identified.

---

[22] TNA FO 1050/1421, Inclusion of Libraries on the CIOS Grey List, HQ/4025, Major C Thornton, 9 March 1945.

[23] TNA WO 204/6321, Diary of a Piedmontese Partisan, 8 April 1944.

[24] TNA FO 1050/1421, Letter from R W Southern, Political Intelligence Department 13 September 1944, to Vyvyan, Foreign Office.

[25] TNA FO 1050/1421, Grey List Targets list attached to Foreign Office letter, C 10767/146/G, Michal Vyvyan, 16 August 1944. OKW – Oberkommando der Wehrmacht (High Command of the Armed Forces), OKH – Oberkommando des Heeres (High Command of the Army), OKM - Oberkommando des Marine (High Command of the Navy) and OKL - Oberkommando des Luftwaffe (High Command of the Air Force).

Vyvyan believed the register should be incorporated into a Grey List of less urgent targets, to be presented in a near identical manner to the CIPC Black List, with the addition of a numerical priority column. In August 1944, it was not clear who was responsible for compiling this new list, so copies of the archive register were issued to CIPC and SHAEF.[26] Vyvyan envisaged that an astute investigator, referring to the register and despatched by SHAEF, could quickly assess a target archive and decide if safeguarding it with occupying troops was required before involving experienced archivists. He sought the council of two of Britain's leading archivists, Lieutenant-Colonel Sir Leonard Woolley, archaeological adviser to the British Government and Mr Hilary Jenkinson of the Public Records Office.[27] Jenkinson had advised the War Office regarding the protection of the Italian archives and state repositories prior to the liberation of Rome.[28] He had advocated that safeguarding be extended to commercial, industrial and trading bodies whose archives would also prove useful after the end of hostilities.[29] Short of manpower themselves, Woolley and Jenkinson were unable to offer staff to assist the Foreign Office investigations but had offered to brief any team provided by SHAEF. [30]. Vyvyan was aware of Major Cave, G2 SHAEF, his previous role as head of Advance G2 in Italy and his experience preparing the investigation of archives in Rome and wrote to him in August, hoping to secure the services of Military Intelligence Officers from SHAEF. Cave's reply is not preserved in the TNA record.

---

[26] TNA FO 1050/1421, Michal Vyvyan, Foreign Office to Mr Walmsley, 16 August 1944, Political Warfare Executive (PWE).

[27] Leonard Woolley (1880-1960), noted archaeologist, especially excavations carried out before the First World War in Mesopotamia and Syria assisted by T E Lawrence. He continued his excavations during the 1920s at the Sumerian city of Ur. During the Second World War, he was part of the Monuments, Fine Arts and Archives Section.

[28] Hilary Jenkinson (1882-1961), had advised the War Office and supported the US Dr Fred Shipman (1903-1978), the first Director of the Franklin Delano Roosevelt Presidential Library who had been brought to Rome by the commander of S Force Colonel George Smith to advise how best to safeguard the city's archives.

[29] TNA FO 1050/1421, Minutes of meeting of 19 September 1944, Lieutenant-Colonel Leonard Woolley, 29 September 1944.

[30] TNA FO 1050/1420, Michal Vyvyan, Foreign Office to Major Cave, G2 SHAEF, 10 August 1944, C 10284/146/G.

Woolley and Jenkinson were later asked to review and expand the provisional Foreign Office archive register, employing the services of the Military Intelligence Research Section (MIRS) to add to the list of Archives throughout Germany to investigate on behalf of the War Office. The expanded list of targets, over half in Berlin, the rest in regional cities across Germany, was issued by MI 17, the secretarial service for the War Office on 4 October 1944.[31] By early 1945, the archive and libraries target list had been prioritised and incorporated into the Grey List. Sir Leonard Woolley became an active member of one of the thirty-two Grey List working parties, whose task would be to research and register specific targets across Europe in readiness for peacetime investigations.[32]

Although a few archives were captured in situ, the German Patent Register for example was seized by Soviet forces in Berlin, many others had been evacuated by the Nazi government and hidden or scheduled for destruction. The Nazi Party membership archive that had been maintained on Arcissrasse in Munich had been shipped in April 1945 to a paper mill in Munich-Freimann for shredding and pulping. This archive included the records and identification photo of every member of the Nazi Party. The owner, Herr Huber (who was not a Nazi party member) realised the importance of the records and managed to conceal the fifty-ton archive until he was eventually able to hand over the cache to occupying US forces in May.[33] Other archives were evacuated and hidden before the defeat of the Nazi forces, including the large German *Auswärtiges Amt* [Foreign Office] archive comprising four hundred-tons of documents dating back to 1860. These

---

[31] TNA FO 1050/1421, Technical Intelligence Targets: Archives, MI 17 BM/218/7.

[32] TNA FO 935/28, CIOS / SHAEF, CIOS/106/10/C, 10 April 1945, Revised Directory of Grey List Panel Working Parties and Sub-Working Parties, p. 10. Woolley was an active participating member of working party 'Section 32, Education, Religious Affairs, Fine Arts and Monuments'.

[33] Frederick Taylor, *Exorcising Hitler: The Occupation and Denazification of Germany* (London: Bloomsbury Publishing, 2011), pp. 249-252.

files had been identified as a target by Anglo-US authorities in advance of their capture in May 1945. The German archivists tasked with care of the files were willingly detained by US forces, while the completeness of the archive exceeded expectations.[34] The archive had been split amongst separate castles in the Harz mountains – all within an area designated at Yalta to be part of the Soviet zone of occupation. The files were swiftly moved to the Anglo-US zones before the area was transferred to the Soviets. The naval archive dating back to 1850 was evacuated south from Keil to Tambach Castle in Bavaria, where it was captured in a coordinated operation by a joint Anglo-US force comprising 30AU and the US FIU, and then moved to London for review. Wernher von Braun managed to hide the fourteen-ton dossier of rocket research notes from Peenemünde, compiled between 1932 and 1945, in a disused mineshaft near Dörnten, again in the Harz mountains.[35] He transferred it to US forces before it could be destroyed by die-hard Nazis.

During December 1944, a clearer picture of Grey List targets that included commercial and industrial concerns started to emerge. Betts announced on 13 December to CIOS that the JIC(Washington) had established the Technical Industrial Intelligence Committee (TIIC), who were already operating collating target requests and information from interested US Government departments. The TIIC had in fact been established on 14 October 1944 to scrutinise industrial and commercial targets in post-war Germany.[36] The role of this new US committee would be to 'co-ordinate US requirements in America and transmit them to London', where targets proposed by US Government departments and stateside industrialists would be included in a Grey List.[37] The function of the TIIC was to receive, approve and coordinate all requests originating in the US…

---

[34] Eckert, *The Struggle for the Files, p. 60.*

[35] Johnson, *The Secret War*, p. 186. US Major Staver accepted the Peenemünde research cache on 26 May 1945, the day before the area was handed over to the British occupation forces.

[36] Gimbel, *The Origins of the Marshall Plan*, p. 146.

[37] TNA FO 935/27, Minutes of eighth CIOS meeting, 13 December 1944, point 7, Other Business – GLP.

for investigations in liberated and enemy areas of Europe pertaining to industrial processes, patents, inventions, engineering and "know-how" required to aid United States production, facilitate economic measures related to military government, and to determine the extent of German technological assistance made available to the Japanese.[38]

On 11 December, the JIC Secretariat in London had issued a basic directive outlining the form and function of the new TIIC and clarifying how they fitted into the CIOS hierarchy.[39] TIIC had been assembled as a permanent body representing various US government agencies and would be under, and quartered with, the Foreign Economic Administration (FEA) in Washington. TIIC operatives would be despatched to the UK to represent US departments within London. It was proposed that they would advise US members of CIOS regarding the prioritisation of individual targets and nominate expert field investigators, though CIOS would retain the final judgement. Once in the UK, the TIIC staff would represent nearly fifty percent of new working parties set up to research on behalf of the Grey List Panel (GLP).

CIOS set up the GLP with the task of compiling a separate register of commercial and industrial targets to be exploited after the CIOS Black List targets had been completed. The GLP was formed under the chairmanship of British Brigadier Frank Spedding of the Control Commission for Germany, British Element CCG(BE) and Mr George Powell of the TIIC. The panel met for the first time on 29 December 1944. In total there were seven US members and seven British members, including the ubiquitous Dr Noton and representatives of the Anglo-US service ministries and relevant government departments.[40] To ensure the GLP remained closely aligned to the parent CIOS committee, Betts proposed

---

[38] TNA CAB 81/26, Annex, Basic Directive, Technical Industrial Intelligence Committee (US), p. 1, JIC (44) 497, 11 December 1944.

[39] TNA CAB 81/26, Joint Intelligence Committee, War Cabinet, Technical Industrial Intelligence Committee (US), Basic Directive, JIC (44) 497, 11 December 1944.

[40] TNA FO 935/27, Grey List panel members, 15 January 1945.

that Spedding and Powel would attend future CIOS meetings to provide monthly progress updates. The GLP represented the 'tip of the iceberg' that was target research, with the majority conducted by Anglo-US working parties who were tasked with completing detailed target assessments. The structure of these international groups would emulate the established CIOS working party format, with representatives assigned to specific research areas.

GLP members sought clarity regarding target types so that the required working parties could be created. A list of Grey List working parties was issued at the second meeting of the GLP held on 19 January 1945. The assertion made by Bentinck on 19 September that Grey List would only consist of non-urgent military targets no longer applied, because, while a few targets were defined as military, most were commercial, industrial, and economic.[41] CIOS and GLP members continued to refine how targets should be differentiated between Black and Grey, resulting in a final definition of Grey targets agreed by CIOS on 14 February 1945. This document replaced an earlier GLP definition issued on 25 January.

The text stated:

> The Grey List comprises targets such as material personnel, and establishments, the exploitation of which is expected to yield political or technical information of military importance which will be useful to the Allies in the prosecution of their total war or the establishment of a lasting peace, except that which is of great value for operational purposes or which constitutes dangerous potential threat. On the technical side, the information sought is primarily but not exclusively, of an industrial nature and includes information concerning such things as scientific and engineering knowledge, new developments and inventions, industrial processes and equipment, patents, "know-how", and industrial organisation and economics.[42]

---

[41] For a breakdown of the thirty-two Grey List Target Categories, please refer to Appendix VIII.

[42] TNA FO 935/27, Definition of Grey List Targets, CIOS (GLP) 8, agreed at the twelfth meeting of the CIOS held on 14 February 1945.

The GLP met on 15 February to finalise the Anglo-US staffing of new working parties. Compilation of the Grey List would be undertaken by separate teams from the CIOS Black List with an increase in civilian members reflecting the commercial nature of targets. While British membership of Black List working parties showed a fifty percent split between military and government personnel, US members were split seventy-five percent military and twenty-five percent government members. By contrast, the Grey List British working party membership shows a seventy-five percent government members and twenty-five percent military. Analysis of US membership reveals a fifty percent military and government split. For a detailed breakdown of Black and Grey List working party membership, please refer to Appendix VII and IX for analysis of members.

The first register of representatives was published on 27 February and included seventy-eight British positions covered by seventy-six individuals – two members representing more than one working party. The parallel US positions were covered by fifty-one individuals, thirty-five military and sixteen civilian, with fifteen members allocated to represent multiple working parties.[43] Six weeks later, the registry was reissued by the CIOS secretariat noting recent staff changes. The British still allocated seventy-six individuals to seventy-eight positions, though eleven original members had been replaced. The US contingent now included fifty-three individuals, twenty-seven military and twenty-six civilian, covering seventy-five positions. Forty-nine US representatives had been replaced between the issue of the first member list on 27 February and the second issued on 10 April.[44] Considering this high staff turnover, the effectiveness of the US contingent

---

[43] TNA FO 935/28, CIOS / SHAEF, CIOS/106/10/C, 27 February 1945, Directory of Grey List Panel Working Parties and Sub-Working Parties.

[44] For a breakdown of the Grey List Working Parties based on the revised register dated 10 April 1945, please refer to Appendix IX.

could be questioned, yet no correspondence survives that would suggest that US staff were not fully committed to the GLP project.

5.03   T FORCE – Forming the Permanent Target Force

The Italian S Force was not replicated in France in 1944, despite the transfer of experienced AFHQ officers to SHAEF who were aware of the benefits an S Force could offer. Major-General Strong, now SHAEF head of intelligence, had worked closely with the Italian S Force in 1943 and early 1944, while his deputy and CIOS chairman, Brigadier-General Betts, had advocated creating an S Force during a meeting at the War Office on 12 June 1944, as mentioned in the last chapter. Despite these officer's appreciation that establishing a 'seize and secure force' would garner experience before the push into Germany, the official 'History of 'T' Force' held in TNA confirms that no *permanent* T Force was created or operated in Western Europe during the French and Belgian campaigns. There was instead, a desire to 'try out "T" Force activities with existing resources'.[45] Twenty-First Army Group utilised inexperienced local troops to secure targets in Rouen, then later Brussels. On both occasions, the formations had limited success due to poor target intelligence and delays reaching their allotted targets. SHAEF G2 advised that targets not covered by special T Force operations were to be handled by the first formation to occupy the region.[46] Throughout September, Army Groups were issued with copies of the Operation Intelligence (OI) Target Lists giving the briefest target details.[47]

---

[45] TNA, FO 1031/49, History of 'T' Force Activities in Twenty-First Army Group, p. 1.

[46] TNA FO 1050/1424, SHAEF G2 HQ, OI Brief for Germany, Colonel E Foord, G2 (OI), 4 September 1944, point 5.

[47] TNA FO 1050/1423, Operational Intelligence Brief for Germany, OI Target Lists, Wehrkreis IX GBI/OI-AOC/319.1-1, 29 September 1944.

In readiness for a sudden occupation of Germany, these OI lists covered the whole of Germany, though were broken down into workable *Wehrkries* [Military Districts]. British forces in the north would be issued for example *Wehrkries* X and XI covering northern cities, US forces would receive *Wehrkries* V and XII that included southern cities. It is probable that the SHAEF target lists were a digest of the detailed information provided by the CIOS Black List issued in August 1944.

The term 'Security Intelligence Force' or S Force was not used in the ETO, with the term 'Target Force' or T Force adopted instead. It is possible that T Force was chosen to avoid confusion with the naval S Force (sometimes referred to as Force S) stationed in Scotland in early 1944 and discussed by Roger Hesketh in his official history of operation FORTITUDE.[48] The presence of S Force in Scotland along with the Third (British) Infantry Division was publicised in the British press in the hope of misleading the German high command that the force was assembled in preparation for an invasion of Scandinavia.[49] The real target lay further south. On 1 April 1944, S Force transported the Third Infantry Division from the Moray Firth to Portsmouth in readiness for their landings on Sword Beach in Normandy on 6 June.[50]

Since the summer of 1944, SHAEF had assembled an administrative 'T' Sub-Division of G2 that had handled administrative responsibility within the combined

---

[48] Lieutenant-Colonel Roger Fleetwood-Hesketh (1902-1987), Barrister and later MP for Southport and the creative genius behind the Allies deception plan Operation FORTITUDE. The successful deception plan conceived to mislead the Germans as to the true position of the Allied invasion of France using bogus formations and supported by false observations made by double agents.

[49] Hesketh, *Fortitude*, p. 67. Preparations for the fictitious Norway landings was referred to as operation FORTITUDE NORTH.

[50] Hesketh, *Fortitude*, p. 12. The Royal Navy operated multiple assault forces as part of operation NEPTUNE – the amphibious element of operation OVERLORD, 'Force G' effected landings on Gold beach, 'Force J' on Juno beach and 'Force S' on Sword beach. For further details, please refer to the Australian Navy Archive - Battle Summary No 39 Volume 1, Operation 'Neptune' Landings in Normandy, June 1944, (HMSO, 1947), pp. 35-38 <https://www.navy.gov.au/sites/default/files/documents/Battle_Summary_39_Vol_1_Part1.pdf> [accessed 16 June 2023].

command for technical investigations. They had been represented at CIOS meetings in the late summer.[51] During October, the decision was made to assemble a permanent T Force staff by expanding the existing Gas and Chemical Weapons (G&CW) staff within Twenty-First Army Group HQ.[52] Reassigning the G&CW officers under Brigadier G Pennycook was proposed after HQ staff noted their enthusiasm searching for evidence of German chemical warfare activities in captured research facilities – a task similar to envisaged T Force duties.[53]

An early recruit to the T Force staff in October 1944 was Major Brian Urquhart of the Dorset Regiment and ex-Intelligence Chief of the First Airborne Division.[54] He describes the staff officers assembled in the Belgian capital in November planning future operations based on previous ad-hoc T Force activity in Rouen and Brussels. No reference is made to the experience of S Force in Italy. Intelligence dossiers were prepared in readiness for the advance across the Rhine and into Germany, with targets based on the CIOS Black List, supplemented by information provided by ISTD. Urquhart noted that these preparations barely filled their time. Brigadier Pennycook received no troops, with T Force described in the unit's official history, as the 'Cinderella of the Army Group' or 'little more than an idea on paper'.[55]

Major-General de Guingand, Field-Marshal Montgomery's Chief of Staff, issued a communication to Twenty-First Army Group in January 1945, advising that T Force was

---

[51] TNA FO 935/21, Minutes of Fifth CIOS Meeting, CIOS (44) 5th Meeting, 1 November 1944.

[52] Longden, *T-Force*, p. 43.

[53] Brigadier George Hamilton Charles Pennycook (1897-1970), of the Cheshire Regiment and Director of Chemical Weapons within Twenty-First Army Group from 1943, continuing to serve in British Army of the Rhine before transferring to the War Office in 1946 as Director of Chemical Weapons and Vehicles.

[54] Urquhart, *A Life in Peace & War*, p. 77.

[55] TNA, FO 1031/49, History of 'T' Force Activities in Twenty-First Army Group, p. 2.

now in existence and outlined their future role. De Guingand drew attention to the plans in place in the event of a sudden German collapse, outlined in operation ECLIPSE, that detailed the use of airborne forces to secure key targets deep in enemy territory.[56] Twenty-First Army Group included at that time, the British Second Army, the Canadian First Army and the US First and Ninth Armies, which were attached in readiness for the push across the Rhine and onward into the German Ruhr. T Force received their allocation of troops the following month, only to see them urgently withdrawn to man the perimeter of the Dunkirk salient. These troops were not released back to T Force duties until March 1945. Dr Noton in London wrote to CIOS chairman Patrick Linstead on 14 February 1945, stating that Twenty-First Army Group is 'in the embarrassing position of not having any large T Force at its disposal' yet attempting to support the actions of CIOS.[57] Noton was concerned that, once across the Rhine, the limited T Forces available to the British would be unable to cover half the area containing CIOS targets in addition to large cities such as Cologne. Noton continued that a number of permanent CIOS evaluation teams were needed in the field who could inspect CIOS targets, liaise with the scarce T Force operatives and advise if they needed to guard the site.

Preparing for the push into Germany and with it, the desire to secure the many CIOS targets, troops were finally released to T Force in late March. To mask the purpose of T Force, the formation appeared on communications using the obfuscating reference G(T)&CW, in a nod to the formation's chemical weapons heritage. The Fifth Battalion of the King's Liverpool Regiment, now released from the Dunkirk region, were the first to be assigned to T Force, transported by four pioneer companies and a separate bomb disposal

---

[56] TNA, FO 1031/49, Securing of Special Targets – T Forces, copies to SHAEF, First Canadian Army, First US Army, Ninth US Army, Second British Army, ref 21 A Gp/00/487/Ops/B, Major-General F W de Guingand, 5 January 1945.

[57] TNA FO 935/25, Dr Noton Economic Advisory Branch, writing to Professor Linstead, Ministry of Supply, 14 February 1945.

unit. In the last days of March after the Rhine crossings, the First Battalion of the

Buckinghamshire Regiment was released from Garrison duty in Brussels, joining the

King's as the second battalion in T Force. Although T Force only saw wartime action

during the final six weeks, the two regiments remained in Germany facilitating visits by

CIOS and later BIOS investigators with their combined numbers swelling to over five

thousand. From September 1945, a representative of G(T)&CW would attend the

fortnightly BIOS meetings in London.[58] The King's Regiment was based in Schleswig and

Lower Saxony while the First Bucks in the Ruhr, North Rhine and Westphalia.[59] The 30th

Battalion of the Royal Berkshire Regiment joined T Force briefly in early May 1945 to

work with the Canadian army in Holland.[60]

5.04   CAFT - Advance Field Teams – Improving Front-Line Efficiency

As the front moved into Germany and targets were captured, CIOS sent multiple

investigation teams to examine the military targets on the Black List, with many facing

problems upon arrival. Insufficient transport was a common issue, compounded by targets

failing to meet expectations when they were eventually captured. Allied bombing had been

efficiently countered by the German authorities, who had dispersed factories, assembly

halls and research centres away from the bombed conurbations. Investigators despatched

by CIOS to a specific target often found a gutted building that evidently had been vacated

weeks before.

It became increasingly apparent that civilian assessors could not be expected to

operate with the front-line troops. With Allied army groups poised to cross the Rhine,

forward units sought guidance from CIOS to prioritise the deployment of limited T Forces,

---

[58] TNA FO 1031/50, Minutes of Forth BIOS Meeting, BIOS (45) 4th Meeting, 26 September 1945.

[59] Howard, *Otherwise Occupied*, p. 331.

[60] TNA, FO 1031/49, History of 'T' Force Activities in Twenty-First Army Group, p. 8.

emphasising the necessity for CIOS to establish forward field teams.[61] Dr Noton had noted

to Linstead in February that there was a need to create CIOS evaluation teams that could

carry out inspection of a target site and report if it warranted guarding by T Force – before

bringing forward specialist civilian investigation teams from the rear. These evaluation

units were eventually termed Consolidated Advance Field Team or CAFT. The target

would be inspected soon after capture and remaining staff interrogated to establish if

equipment or documents had been hidden. The CAFT assessor would then issue a report to

interested parties – the local army group, the head of the CAFT group in London and to the

local T Force. The report described the target site, condition, whether areas of the site were

being guarded, on what date the assessment had been conducted and by whom. Crucially,

the assessor would prioritise the site if there was an urgent requirement to move CIOS

investigation teams to the target.[62] The CAFT would be empowered to investigate targets

of opportunity and post guards via T Force, if appropriate. Different CAFT groups

developed different reports and procedures. The CAFT group in Austria in early 1946 used

a standard questionnaire style of report that was filled in in German by the current operator

of a target location. These forms were then translated into English by the CAFT staff and

observations added regarding the necessity for further investigation. The records detailed

the percentage of war damage evident, the current workforce compared with that of 1938

and later, during the war, the company's finances and, if appropriate, stock or raw material

---

[61] TNA FO 935/22, Minutes of twelfth CIOS meeting, CIOS Forward Reconnaissance Teams, 14 February 1945, p. 9.

[62] TNA PRO 30/95/15, CAFT Assessment Report dated 19 May 1945, assessors Major Coventry and Captain Stella for CAFT 7 at Twenty-First Army Group HQ. The assessment report concerns *Hamburgisches Welt-Wirtschafts-Institute* [*sic*] (HWWI) [Hamburg Institute of International Economics]. The target condition was noted as intact, priority assessment rated as II and that the building had been sealed, all files locked within the building and guards placed from T Force, King's Regiment. The head of HWWI, *an SS Oberfuhrer Dipl-Ing.* Hausleighter had been arrested with a list of other employees compiled. It was noted that the Institute operated with no Gestapo supervision, though the two assessors doubted the truthfulness of the employees that were interviewed. They recommended despatching a special team of investigators who could investigate the personalities employed by the HWWI.

held.[63] On a number of occasions, the assessor noted that the majority of the plant and equipment had been removed by the 'occupying forces' or the 'Red Army' in the summer of 1945.[64]

The CIOS Black List comprised thirty target categories with those pertinent to the air force or navy grouped together and allocated to two service-specific CAFT groups. The remaining categories were shared with a further five CAFT groups, making a total of seven CAFTs.[65] This was confirmed by the minutes of the twelfth CIOS meeting, that seven CAFTs would be attached to each army group in Western Europe.[66] In other words, Twenty-First, Twelfth and Sixth Army Groups would each receive seven CAFT teams, with each team comprising around fifteen assessors. CAFT members had to be technically literate, preferably speak German and possibly have an intelligence background. They needed to be technically qualified and possess the decisiveness to 'rapidly assess the value of targets encountered'.[67] They would collaborate closely with local T Forces, who would be deployed to guard target sites if deemed necessary by the CAFT assessors. Though operating at the front, CAFT members would not be used as assault troops as a target was captured, instead only entering the target site once it had been secured and deemed safe to investigate. A fourth group of seven CAFT groups was also created and held in reserve, to accompany the airborne forces awaiting deployment at the commencement of operation

---

[63] TNA FO 1020/3071, CAFT Assessment No 15, Small works owned by Alois Linner in the English Zone of Vienna employing eleven metalworkers, 18 March 1946.

[64] TNA FO 1020/3071, CAFT Assessment No 28, 'Minimot' *Spezialfabrik fur elecktrische kleinmaschinen und Apparate GmbH.* [Special factory for small electrical machines and equipment]. This company situated outside Vienna produced components for the Luftwaffe and *Vergeltungswaffe* programme, 18 March 1946.

[65] For a list of CAFT - Consolidated Advance Field Teams, please refer to Appendix XI.

[66] TNA FO 935/22, Minutes of twelfth CIOS meeting, CIOS Forward Reconnaissance Teams, 14 February 1945, p. 8. These teams were not titled Consolidated Advance Field Teams, CAFT, until the outline plan was issued by CIOS on 28 February 1945.

[67] TNA FO 935/22, CIOS, Preliminary Outline Plan for Rapid Appraisal and Assessment of Targets under Conditions of German Collapse, CIOS/118/8/S, Outline Plan, point e, p. 3, 28 February 1945.

ECLIPSE. It was also envisaged that these reserve CAFT groups would operate in the Soviet zone once hostilities ended.

The introduction of CAFT groups in March 1945 resulted in twenty-one teams assigned to the three Army Groups, while seven were held in reserve - thus twenty-eight teams created in total. The teams started to assemble in late February, with team leaders deployed in March to Army Groups to establish working relationships with the newly arrived T Force staff. Emphasising the CAFT team's Anglo-US composition, Lieutenant-Colonel Dean of the CIOS Secretariat declared on 9 May 1945 that, of the CAFT personnel in the field in April, fifty-four percent were British, and forty-six percent were US. Field teams were supported in London by seven CAFT 'Item Groups' headed by Anglo-US chair and vice-chairmen.[68]

Professor Linstead, writing in June 1945, cited the introduction of the CAFT as one of the most important and successful developments in CIOS operations.[69] Efficiency of the investigators increased, as they were only called to the front once targets had been viewed, and their worth verified, by CAFT operatives. This reduced time wasted on abandoned or gutted sites that no longer held valuable intelligence. Field communication improved due to the CIOS secretariat dealing with a small number of CAFT leaders compared to multiple investigation teams and working group leaders. Indeed, communication with CAFT groups in Europe became so efficient that eventually the working group leaders in the UK were found to be superfluous and redeployed. By creating the CAFT teams, the CIOS committee had responded swiftly to a growing issue of intelligence targets having been dispersed as a

---

[68] TNA FO 935/23, CIOS 55 (Revised), Chairmen and Co-Chairmen of Consolidated item Groups, 7 May 1945.

[69] TNA FO 1031/51, CIOS, Progress report for 1945, Brigadier-General T J Betts and R P Linstead, 4 June 1945.

result of Anglo-US bombing, and the need to co-ordinate with front line forces, further improving the efficiency of the entire Black List investigation process. Linstead paid special tribute to the leaders and members of CAFTs who frequently operated under conditions of danger, discomfort and isolation. Only the reserve CAFT groups held in readiness for deployment in the Soviet zone remained underutilised, with access to areas controlled by Soviet forces seemingly impossible to obtain.

5.05   Eastern Europe's Intelligence Targets – Accessing the Soviet Zone

The Combined Chiefs of Staff instructed the Anglo-US military missions in Moscow on 26 August 1944, to obtain Soviet permission for Allied officers to visit research centres in what would become the Soviet occupation zone in Germany. In return, the Soviets were offered reciprocal access to sites in the Anglo-US zones.[70] Targets were taken from the RANKIN Case C register produced in May 1944. The Soviets obfuscated, with foreign minister Molotov only responding on 3 November with an aide memoire stating the Soviet authorities would prevent the Germans from destroying research sites. He commented that the Soviet Government would like to see a list of objectives located in their zone that were of interest to the Anglo-US chiefs of staff. By the end of 1944, no visiting arrangements had been agreed.[71] Targets in the Soviet zone were discussed again in February 1945 at the twelfth meeting of the CIOS committee. A list of three hundred and fifty-nine targets had been compiled to 31 December 1944, with seventy-two high priority targets passed to Allied representatives in Moscow for submission to Soviet authorities.[72] Seventeen targets

---

[70] TNA CAB 81/126, War Cabinet, Joint Intelligence Committee, Exchange of Information with the Russians, JIC (44) 487 (O) (Final), 1 December 1944.

[71] TNA CAB 81/126, Exchange of Information on German Weapon Development with the USSR, Draft Report by the Combined Intelligence Committee, CIC 54/3, 21 December 1944.

[72] TNA FO 935/9, Technical Objectives Submitted by the JIC to the Moscow Mission for passing to USSR up to 14 February 1945, seventy-two targets, four pages. CIOS/115/1/S, CIOS Secretariat Dean and Harris, 15 February 1945.

were in the British and US zones in Berlin, others in the Soviet zone east of the city.[73]

CIOS agreed to select thirty priority targets and assign twenty investigators to travel to

these sites.

To select these targets, a temporary ad-hoc sub-committee was formed, chaired by

the ubiquitous Noton, with representatives of the Anglo-US navies, control commissions,

the joint chairmen of the Grey List Committee and the UK Foreign Office and US State

Department.[74] Meeting on 20 February, targets were distilled to thirty-three, including

Hitler's Chancellery, the Reich Foreign Office, and a number of sites operated by IG

Farben. Details of the type of intelligence expected at each site was noted against each

target. Before the list could be forwarded to the Soviet authorities, it was agreed at the

thirteenth CIOS meeting that a permanent Eastern European Area Sub-Committee (EEAS)

would be convened, to review CIOS targets in Berlin, Czecho-Slovakia, Poland, Austria

and Hungary.[75] Noton's target selection team and the EEAS met during March to refine the

target list, yet still nothing was sent to Moscow requesting access.[76] The final thirty-three

targets were agreed, while the number of proposed investigators increased to sixty. The list

was duly forwarded to the Allied Moscow Mission, who advised that the chance of the

Soviets accepting the contents was so small, it was not worth presenting! They asserted

that in any case, CIOS had enough targets of importance to make investigations of targets

in the Soviet zone unnecessary.[77]

---

[73] TNA FO 935/22, Minutes of twelfth CIOS Meeting held on 14 February 1945, p. 4, Point 5, Black List Targets in the Russian Zone.

[74] TNA FO 935/22, Report of Sub-Committee Set Up to select Approximately 30 Technical Objectives in the Russian Zone of Germany for Immediate Investigation, CIOS 38, 22 February 1945.

[75] TNA FO 935/22, Minutes of thirteenth CIOS Meeting held on 28 February 1945, pp. 6-7, Point 7, Report of the Russian Zone Sub-Committee.

[76] TNA FO 935/23, Minutes of fifteenth CIOS Meeting held on 28 March 1945, p. 3, Point vi, Actions from fourteenth meeting of CIOS.

[77] TNA FO 935/23, Minutes of seventeenth CIOS Meeting held on 25 April 1945, p. 9, Point 2 Reports from Officers and Standing Committees, Point C, EEAS Report.

With Soviet forces forty miles to the east of Berlin in early 1945, CIOS

acknowledged that it was probable that German forces would have evacuated priority

intelligence away from the city. CIOS also accepted that once the Soviets occupied the

Reich capital, they would remain for an appreciable time before the Allies could enter their

zones. This raised the question of what intelligence might remain for the Anglo-US

investigators.[78] Inspection teams had not been granted access to sites in Berlin even after

the German surrender in May. The matter was raised on 23 May at the nineteenth meeting

of CIOS by Mr Abraham of the MAP, who requested clarification over whether Berlin was

accessible.[79] Noton advised that CIOS had agreed not to press the question of target

exploitation in the Soviet areas, offering no further explanation.

For Soviet forces that had captured Berlin, pillaging the entire city, including the

future British and US zones was a priority while they still controlled the entire

conurbation. According to Milton, orders issued by the Soviet headquarters at Karlshorst in

the West of Berlin were clear: 'Take everything from the western sector of Berlin, if you

can't take it, destroy it. But don't leave anything for the Allies, no machinery, not a bed to

sleep in'.[80] The British Government were aware of the Soviets stripping their captured

territory of everything of value, under the guise of war material or 'booty'. Chancellor

John Anderson pointed out to Churchill that plant and machinery should go into the

common pool to be shared later as reparations.[81] Cherwell counselled Churchill that with

booty removed, the Soviets would still claim they were unable to contribute to the

---

[78] TNA FO 935/22, Movement of CIOS Investigating Personnel to Berlin under Eclipse Conditions, CIOS/102/TS, Captain H J Hawkinson, 24 February 1945.

[79] TNA FO 935/23, Minutes of nineteenth CIOS Meeting held on 23 May 1945, p. 7, Point 7 B, Other Business.

[80] Giles Milton, *Checkmate in Berlin: The Cold War Showdown that Shaped the Modern World* (London: John Murray, 2021), p. 64.

[81] NUF CSAC 80.4.81/H.287, Lord Cherwell to Churchill commenting on points raised by John Anderson, Ownership and Disposal of German War Materials cp(45)41, 19 June 1945, Document H.287/7. John Anderson, Viscount Waverley, 1882-1952, Chancellor of the Exchequer September 1943 to May 1945.

reparations pool, suggesting instead they should receive reparations from the Anglo-US zones which were not being stripped of booty to the same extent. Cherwell pragmatically suggested to Churchill that there was little point in contesting the situation with the Soviets, as access to their territory was impossible and no records were being taken of items they removed.[82]

The JIC had asked CIOS to state their attitude to pursuing intelligence targets in Soviet occupied areas. Linstead replied stating that CIOS did not at this time, wish to press for exploitation of targets in the Soviet Zone.[83] By September, Noton was again tasked with preparing a new list of Soviet zone targets in major cities in eastern Germany, in the hope that access could be negotiated. A cryptic note by Noton records 'another list, but never mind, the Russians won't buy it'.[84] The foreign office's attitudes to Soviet targets were evolving with Noton observing that pursuing access to Soviet targets might conflict with British Foreign Office policy to restrict access to 'top secret targets in the British Zone of Germany'.[85] There is no indication in the TNA record whether the target sites were eventually accessed however, the difficulties negotiating with the Soviet authorities is inferred by the need for repeated revision of target lists over the summer of 1945.

5.06 Peace in Europe – The Black and Grey Lists Combine

The eighteenth CIOS meeting was held on Wednesday 9 May 1945, the day after the unconditional surrender of German forces and the end of hostilities in Europe. CIOS had received requests from the JIC(Washington) 'hoping that CIOS would abolish the

---

[82] NUF CSAC 80.4.81/H.287, Lord Cherwell to Churchill, 19 June 1945, Document H.287/8.

[83] TNA FO 935/23, Minutes of twentieth CIOS Meeting held on 6 June 1945, p. 6, Point 7 e, Targets in the Russian Area.

[84] TNA FO 935/41, Note by Noton to Miss Jones, around 12 September 1945 attached to list of one hundred and sixteen targets in Berlin, Dresden, Dessau, Jena, Chemnitz, Austria, Silesia, Poland, Czechoslovakia and the Baltic.

[85] TNA FO 935/41, Noton to M J Creswell, Foreign Office 12 September 1945.

distinction between Black and Grey List targets'. SHAEF had stated that as 'far as they

were concerned, there would in future be no distinction between Black and Grey list

investigations'.[86] The CIOS Committee agreed to combine the two lists and recommended

disbanding the GLP. The Grey List Panel had already concluded that the difference

between Grey and Black List targets was 'an illusionary differentiation and that in practice

there can be no clear line of demarcation between the two interests'.[87] The Grey List

working parties met on 18 May and the twenty-six attendees were instructed that the

former Black and Grey lists were now to be merged into a single CIOS target list. The

existing Consolidated Advanced Field Teams, so beneficial to the operation of CIOS since

their formation in March, would now be expanded to support Grey List investigators.[88]

These Field Teams would be enlarged by the addition of forty-five US and forty-five UK

technicians to cope with the increased number of target investigations. The amalgamation

of the target lists resulted in the number of target groups increasing from seven to eight,

with an additional five categories added to accommodate the incorporated Grey List

subjects.[89] The members of the Grey List working parties were advised to wind up their

operations and complete all current work by 9 June 1945. No new target requests would be

accepted by the Grey List working parties after 18 May.[90]

---

[86] TNA FO 935/23, Minutes of eighteenth CIOS Meeting, 9 May 1945, p. 5, point 5. Comments regarding combined command's views to treat Grey and Black lists as one list in future - Brigadier Maunsell representing G2 SHAEF.

[87] TNA FO 935/23, Expansion of Field Plans to Include Grey List Interests, CIOS 59, point 1, Brigadier Spedding and Lieutenant-Colonel Powel, 3 May 1945.

[88] TNA FO 935/23, Expansion of Field Plans to Include Grey List Interests, CIOS 59, points 6, 7, 8, Brigadier Spedding and Lieutenant-Colonel Powel, 3 May 1945.

[89] For a summary of the new CAFT Target Groups resulting from the amalgamation of the Black and Grey Lists, please refer to Appendix XII.

[90] TNA FO 935/28, CIOS Grey List Panel, Minutes of meeting of Working Parties, 18 May 1945, Lieutenant-Colonel H Read, Chairman Working Parties, 23-May 1945.

The last meeting of the GLP was held on 27 May 1945 with members agreeing to terminate the panel.[91] It was suggested that departments or agencies represented by the GLP, yet not part of CIOS, should send representatives to CIOS meetings – perhaps as observers. Accordingly, full CIOS membership was extended to the British BOT and the US TIIC - reflecting the focus shifting to economic and commercial targets.[92] The secretariat confirmed the changes to the JIC(Washington), and prepared new procedures for managing a single Black List that incorporated the 'Grey' items. Writing to SHAEF in Versailles, CIOS suggested that a greatly increased number of ex Grey List target investigators would now be despatched to liberated Europe, necessitating additional reception facilities. From the middle of May 1945, the Black and Grey lists were amalgamated into a single CIOS Black List that incorporated ten new target categories.[93]

To better understand the scientific and technological advances made in Germany since 1939, SHAEF G2 set up the Scientific Intelligence Advisory Section (SIAS) in January 1945.[94] Their role was to locate, control access to and obtain information from German scientists and technologists. SIAS would form a separate working party dedicated to producing a target list containing up to two hundred names of the top German scientists, with the intention that SIAS members would conduct interrogations of captured target individuals. The SIAS target list would be expedited using T Forces in Europe along with SHAEF Counter Intelligence G2 Sub-Division who would act as field agents of SIAS. Fifty-seven German periodicals and scientific journals that were still published after 1940

---

[91] TNA FO 935/28, CIOS Grey List Panel, Minutes of ninth meeting, 27 May 1945.

[92] TNA FO 935/28, Increase in Membership of CIOS, CIOS 68, 30 May 1945, GLP recommendation to give full membership of CIOS to BOT & TIIC.

[93] TNA FO 935/23, CIOS Target Groups, 12 May 1945.

[94] TNA FO 935/33, SHAEF, Establishment of Scientific Intelligence Advisory Section in G2 Division, Brigadier T J Davis, 16 January 1945.

were trawled for names.[95] Noton was involved in gathering information, again employing German émigré Dr Demuth to search ISTD records and science periodicals for names of leading German scientists.[96] Demuth had collaborated with Noton in early 1944 in their quest for German Research Centres in preparation for RANKIN. Linstead drew on his contacts as a Professor of Chemistry at London's Imperial College, passing contacts onto Noton.[97] SIAS also received advice from British scientists Henry Tizard and R V Jones.[98] The provisional list, when circulated in April, included one hundred and thirty one names including aviation developers Messerschmitt and Lippish, notable physicists Plank and Heisenberg, rocket developers Dornberger and Von Braun. Scientists from IG Farben were listed, including chemical weapons developers Ter Meer and Dr Ambros.[99]

What SIAS had achieved by pooling the knowledge of the British scientific establishment, paled after a Polish lab technician discovered a partial list of Germany's top scientists in an unflushed toilet in Bonn University. With the US Third Armoured Division advancing on the city in late March 1945, the staff at the university used their remaining hours before occupation to burn incriminating paperwork in the university courtyards. Inside one building, Dr Werner Osenberg, mechanical engineer, SS officer and head of the *Wehrforschungsgemeinschaft* [Defense Research Association], had attempted to destroy his compendious register of Germany's scientists. The expansive list included names, qualifications, details of past and present projects, and contact addresses. The Polish

---

[95] TNA FO 935/33, German Periodicals on Fuel, Engineering, Chemistry, Physics, Telecommunications and Electronics, March 1945. Many had publication dates in 1944, with the most recent from October.

[96] TNA FO 935/33, Foreign Office and MEW, Noton to Dr Demuth, 20 April 1945.

[97] TNA FO 935/33, Ministry of Supply, Linstead to Noton, F.262/SIAS, 19 April 1945.

[98] Sir Henry Tizzard (1885-1959), English chemist and supporter of the development of Radio Direction Finding (RDF or RADAR) before the outbreak of World War II. Dr Reginald Victor Jones (1911-1997), Assistant Director of Intelligence (Science) had been instrumental in solving many technical and scientific problems throughout the war.

[99] TNA FO 935/33, SHAEF, Scientific Intelligence Advisory Section, GBI/Scientific/310.1, Major M D Onthank, 7 April 1945.

technician handed the paperwork to military intelligence who subsequently handed the file to Samuel Goudsmit - a representative of the US ALSOS mission. It was apparent that Dr Osenberg was the author, with his address prominently recorded on the un-flushed document. Here he was detained in a town near Hamburg. Osenberg's wartime task had been to compile a detailed 'who's who' of Germany's scientists, engineers, technicians, doctors and research establishments in order to prevent essential research staff being drafted. Five thousand scientists and technicians had been released from military services as a result of what Hitler referred to as the 'Osenberg Action'.

With Osenberg detained, numerous card index systems were recovered from his residence, which provided a comprehensive list of fifteen thousand names of specialists that had worked for the Reich. Osenberg was moved to SHAEF headquarters in Versailles where he continued to refine his reference work - now on behalf of the Allies. Goudsmit noted he merely changed the address on his original letterhead to state 'at present in Paris'. [100] The resulting list was shared with CIOS, with its contents used extensively in the post war drive to track down Germany's scientists and technicians and to exploit the Reich's scientific know-how. The ALSOS team would go on to investigate Germany's atomic-weapons research program under the operational title of Operation BIG, finally establishing that the Third Reich program was tiny compared to work being carried out in the US and consequently was years away from developing an atomic bomb.[101] Investigating Germany's chemical and biological weapons program relied heavily on the Osenberg list for names and locations of chemical weapon experts who were systematically tracked down and interrogated.[102] As these scientists included on the SIAS and Osenberg lists were incarcerated, the need to establish an appropriate facility to accommodate detainees

---

[100] Jacobsen, *Operation Paperclip*, pp. 40-43.

[101] For further reading please refer to Brown, *Operation Big*.

[102] TNA FO 1031/86, Interrogation files compiled by Major Tilley, G2 Special Sections, SHAEF.

became more urgent. Major-General Strong was charged with laying the groundwork for such an establishment.

Major-General Strong and SHAEF G2 met on 21 April 1945 to discuss the seizing, holding, exploiting and eventual release of these human 'intelligence' targets. The point was made that the information they possessed was not only useful now, but of potential in the post war period and would add valuable detail to the work already being carried out by CIOS assessors. Brigadier-General Betts, CIOS chairman and Strong's deputy, oversaw the working group established to list scientists and technologists that would be sought once hostilities ceased with the launch of operation ECLIPSE. This working group was tasked with making recommendations of future detainees, but also to assess how and where they should be detained, the quantity and size of such facilities and how they should be staffed.[103] Dr H P Robertson of SIAS raised the fundamental question of whether the Allies had the authority to detain anyone after the end of hostilities. Strong's response was unequivocal - the Allies would detain anyone they wanted, affirming that this principle had been approved by the Chiefs of Staff and embodied in the ECLIPSE Memorandum. Strong foresaw the exploitation of detainees taking three forms. The first would be immediate interrogation on capture, the second would involve evacuation to a central interrogation centre where further interviews could take place by other external bodies. The third level would see selected individuals suitable for long-term exploitation removed to the UK or US to enable respective governments to maximise their skills and knowledge. CIOS would liaise with the SIAS over the removal of scientific apparatus, equipment or documents that were pertinent to a detained individual. Only in exceptional cases agreed by CIOS or SHAEF would such documents travel with the detainee to the detention centre. SIAS were

---

[103] TNA FO 1031/72, SHAEF G2, How to Deal with German Scientists, Colonel T F Bogart, SHAEF Executive G2, 21 April 1945.

tasked with providing an instructional report to be issued through all commands, to provide guidance regarding the handling of scientific equipment. Once detained, CIOS would also be responsible for disseminating lists of detainees available for interrogation by interested parties.

To ensure documents that might support future interrogations were located and secured efficiently, four 'ECLIPSE' teams were created in May by Twenty-First Army Group and allocated at corps level, comprising one officer and up to three 'other ranks'. Many of their targets were too small to be of interest to CIOS, while inevitably there was duplication of larger CIOS targets. Dr Noton was approached to advise how best to resolve target overlap and how to efficiently report captures to all parties. The ECLIPSE teams were in addition to SHAEF teams operated by T Force and attached to each army group. These comprised up to eight German speaking members who were tasked with locating document targets that were not included on CIOS lists. The T Force teams were keen to collaborate with CIOS and CAFT investigators whenever possible. Overstretched British FSS units or US CIC teams, only searched enemy HQ and Gestapo offices for priority information regarding hunted personalities, leaving the ECLIPSE or T Force teams to follow up, searching the sites more thoroughly for concealed documents.[104]

5.07 Interrogating the Enemy - CSDIC, DUSTBIN, ASHCAN

In any conflict, interrogating prisoners of war has been an essential tool for extracting valuable intelligence. In January 1939, a new unit was set up in the Tower of London named the 'Prisoners of War Collecting Centre in London' and was designed to accommodate twenty-five officers and one hundred other ranks.[105] By secretly installing

---

[104] TNA FO 898/40, Letter from Major Southern to Noton, Foreign Office, 19 May 1945, pp. 1-2.

[105] Helen Fry, *Spymaster: The Secret Life of Kendrick* (London: Marranos Press, 2014), p. 211.

microphones in some of the prisoner's quarters (known as Microphone or 'M' Rooms), and assiduously listening to the detainees' candid conversations, much more could be revealed than by direct questioning. Rooms within the Tower were thus modified to accommodate the latest bugging devices, made ready to accommodate detainees in September 1939. The Tower listening facility was titled Combined Services Detailed Interrogation Centre or CSDIC, under the command of the facility's creator Lieutenant-Colonel Thomas Kendrick.[106] German naval and air crew were housed together with their conversations covertly recorded. To ensure every nuance of the taped conversations was understood, natural German speakers were employed, often Jewish émigrés from Germany or Austria. The crew of U-Boat 39 were the first prisoners to arrive at the Tower by 19 September 1939, followed by a GAF crew rescued from the Thames estuary. Recorded conversations revealed details of weaponry and whether to escape. The use of the naval enigma machine was discussed and the utilisation of multiple wheels.

Kendrick appreciated that the Tower could not accommodate the anticipated number prisoners of war and was also vulnerable to enemy bombing. An alternate site was found at the Sassoon family mansion at Trent Park near Cockfosters. State of the art US bugging equipment was installed into five interrogation rooms and six bedrooms, with the site first opening on 12 December 1939. British intelligence staff at the site now numbered in excess of five hundred. M Room listeners were Oxbridge language graduates or German émigrés who had arrived in Britain from 1933 onwards and had received British nationality.[107] As more German military personnel were captured, additional sites were created at Latimer House near Chesham and Wilton Park near Beaconsfield, through Trent Park remained the designated detention centre for high ranking German officers from all

---

[106] Lieutenant-Colonel Thomas Kendrick (1881-1972), MI6 operative and head of the Combined Services Detailed Intelligence Centre (CSDIC) during World War II,

[107] Fry, *Spymaster*, p. 241.

services.[108] In January 1945, the JIC would recognise the importance of these

'eavesdropping' centres as having provided 'much valuable operational, technical,

economic and political intelligence'.[109] Individual sites were designated CSDIC, with sites

jointly operated by the War Office, MI5 and MI9. Others were created as the War

progressed in the Middle East, Cairo, Rome, and Deist in Belgium. With the end of

hostilities, it was agreed in May 1945 to form a new CSDIC (WEA) Western European

Area, complete with concealed microphones, created within the Spa buildings at Bad

Nenndorf in Lower Saxony.[110] The Spa's austere former treatment rooms would be

repurposed as unheated holding cells for up to thirty-five inmates, SS prisoners and agents

suspected of working for Germany, Japan and later working for the post-war Soviet

Union.[111]. By January 1946, the detainees at Bad Nenndorf were no longer being

interrogated about the Third Reich, instead being questioned in the hope of revealing

intelligence about Soviet occupied East Germany. Industrial and technical intelligence was

being harvested elsewhere.

The surrender of Germany's armed forces in May 1945 delivered an immense

number of prisoners into Allied captivity. Amongst the capitulating masses were senior

officers of the German armed forces, scientists, industrialists, technicians and high ranking

---

[108] Latimer House, Wilton Park and Trent Park CSDIC sites were all used to eavesdrop on the German detainees. Many important intelligence discoveries made, or suspicions confirmed, ranging from details of the Holocaust to the development of the *Vergeltungswaffe Eins* and *Zwei* (V-1 & V-2 For further reading, please refer to Fry, *Spymaster*. For transcripts of the recordings in the original German, please refer to Sönke Neitzel, *Abgehört: Deutsche Generäle in britischer Kriegsgefangenschaft* 1942-1945 (Berlin: Propyläen Verlag, 2007). In each case, the equivalent file reference at TNA is included for the English translation.

[109] Journal of Contemporary History, Artemis Joanna Photiadou, *Un British No More: Torture and Interrogation by Britain in Germany 1945-1954*, LSE, 2022, p. 5, citing JIC report, TNA, CAB 163/6, 10 January 1945. <https://journals.sagepub.com/doi/pdf/10.1177/00220094221087854> [accessed 15 January 2024].

[110] Journal of Contemporary History, Artemis Joanna Photiadou, *Un British No More: Torture and Interrogation by Britain in Germany 1945-1954*, LSE, 2022, p. 6. <https://journals.sagepub.com/doi/pdf/10.1177/00220094221087854> [accessed 15 January 2024].

[111] For further reading, please refer to Helen Fry, *The London Cage: The Secret History of Britain's World War II Interrogation Centre* (London: Yale University Press, 2017), regarding London interrogation centre and CSDIC detention centre at Bad Nenndorf. Conditions for inmates were rudimentary, with senior staff courts marshalled after the centre was closed, accused of mistreatment of prisoners.

Nazi Party officials. All would need to be identified and many interrogated. Some would

be detained and held accountable for their actions while others would be questioned to

better understand the technological progress they achieved during the previous decade.

Responding to the April meeting organised by Major-General Strong, SHAEF were quick

to allocate facilities to accommodate captives and interrogators. Detailed on the SHAEF

Monthly Operations Report for May 1945, The Enemy Personnel Exploitation Section

(EPES) was set up on 7 May 1945 with the task of holding and facilitating the

interrogation of detainees.[112] The Anglo-US detention centre christened DUSTBIN, was

situated near SHAEF Headquarters at Versailles where by the end of May, the EPES team

detained thirty-five prisoners including Reichministers Albert Speer and Julius

Dorpmüller.[113] In time, EPES became subordinate to the Anglo-US FIAT when it was

formed as part of SHAEF G2 on 31 May 1945, but remained an ostensibly British staffed

formation. The Executive element of EPES was responsible for the movements and

transfer of detainees, issuing passes to enable third party access to the detainees and all

administration. The Intelligence Sub-Section were responsible for collating information

regarding the detainees, creating and issuing 'wanted' lists of targets, supervising the

intelligence exploitation of the detainees and disseminating the information once extracted.

Interrogation reports and their integration within final reports would be undertaken by

external investigation teams such as CIOS.

---

[112] TNA FO 1031/72, Monthly Operations Report for May 1945, review of actions during May 1945, p. 1, with report drafted on 1 June 1945. EPES creation is noted as taking place on 7 May 1945, while Charlie Hall suggests 1 May 1945. Hall, *British Exploitation of German Science and Technology, 1943-1949*, p. 110.

[113] Albert Speer (1905-1981), Reich Minister for Armaments and War Production and favoured architect. Speer was close to Hitler having designed many of the new Nazi era buildings in Berlin including the Chancellery. He was convicted at the Nuremburg trials in 1946 and sentenced to twenty years imprisonment. Julius Dorpmüller (1869-1945), Reich Minister for Transport between 1937 and 1945. Cleared of being an active member of the Nazi Party, he was asked by the British, with the backing of Eisenhower, to head the rebuilding of the German railways. Immediately giving advice regarding reconstruction, his tenure was short as cancer took hold in late June and he died the following month.

A second detention centre was created to hold just the captured Nazi elite, established by the US authorities at the Palace Hotel, Mondorf-les-Bains in Luxembourg. Officially titled the 'Central Continental Prisoner of War Enclosure No. 32', the commandeered hotel was also known by its code name – ASHCAN. It received 'civilians of high political status 'Nazi personalities of interest to counter intelligence' and 'high ranking military and naval officers of operational intelligence interest in connection with the war with Japan'.[114] Ivone Kirkpatrick, British Political Adviser to General Eisenhower in the brief period from the end of hostilities to the termination of SHAEF, visited ASHCAN in early May.[115] He intended to interview several inmates that he had previously met in Munich in 1938 when he acted as translator for British Prime Minister Neville Chamberlain.

On arrival, the ASHCAN Commandant US Colonel Andrus introduced the visitors to his prisoners that included Ribbentrop, Doenitz, Reader, Keitel, and Goering. Having completed interviews with Goering and Ribbentrop, Kirkpatrick departed the detention centre commenting that the place had an 'atmosphere of a criminal lunatic asylum', vowing to have no more to do with the Nazi inmates and declining an invitation to attend the Nuremburg trials.[116] He returned to SHAEF Headquarters, now relocated to its final post war location from the 26 May 1945 in a building that once belonged to IG Farben in Frankfurt.[117] With the group of high-ranking prisoner's transferred to cells at Nuremburg on 10 August 1945, ASHCAN was closed, leaving DUSTBIN as the major Allied

---

[114] TNA 935/23, Document CIOS 73, Establishment of Special Detention Centres for Suspects and Important German Personages. A CIOS reissue of SHAEF letter AG 254-1 GBI-AGM dated 27 May 1945.

[115] Sir Ivone Augustine Kirkpatrick, 1897-1964, was the first secretary to the British Embassy in Berlin between 1933 and 1938 and assisted Prime Minister Neville Chamberlain as a translator at Munich in 1938. He acted as British Political Adviser to General Eisenhower during the last few months of SHAEF.

[116] Kirkpatrick, *The Inner Circle,* p. 198.

[117] SHAEF headquarters had remained in England till December 1944 when it moved to the Trianon Palace Hotel in Versailles, France. In February 1945, the HQ moved to Reims before its final move to Frankfurt on 26 May 1945.

detention centre on the continent. Hall noted that that a 'Works Centre' was also established at the Rheinmetall Borsig plant at Unterlüß near Celle in Lower Saxony where one hundred and fifty German specialists were 'detained' by the British to work on projects until the operation closed in August 1948.[118]

DUSTBIN would be used to incarcerate German scientists and chemists, 'industrial technologists', engineers, secretaries and a few military staff officers. EPES administration and Intelligence staff were provided by the combined command at SHAEF, with guards provided by a Battalion of the Buckinghamshire Regiment up to the end of 1945.[119] Details relating to detainees: where captured; army or SS rank along with reports detailing interrogations, were forwarded to Paris where the Central Registry of War Criminals and Security Suspects (CROWCASS) had been established by SHAEF.[120] CROWCASS would eventually publish a list of over forty-seven thousand persons – Austrians, Germans, a few Belgians, French, Italians, Poles and Japanese – all wanted for war crimes committed during the Second World War.[121] It was not permitted for War Crimes examinations to be carried out at DUSTBIN. Instead detainees would be released to the Allied War Crimes Commission (AWCC) when required.[122]

---

[118] Hall, *British Exploitation of German Science and Technology, 1943-1949*, p. 111. Rheinmetall Defence, one of Germany's major weapons developers operate at the site to this day.

[119] TNA FO 1031/70, British Guard Personnel at Dustbin, 30 September 1945. Discussions with the Officer in Charge, Lieutenant-Colonel Nicol confirming that the Bucks Guard would not be replaced on 15 November 1945 but would remain at DUSTBIN indefinitely. Special emphasis was placed on the desirability of not disturbing the status quo. From Commandant DUSTBIN to G2 FIAT.

[120] TNA FO 1031/72, Monthly Operations Report for May 1945, review of actions during May 1945, p. 2, with report drafted on 1 June 1945.

[121] CROWCRASS instructions, detention and wanted lists can be accessed or downloaded in Pdf format at <https://archive.org/details/CROWCASS> [accessed 18 October 2023].

[122] TNA FO 1031/68, Enemy Personnel Exploitation Section, FIAT(Br), Standing Instructions FIAT EP 316-76, 24 October 1945.

The DUSTBIN Intelligence Sub-Section compiled a detailed card index of Scientists and Industrialists wanted for interrogation and individual dossiers for more important target personnel or scientific and industrial facilities. In cases where the subjects were sufficiently important or urgent, the dossiers were passed to the 'T' Sub-Division within SHAEF to expedite using T Force. By the beginning of June 1945, information pertaining to the search and immediate detention of fifty-one Germans had been disseminated in this way. To ensure minimal duplication, the EPES team at DUSTBIN liaised closely with other bodies who might be trying to detain and exploit scientists and industrialists, including CROWCASS, ALSOS and CIOS. Industrial designers, scientists and technicians involved with naval weapons and equipment, long-range rockets, V-weapons, chemical, biological and gas warfare were all to be detained and interrogated. Lists were circulated that provided the name and title of the scientist being sought, the type of industry or research they were involved with, and their last known location. Once the target was detained and held at DUSTBIN, his or her name was added to the detainee list, along with details of their wartime work, their date of arrival and any pertinent observations such as 'Director of IG Farben and oil expert'.[123] The list of 'detainees available for exploitation' was circulated to over one hundred and forty agencies including FIAT US and BR, CIOS or later BIOS and many different departments within the Control Commission for Germany (CCG).[124] The register of detainees was updated and distributed each week until May 1946 when the issue was revised to fortnightly. Although the Anglo-US FIAT would separate into national sections after the termination of SHAEF, the covering letter issued with the register of detainees stated that applications by any parties

---

[123] TNA FO 1031/70, EPES, FIAT, CCG, British Army of the Rhine (BOAR) EP 254-77/2, Detention Camp DUSTBIN, Periodic State Report No 40, 28 February 1946, Detainee number twenty-five - Fritz Ringer, described as 'Director', Arrived at Dustbin 13 June 1945.

[124] TNA FO 1031/70, EPES, FIAT 69 HQ, CCG, British Army of the Rhine (BOAR) EP 254-77/2, Detention Camp DUSTBIN, Periodic State Report No 63, 12 September 1946.

wishing to interview the detainees, must be made through EPES, Integration and Planning Branch of the British element of FIAT.

Anticipating an increase in the duties of EPES as prisoners in Germany were processed, a move from Versailles to a more appropriate facility was made in June 1945, to the once German army headquarters at Kransberg Castle, forty kilometres north of Frankfurt.[125] Departure from Versailles was noted at the twenty-first meeting[126] of CIOS held on 20 June, with the new location clarified during the following meeting held on 4 July.[127] Industrialists and technicians were often interrogated by CIOS investigators on capture, before being moved to DUSTBIN for additional interviews with other investigating bodies. Typically, around fifty detainees were held, with a number who had arrived in June 1945, still incarcerated in September 1946. British or US investigators who maintained that a detainee was an asset to post war industry, could organise for them to be transferred to the UK and more relaxed interrogation sites – a move that would prevent the detainee being employed by the Soviets.

Important designers and industrial prisoners moved to the UK were held at Beltane School in Wimbledon - code named INKPOT, which offered a less formal setting for cordial interrogations. According to Hall, Wernher Von Braun referred to his interview at the site with Sir Alwyn Crow, the Director of Guided Projectiles at the MoS as 'friendly

---

[125] The mediaeval Kransberg Castle saw extensive rebuilding and repair in the nineteenth century before undergoing further redeveloped to create Hitler's western command centre, titled the Adlerhorst or Eagles Nest. It was used by Field-Marshal von Rundstedt's as his command headquarters during the 1944 Ardennes offensive towards Antwerp and by Hitler in January 1945 to observe Operation Nordwind, the German counter attack towards Strasbourg.

[126] TNA FO 935/23, Minutes of twenty-first CIOS Meeting, 20 June 1945, p. 5, Establishment of Detention Centres, confirmation that move from Versailles had been made, but new centre incorrectly stated as not being in Frankfurt.

[127] TNA FO 935/24, Minutes of twenty-second CIOS Meeting, 4 July 1945, p. 2, 1: Minutes of The Last Meeting, point A, (ii), clarification that location of DUSTBIN since the middle of June was outside Frankfurt. SHAEF also moved from Versailles (Trianon Palace Hotel), to Frankfurt on 26 May 1945, occupying a commandeered IG Farben building.

shop talk'.[128] Crow had hoped to secure von Braun's employment in the UK, but a more attractive offer ensured he would move to the US to work for the US. INKPOT would eventually close, to be replaced by Speden Towers in North London.[129] Although operated by a military staff, Spedan Towers had no fencing or guards, with up to thirty residents enjoying visitor status. These 'visitors' were offered comfortable surroundings in the hope that they would reveal more information and possibly accept employment in the UK.

German technicians who wished to accept a position working for the British authorities would require the sponsoring authority to apply to the CCG, who were required to endorse employment. An example of German technicians and ex-soldiers working for the Allies is illustrated by the personnel who assisted the British in 1945 in demonstrating the launch process for Germany's long range A-4 rocket. Three launches were successfully carried out at Altenwald near Cuxhaven in autumn 1945. The Combined Chiefs of Staff had decided in June 1945, to conduct a series of launches of the A-4, utilising the wartime German crews. This would enable British observers to record the targeting and launch procedure, the handling of fuels and control of flight. The predominantly British team overseeing the operation was titled the Special Projectile Operations Group (SPOG) under the command of Major-General Cameron. SPOG staff were assembled from the Air Defence Division in response to SHAEF issuing 'BACKFIRE Instruction No 1' on 22 June

---

[128] Charlie Hall, *British Exploitation of German Science and Technology, 1943-1949* (London: Routledge, 2019), p. 115. Sir Alwyn Crow (1894-1965), British scientist specialising in ballistics between the wars and Chief Superintendent of Projectile Development 1939-40.

Werner von Braun (1912-1977), German rocket designer involved with the *Vergeltungswaffe Zwei* (V-2) rocket development and after the war, employed by Redstone and NASA in the US, culminating in the Apollo space programme and the successful moon landings in 1969. For ten days in the summer of 1945, von Braun was held at Beltane School while Crow tried and failed to entice him to remain and work in the UK.

[129] The building was bought by John Lewis for his wife in the 1880's and it became the family home with Lewis commuting to his Oxford Street shop each day. The house was sold by the Lewis family in 1936 and by 1945 had become the official reception centre for holding German technicians and specialists under the auspices of BIOS – a formation that will be discussed later in this chapter. In 1951, Spedan Towers became a nursing home until closure. The land was bought by Camden Council who demolished the property in the 1970s.

1945, with BACKFIRE being the official operation codename. [130] With no complete and undamaged rockets remaining in Europe, assembly of 'new' rockets from surviving components was necessary, with parts, fuel bowsers and support vehicles recovered from many sites across Germany.

The German Aggregat-4 (A-4) rocket had been deployed operationally from September 1944 to March 1945, targeting predominantly London and Antwerp and dubbed the *Vergeltungswaffe Zwei* or V-2 in the German press. When the German A-4 Division surrendered to the Allies in late April 1945, one hundred and seven officers and men were selected by Allied military intelligence as being the most skilled, knowledgeable, or those who had the longest practical experience of launching the A-4.[131] Some were segregated in a prisoner of war camp near Brussels, while others were held at Garmisch south of Munich in the Bavarian Alps.[132] All were interrogated intensively, some by CIOS investigators, to discover the location of abandoned rocket parts or launch equipment and asked to advise what personnel would be required to successfully launch the A-4. By July, the number of detainees had increased to one hundred and thirty-seven, with lists of potential V-2 scientists and technicians circulated by the War Office in July.[133] Conflict arose between the British operation in Cuxhaven and the desire of the JCS to transport one hundred designated the 'Peenemünde Group' – Germany's senior specialists, designers and

---

[130] BACKFIRE. Volume I – Scope and Organisation of Operation, letter from commander of SPOG to the War Office with copy of BACKFIRE report, SPOG/500/12, Major-General A M Cameron, 7 November 1945. Smithsonian Library, <https://library.si.edu/digital-library/book/report-operation-backfire> [accessed 16 April 2018]. Also, TNA WO 33/2554.

[131] BACKFIRE. Volume I – Scope and Organisation of Operation, The German Personnel Employed, p. 12 and Operational chart reproduced as 'Table A'. Smithsonian Library, <https://library.si.edu/digital-library/book/report-operation-backfire> [accessed 16 April 2018]. Also, TNA WO 33/2554.

[132] TNA FO 1031/85, Move of V-Weapon Personnel from Germany, FIAT E 471.94-76, Major P M Wilson, EPES, FIAT, 28 July 1945.

[133] TNA FO 1031/85, War Office to the CCG, 23 July 1945. List of forty-one German Rocket Technicians required by the Director of Guided Projectiles, to assist the Special Projectile Operations Group (SPOG) in organising Operation BACKFIRE.

engineers, to the US for 'research related to the Japanese war'.[134] Some of the designated

one hundred had already been handed over to the British for employment with

BACKFIRE, after which the JCS anticipated moving the entire group to America by 1

September 1945.[135] After negotiation, some were released to the US, while others

remained at Cuxhaven until the conclusion of BACKFIRE in October 1945.[136] The US

operation, codenamed OVERCAST and designated the 'Ordnance Guided Missile

Program', anticipated long-term development of the A-4 in the US, while BACKFIRE was

designed to be a short-term project to observe the launch procedure, the findings

supplementing US research.[137]

The ECLIPSE instructions issued to Army commanders, the War Office and

SHAEF on 7 April 1945, specifically forbade any demolition or damage to special

weapons installations that were involved in V-1 or V-2 production, including launch sites

or stocks of weapons found in the vicinity of production or distribution facilities.[138] This

directive was observed when US forces captured the A-4 production facility at Mittelwerk

near Nordhausen in the Harz Mountains of Thuringia. The Air Defence Division removed

enough components from the underground factory to enable the assembly of an estimated

one hundred and fifty A-4 rockets.[139] The Nordhausen components were in addition to a

number of complete A-4 rockets captured in Holland in 1944 and stored at the US operated

---

[134] Peenemünde on the German Baltic coast was the army's centre of German rocket research and development since 1937.

[135] TNA FO 1031/85, FIAT to CCG, FIAT/A/RJM/22 , Brigadier R J Maunsell, head of FIAT British Element.

[136] TNA FO 1031/85, German Scientific and Technical Personnel, to commander SPOG, 6 August 1945, twenty-seven German technicians out of the original eighty-five that had been requested, were handed over to US forces for transfer out of Europe.

[137] TNA FO 1031/85, Interference between projects OVERCAST and BACKFIRE, 1117OOB, no date or signature.

[138] TNA WO 219/2125, 21st Army Group ECLIPSE Plan , Pamphlet 7, Disarmament and Demolitions, Appendix F, Priority List for Destruction and Demolitions in Germany, Priority 1, clause A, 30 March 1945.

[139] TNA WO 219/2165, SHAEF Staff Minute Sheet, Nordhausen Manufacturing and Assembly Plant, SHAEF/1029/47/1/ADD, p. 1, 19 June 1945.

Ordnance Technical Intelligence Team Depot O-644 near Paris.[140] These captured rockets were still wrapped in purpose designed camouflage tarpaulins, although stored minus their one ton Amatol warhead.[141] The nosecone with payload would only be installed when the weapon was readied for launch.[142] SHAEF had authorised the British investigators to select up to thirty rockets for testing from these captured stocks.[143] US Colonel Toftoy decided to ignore this accord and transfer all captured parts, including the Depot 0-644 examples, to the US without informing SHAEF or the British. The haul departed Antwerp on sixteen liberty ships before British intelligence within SHAEF were made aware attempted to prevent embarkation.[144] Toftoy's actions forced the SPOG team to scavenge rocket parts and support vehicles from across Germany to enable A-4 testing in Europe to continue. Seventy-nine German technicians whom the US had gathered, many from Mittelwerk, joined their countrymen at Altenwald and eventually assembled eight operational A-4 rockets.

Anticipating the termination of SHAEF in July, the British War Office inherited responsibility for organising the launches on behalf of the Combined Chiefs of Staff.[145] A

---

[140] Christopher Van Valkenburgh, *Fifty Years of Silence: Ordnance Technical Intelligence Team Depot O-644 1944-1945* (Independently published, 2020), pp. 78-98. A published collection of archive images and documentation detailing O-644. After the US authorities removed the A-4 rockets and a selection of the vehicles and Ordnance to the United States, with many items ending up at the Aberdeen Proving Grounds in Maryland. The remaining items were handed over to BIOS. Between 18 and 25 October 1945, 200 tons of items were removed from Depot 0-644 and transported to Halstead in Essex BIOS issued a memo to the committee members on 14 November, Ref BIOS (45)30, calling for a committee to be set up to agree how the items removed from the Paris Depot should be allocated. For further reading, please refer to TNA BT 211/541.

[141] The separate payload module installed in the V-2 weighed 1000 kg (one metric ton), containing 910 kg of Amatol explosive. For safety, the A-4 was designed to be stored without the explosive installed.

[142] TNA WO 231/24, BACKFIRE Report Volume III, The Warhead Mounting Section, pp. 55-57.

[143] TNA WO 219/2165, Combined Chiefs of Staff, to Eisenhower, SHAEF, 6 June 1945.

[144] Johnson, *The Secret War*, p. 185. The A-4 were shipped to the White Sands Proving Grounds operated by the US Army Ordinance Corps in New Mexico where the captured rockets were assembled and extensively tested throughout the late 1940's.

[145] TNA WO 219/2165, Trial Firing of V-2 Rockets, GOT/660.2-5/Ops(A), Major-General Bull, 13 June 1945.

letter confirming the authority of the War Office was issued on 11 August 1945.[146] To ensure the Germans actively participated in the launching rather than passively showing obedience to their British 'masters', a new unit was formed known as the *Altenwald Versuchs Kommando* [Old Forest Test Command] or AVKO commanded by German Oberstleutnant Weber.[147] The unit was fully operational by 18 September 1945 with three hundred and sixty-seven staff employed producing rockets at Voelkenrode and testing at Altenwald. A further two hundred and twenty-four Germans provided general labour and camp administration. According to the BACKFIRE Report, Volume 1, to keep the employment of the five hundred and ninety-one Germans on 'a proper footing' and in accordance with international law, the status of the men - some 'prisoners of war' - some 'disarmed enemy personnel' and others civilians, was changed to 'disarmed enemy personnel'. All civilians were 'beamted', in other words made into officials of the German Army. Of these men, seventy were A-4 technicians and one hundred and twenty-eight were members of the original A-4 Division.

The final status for all members of AVKO was 'held for interrogation' until the termination of the operation.[148] All were paid by the British, with rations and wages increased as the project progressed. Towards the end of the program, a bonus was also paid according to responsibility and technical efficiency.[149] The precise amount paid to the AVKO Germans was not recorded. The process of preparing and fuelling the A-4 for firing

---

[146] BACKFIRE. Volume I – Scope and Organisation of Operation, letter from commander of SPOG to the War Office with copy of BACKFIRE report, SPOG/500/12, Major-General A M Cameron, 7 November 1945, referencing War Office communication ref 43/Training/3548(RA3). Smithsonian Library, <https://library.si.edu/digital-library/book/report-operation-backfire> [accessed 16 April 2018].

[147] TNA WO 33/2554, Report on Operation Backfire, The German Personnel Employed, SPOG/500/12, 07-November 1945 p. 12.

[148] TNA FO 1031/85, German Civilian Technicians employed on BACKFIRE, SPOG/800/2, Major-General A M Cameron, Commander Special Projectile Operations Group (SPOG), 4 October 1945.

[149] BACKFIRE. Volume I – Scope and Organisation of Operation, The German Personnel Employed, p. 12 and Operational chart reproduced as 'Table A'. Smithsonian Library, <https://library.si.edu/digital-library/book/report-operation-backfire> [accessed 16 April 2018]. Also, TNA WO 33/2554.

was filmed and recorded in minute detail, culminating in three successful launches.[150] The

results of these tests were published as five detailed reports by the MoS in January 1946.[151]

With the completion of BACKFIRE around the 20 October 1945, plans were made to set

up a 'special experimental establishment to continue the work on Long Range Rockets' at

Cuxhaven and it was hoped to re-employ some of the members of AVKO. [152] To achieve

this, they had to be discharged from the status of 'held for interrogation', allowing them to

be re-employed as 'free civilians'. The change of status was granted for sixty of the staff,

with ten released to travel to the US and join their compatriots as part of operation

OVERCAST.[153]

Paying German staff and their families to assist the British authorities extended to

German scientists and technicians, who by 1947, were permitted to visit the UK for limited

periods from two to six weeks. Scientists working in the Germany's three western zones

and Austria, could visit the UK and lodge at Spedan Towers. Their only restriction while in

the UK was to be available for interviews when required, not to leave the accommodation

between midnight and six in the morning and not to travel outside London without Police

approval.[154] Accommodation was limited to twenty-five to thirty visitors, with transit

organised by the BIOS Movements Section and T Force in Germany. The visitors would

---

[150] The film detailing operation BACKFIRE was published in December 1945 and can be viewed on YouTube. <https://www.youtube.com/watch?v=V_fPdXLx48c> [accessed 15 July 2024].

[151] The five volumes of operation BACKFIRE. Volume I – Scope and Organisation of Operation, II - Technical Report, III - Field Procedure, IV – Description of Equipment and Special Vehicles, V – Recording and Analysis of the Trajectory, Smithsonian Library, <https://library.si.edu/digital-library/book/report-operation-backfire> [accessed 16 April 2018]. Also please refer to TNA WO 33/2554, 2255, 2256, 2257, 2258 for the same five reports.

[152] TNA FO 1031/85, Request issued by the Commander of SPOG to the CCG(BE), requesting status change for seventy German detainees to allow their continued employment by British forces, Major-General A M Cameron, Commander Special Projectile Operations Group (SPOG), 4 October 1945.

[153] TNA FO 1031/85, Appendix Sheet Seven, Rocket Technicians. A note releasing ten of the technicians on the termination of BACKFIRE, to travel to the US for employment in Operation OVERCAST. This code name would later be superseded by PAPERCLIP.

[154] These restrictions were not devised specifically for the BIOS German visitors but were taken from the Home Office Aliens Order 1920 (Amended).

be paid an allowance of sixteen shillings per week to cover cigarettes etc., with concert tickets, cinema and free recreational facilities provided. Their family back in Germany or Austria would be paid an allowance of four hundred marks per month, or four hundred schillings in Austria. Dependents of scientists were also entitled to rations at the 'heavy workers' scale and receive a special allocation of fuel.[155] A treasury document dated 22 February 1947 gave the exchange rate of eighteen marks to one pound, thus the families of a German scientist would be paid the equivalent of twenty two pounds per month.[156] To offer some perspective, an investigator representing BIOS in 1946 was given an accommodation and meal allowance of one pound ten shillings per day in the British zone and three pounds fifteen shillings in the US zone with a recommended minimum allowance of twenty pounds to go towards copying, photography, drawing and reproduction.[157]

The end of the War in Europe ushered changes in the prioritization of intelligence targets and the way they would be accessed by investigation teams. CIOS believed that many of the military targets included on the Black List had been investigated by the close of hostilities, though final inspection reports had still to be written and issued. The emphasis now shifted to the investigation of commercial, economic and industrial targets as a matter of urgency before infrastructure could be looted or destroyed. The JIC(Washington) considered that a new high-powered military coordinating agency was needed, with seniority over 'T' Sub-Division within SHAEF who currently directed T Forces. This new agency would be manned by military technical staff and be supported by a technical library and card-index, itemising relevant reports and captured enemy

---

[155] TNA FO 943/292, Short Visits to the UK by Germans and Austrian Scientists and Technicians (BIOS Scheme), Major R L Blum. Document attached to meeting agenda, Major Rupert Blum, BIOS Movements Section, 6 April 1947.

[156] TNA T 294/9, IARA, Inter Allied Reparation Authority, Reparation Valuation and Accounting, 22 February 1947.

[157] TNA FO 1012/422, BIOS, Financial Requirements of BIOS Investigators, BIOS (46) 46, 1 August 1946.

documents. It was essential that this new agency was of 'joint Anglo-US character', reflecting the US and British Government's need to exploit both the US and British zones in Germany.

The resulting inter-service 'Field Intelligence Agency, Technical' or FIAT was established on 31 May 1945. The organisation chart issued by Eisenhower's Chief of Staff, Lieutenant-General Bedell Smith included technical staff drawn from air, naval and army units providing interrogation and planning staff, a scientific and technological branch, while other sections covered economic, financial and industrial targets. Operational staff would handle enemy documents, records and include administrators to organise accession list publication. All would be under the command of high ranking Anglo-US officers. SHAEF announced the formation of the new agency to all forces in Europe, stipulating the purpose of FIAT was to:

> co-ordinate, integrate and direct the activities of the various missions and agencies interested in examining, appraising and exploiting all information pertaining to German economy, other than direct military intelligence. [158]

Thus, the key responsibility of FIAT was to facilitate access to target sites for investigation teams despatched from the UK, and neighbouring occupation zones. FIAT would provide information but would not be responsible for subsequent investigation or exploitation. They were to develop policy governing the collection of technical, scientific, and industrial information, including documents, equipment and personnel. When formed in May, FIAT was subordinate to SHAEF, designated part of the G2 Division. The agency was conceived to function for the limited time that SHAEF existed, thereafter be split into separate national bodies. Unlike CIOS, the agency would not be terminated with the end of SHAEF. The establishment document states that FIAT would be organised such that:

---

[158] TNA FO 935/23, Establishment of Field Information Agency, Technical (FIAT) of G2, Supreme Headquarters, AEF, GBI/5S/322-17, 31 May 1945, Lieutenant-General Walter Bedell Smith, Chief of Staff.

it may be readily divided into American and British components to serve under their respective commanders-in-chief upon termination of the Combined Command should it be desired.[159]

The personnel operating within FIAT were 'furnished [with] special credentials' directing all military authorities and commands to facilitate and expedite their mission, allowing them to freeze any targets they may designate to be of interest and arrest, intern and remove any individual German who may be of similar interest. To ensure authority, FIAT was created with a large number of senior officers in charge. Comparing the 'War Establishment' (WE) of the British element of FIAT with the equivalent 'Table of Organisation' (TO) of the US element, reveals an even spread of senior staff members in each country's contingent: two Brigadiers commanding, nine Colonels, sixteen Lieutenant-Colonels, thirty Majors, and twenty-five Captains. Overall, the TO of the US section included around three hundred and forty individuals, while the WE of the British contingent amounted to around two hundred and eighty. The US section was supported by a further two hundred TIIC staff based in Washington.[160]

FIAT was created in May to collaborate with CIOS, swiftly supporting the post-hostilities change in priorities to investigate economic and scientific intelligence targets.[161] Talking at the twentieth CIOS meeting on 6 June 1945, Brigadier Maunsell representing SHAEF G2 assured the committee he anticipated FIAT would be functioning at seventy

---

[159] TNA FO 935/23, Establishment of Field Information Agency, Technical (FIAT) of G2, Supreme Headquarters, AEF, GBI/5S/322-17, 31 May 1945, p. 2, Point 5. Personnel.

[160] TNA FO 1049/139, War Establishment of FIAT(Br), Comparison Between TO of FIAT(US) and WE of FIAT(Br), probably June 1945. For a comparative breakdown of US and British FIAT staffing, please refer to Appendix XIII.

[161] TNA FO 1049/139, Control Commission for Germany, Proposed New Establishment of Field Information Agency Technical (British Component), JIC (CCG) 45/2 (Final) 23 August 1945.

percent strength by early July.[162] Supporting Maunsell's optimistic statement, CIOS

chairman Linstead pointed out that it was clear from Eisenhower's signal to the staff at

SHAEF 'that FIAT was designed to strengthen rather than in any way disturb the existing

CIOS machinery for obtaining intelligence'.[163] Maunsell noted there were still CIOS

targets that had not yet been investigated, pointing out that FIAT would have a large

number of technical experts in the field within months, who would be competent to assess

targets in their area in support of CIOS.[164]

5.08   CIOS – Should the Anglo-US Partnership Continue?

Two months after the end of the European war, the Combined Command of SHAEF was to

be terminated and Germany split into four occupation zones. CIOS as a subordinate part of

SHAEF would also be terminated. The administrative role of SHAEF would be replaced

by the Control Commission for Germany, with separate national 'elements' governing each

zone. By July 1945, CIOS had completed many of the military target investigations but

still had numerous targets to visit with multiple British and US investigation teams in the

field. Many of the investigator's reports had to be completed and returned to CIOS to edit

and publish. The CIOS Secretariat estimated that the delay between the return of an

investigation team and issue of a draft report was estimated to be as much as two months.

In March 1945, Linstead proposed that a summary of the investigation findings, including

principle discoveries, should be issued to CIOS within days of returning to the UK, or

forwarded by post should the investigation team remain in the field to investigate other

---

[162] Brigadier Raymond John Maunsell (1903-1976), British army intelligence officer, head of Security Intelligence Middle East (SIME), based in Cairo in 1939, for which he was awarded a CBE in 1944. As a G2 staff officer in SHAEF, he represented Combined Command at many CIOS meetings throughout 1945. In May 1945, he also took command of FIAT after its creation on 31 May. Attending CIOS and later BIOS meetings, he represented SHAEF until its dissolution in July, then continued to represent FIAT(Br).

[163] TNA FO 935/23, Minutes of twentieth CIOS Meeting held on 6 June 1945, p. 5, Point 7 b, FIAT.

[164] TNA FO 935/23, Minutes of twentieth CIOS Meeting held on 6 June 1945, p. 5, Point 7 c, CAFT.

targets.[165] There was still an urgent need to discover what technology the Germans had

passed to the forces of Imperial Japan - technology that the Allies might encounter as the

conflict continued in the Pacific. Equally, the Allies hoped to acquire German technology

that might better arm their armies fighting against the Japanese. With the expectation that

the war in the Pacific would persist long after the end of the European war, it was clear that

a similar Anglo-US committee to CIOS would be required to oversee the continuing

investigations in Germany. In preparation, the CIOS membership was extended to include

representatives of the British BOT and the US TIIC.[166] Membership was later extended to

include full representation from the British and US Control Commissions, upgrading their

presence from that of observers. Reviewing the performance of the Anglo-US CIOS in

June, Patrick Linstead observed that '… the success of its operations could only have been

achieved by the active cooperation of all concerned'.[167] The Combined Intelligence

Committee added their appreciation of what CIOS achieved:

> The CIC wishes to commend all who have been associated with the work of CIOS
> for their outstanding accomplishments in procuring intelligence of great value to
> their Governments. CIC believes that the initiative and co-operation evidenced
> should serve as a fine example of international collaboration for future activities of
> this nature.[168]

In light of such positive reviews, and with the Anglo-US governments preparing to exploit

Germany for economic intelligence, why did Britain and the US not continue with this

proven combined committee formula?

---

[165] TNA FO 935/23, Minutes of fifteenth CIOS Meeting held on 28 March 1945, p. 6, Point 2, Brigadier
Spedding representing the CCG(BE) questioning the delay in investigator's reports being circulated to
government departments.

[166] TNA FO 1031/51, CIOS 68, Increase in Membership of CIOS, 30 May 1945.

[167] TNA FO , CIOS Progress Report for 1945, 4 June 1945, p. 3.

[168] TNA FO 935/24, Termination of the Activities of CIOS, 31 July 1945. This praise for CIOS activities first
appeared in correspondence issued to the commanders of the US and British zones of occupation on 17 July
1945, reference TNA CAB 81/130, Reference 3908, 17 July 1945.

The question of how to continue the work of CIOS after the termination of SHAEF was raised by the JIC in February 1945.[169] In February, it was anticipated that the military Black List investigations would be concluded, but investigation of long-term Grey List targets would only have started. The JIC report concluded that the responsibility for target investigation would probably devolve to the British and US elements of the CCG although the JIC foresaw problems. The report avoided directly naming the third member of the CCG – the Soviets - yet implied that the JIC foresaw problems with creating a tripartite intelligence gathering body.[170] Seeking expert council, JIC chairman Cavendish-Bentinck sought advice from the Permanent Under-Secretaries at the Foreign Office, Sir Alexander Cadogan[171] and Sir William Strang.[172] Both men had recently returned from the ARGONAUT Conference in Yalta and were believed to have the most experience of dealings with the Soviets. Both men recommended consulting Ivone Kirkpatrick in his capacity as the head of the team setting up the British element of the CCG.[173] Bentinck wrote to Kirkpatrick on 1 March, requesting his input on two points.[174] Firstly, assuming the investigations commissioned by the CIOS would not be complete before the

---

[169] TNA CAB 81/127, War Cabinet, Joint Intelligence Committee, Report by the JIC regarding the future of CIOS, incorporating a review of CIOS performance by Patrick Linstead, JIC (45) 65, 22 February 1945.

[170] TNA FO 1032/475, Joint Intelligence Committee, JIC (45) 65, report regarding the Combined Intelligence Objectives Sub-Committee, 22 February 1945, report circulated to the Chiefs of Staff and copied to Sir Alexander Cadogan of the Foreign Office by Victor Cavendish-Bentinck for discussion 23 February 1945.

[171] Sir Alexander Cadogan (1884-1968), British Secretary of State for Foreign Affairs from 1938 to 1946. In early 1945, Cadogan attended the Yalta Conference where he argued against the Soviet delegation over Polish Governance, borders and the independence of post war elections. His negotiating experience with the Soviet authorities was extensive.

For further reading, please refer to Diana Preston, *Eight Days at Yalta: How Churchill, Roosevelt & Stalin Shaped the Post-War World* (London: Picador, 2019).

[172] Sir William Strang (1893-1978), political advisor to the British Government, attending the major conferences of the Allied leaders throughout the war. He was the British Ambassador to the European Advisory Commission until the body was dissolved at the Potsdam Conference in 1945, after which he became political advisor to Field-Marshal Bernard Montgomery.

[173] Kirkpatrick had been appointed to set up the British Element of the Control Commission for Germany in September 1944.

[174] TNA FO 1032/475, Foreign Office, Cavendish Bentinck to Kirkpatrick, 1 March 1945, including a report reviewing the activities of CIOS written my Professor Linstead.

disintegration of SHAEF, how could their work be completed. Secondly, how would

Kirkpatrick envisage the future investigations of the CIOS Grey List Panel be carried out.

Kirkpatrick was issued with a response to Bentinck's letter on 13 April after a reply

was drafted by the Control Commission and approved by the Economic Division of the

CCG.[175] Kirkpatrick referred to draft proposals by the US Group Control Council, who like

the JIC, acknowledged that there would be much of the Black and Grey list intelligence

assessment work still outstanding after SHAEF has been terminated. The US proposal was

for a quadripartite intelligence co-ordinating body, possessing the administrative and

advisory functions like those then being exercised by CIOS. This statement acknowledged

the evolution of the tripartite CCG, to a quadripartite version with the inclusion of a fourth

member - France. What was not clear was whether the US envisaged the examination of

targets to be on an integrated basis. Kirkpatrick's statement conceded that the Anglo-US

CIOS had functioned well yet predicted that 'there is no reason to hope that the Russians

would permit other than restricted investigation of targets in their zone'. Consequently,

Kirkpatrick anticipated that an integrated organisation would not function. He continued

that 'the French attitude is not known, but they are unlikely to have many technical

objectives in their own prospective zone'.[176] He submitted that input from quadripartite

committees should be reduced to a minimum and only used when there was no other

solution.

Kirkpatrick offered an alternative proposal whereby each controlling power should

handle their own intelligence objectives in their own zone, while affording facilities for

---

[175] TNA FO 1032/475, Future of CIOS, CCG (BE), 13 April 1945, Major H. L. Tuckey issue to Kirkpatrick of a draft proposal responding to Bentinck's letter dated 1 March 1945.

[176] TNA FO 1032/475, Control Commission for Germany, Ivan Kirkpatrick reply to Cavendish-Bentinck HQ/2020 (DC(C)), 18 April 1945.

representatives to visit from other zones. This concept was adopted, exemplified by the creation of FIAT with separate mutually supporting UK and US elements. Kirkpatrick suggested that a 'Central Intelligence Objectives Bureau' should be established in Berlin, through which the investigator's reports could be shared along with lists of targets in each zone. In conclusion, he advocated that individual powers would manage their own affairs, subject to an implicit obligation to share the results of investigations, believing this would be acceptable to the Soviets. Offering the services of the CCG to assist with researching intelligence targets, Kirkpatrick noted that purely naval, army and air force intelligence targets would still be handled by the individual services.[177] Commenting on Kirkpatrick's proposals, Cavendish-Bentinck's generally agreed with the avoidance of quadripartite integration, although he hoped that in practice the Anglo-US 'arrangements will continue', with synchronised working parties and continued operation of the Black and Grey lists. In a comment seemingly lifted from a Hollywood gangster film, Bentinck suggested discreet interpretation of Kirkpatrick's proposals – devolved intelligence teams representing each zone - 'will be the only way of preventing the Russians getting all our dope, whilst not giving us any'.[178]

Kirkpatrick's letter was forwarded to Patrick Linstead who replied to Cavendish-Bentinck on 4 May 1945. Linstead noted that the often civilian investigators were commissioned by CIOS on the understanding that the reports they generated would be shared between the UK and US governments. It should not however, be assumed that these same investigators would be happy sharing details with the French and Soviet Governments. He recognised that Anglo-US collaboration with intelligence target investigation and the sharing of the resulting information had worked well, but it should

---

[177] TNA FO 1032/475, Control Commission for Germany, Ivan Kirkpatrick reply to Cavendish-Bentinck HQ/2020 (DC(C)), 18 April 1945.

[178] TNA FO 1032/475, Cavendish-Bentinck letter to Patrick Linstead, M/G/46, Enclosure 'A', 21 April 1945.

not be assumed that this would also work with other countries. He conceded that it might

be appropriate to disseminate details of target access and information with other countries,

but that the skill in interpreting the target by the British investigators should not necessarily

be shared. Intelligence target security should apply, but with no blanket agreement to share

all intelligence findings. Linstead made clear that his comments were his own opinion, and

not those of the CIOS Committee, affirming that quadripartite investigations should not be

carried out. He added a footnote regarding collaboration with the French, advising that

CIOS had agreed to share target information but would not integrate investigation teams or

release of reports without instructions from a higher authority.[179]

Linstead's footnote regarding the French was based on discussions he had had,

regarding CIOS collaboration with the French Government during the previous few weeks.

The subject was raised in America with a communication from the French Military

Mission to the Combined Chiefs of Staff in early April, requesting close cooperation

between CIOS and its French counterpart – the Committee of Scientific Coordination of

National Defence (CSCND). This French committee was offering information regarding

German objectives - gleaned from French prisoners and forced workers, as well as offering

their own technical assistance where appropriate. The French further proposed cooperation

with CIOS based on a complete exchange of information. The French wished to coordinate

intelligence research, integrate French and Anglo-US field teams and employ French

troops to seize and guard important targets.[180] The CIOS response was swift, pointing out

that a mingling of French and Anglo-US investigators in the field could reveal US or UK

technical developments that at that point, were not known to the French. If technical

---

[179] TNA FO 1032/475, Letter from Patrick Linstead to Victor Cavendish-Bentinck, 4 May 1945, ref F.262/X, pp. 1-3.

[180] TNA FO 935/23, French Participation in CIOS. CIOS reaction to French request for involvement in investigations, 9 April 1945.

reports were to be shared, it should be as a conscious act of government policy and not as a casual act of tripartite investigations. CIOS had been developed to satisfy the requirements of sixteen UK and sixteen US agencies, and the functioning of the committee could be disturbed with the introduction of a new French factor. CIOS concluded investigation teams should not be merged but operate independently, while distribution of reports should be a decision of the US and UK governments and outside CIOS purview.[181]

Kenneth Strong notes in his memoirs that Eisenhower was keen that the combined command should not be broken up and had suggested to the British Government as late as July 1945 that US and British intelligence should continue under Strong's leadership. Though Strong was not aware of this proposal at the time, he suggests in his memoirs that the British had grown tired of being the subordinate partner to the US and were keen to break ties with their more powerful ally.[182] This British attitude may also have influenced the final decision to disband CIOS after SHAEF was terminated. The result of nearly four months of discussions between the foreign office, JIC, CCG (BE) and CIOS concluded that it would not be politically appropriate to create a new Anglo-US intelligence gathering committee, without expanding membership of such a body to include Soviet and French representation. All believed this solution was impractical, instead proposing that CIOS would be replaced with four separate national Intelligence Objectives committees. It was however agreed that all final reports produced by CIOS or its successor committees would be shared between the UK and America, with no mention of excluding the French or Soviets.

---

[181] TNA FO 935/23, French Participation in CIOS, CIOS reaction to French request for involvement in investigations, 19 April 1945.

[182] Strong, *Intelligence at the Top*, pp. 217-218.

5.09   Concluding SHAEF - Terminating Anglo-US Combined Command

The minutes of CIOS meetings held in late June and July 1945, the period running up to the termination of SHAEF, suggest an atmosphere of misinformation and vagueness. At the twenty-first CIOS meeting held on 20 June 1945, Maunsell stated that the termination of SHAEF would take place on 30 June and announced that this was the last CIOS committee meeting he would attend representing the combined command. Two days later, an MI 17 Cipher message issued by the War Office on behalf of the Chief of Staff to Field-Marshal Montgomery, affirmed that CIOS would be dissolved upon the termination of SHAEF, with an interim system for exploiting targeted intelligence targets required. The message confirmed that the British element of the CIOS organisation would continue as the British Intelligence Objectives Sub-Committee or BIOS, under the chairmanship of Professor Linstead.[183] Speaking on 20 June, the US Lieutenant-Colonel Dean of CIOS secretariat, advised that the JIC(Washington) would disband and that there were no plans to form a US equivalent to BIOS. British members of CIOS commented that the US had ceased to show much interest in the committee or its successor body, noting that the attendees at the last CIOS meeting were nearly all British. Regarding the results of field investigations, the unnamed writer continues 'presumably they consider they can get all they want through the pirate agencies'.[184] To the cynical observer, the implication is that the US could enjoy the benefits of all future reports issued by CIOS or its successor, without the need for US investigation teams remaining in Europe.

SHAEF was not terminated on the last day of June as Maunsell had predicted, so at the twenty-second meeting of CIOS held on 4 July, he duly apologised for misleading the

---

[183] TNA FO 1031/51, MI 17 Cipher Message from War office to EXFOR Main, J S M Washington, 22 June 1945.

[184] TNA FO 935/24, Letter from P. D. Paterson to Mr Noton and Mr Lawrence, 19 July 1944.

committee.[185] Professor Linstead reiterated that CIOS would still be dissolved with the termination of SHAEF, expected to take place between 5 and 15 July while US Lieutenant-Colonel Dean of the Secretariat acknowledged that CIOS had much work outstanding. Although two thirds of the Black List targets had been investigated, the bulk if the Grey List economic and industrial targets remained to be inspected. Advice was sought from Betts, who advocated that the US CIOS members should lobby JIC(Washington) to sanction a US agency to continue the work. The British members should approach the JIC who, it was believed, were already contemplating a replacement body to manage CIOS tasks. It was stated that FIAT would continue with separate US and British elements, however Brigadier Maunsell, now representing FIAT in addition to SHAEF, made clear that FIAT was not equipped to carry out any CIOS functions, nor was it set up to do so. He stated that with FIAT having only existed for six weeks, the agency was short of staff, with their central records library still undergoing implementation. It was agreed that pending the announcing of a termination date, all CIOS functions should continue as normal, with the twenty-third meeting scheduled for 18 July.[186] The agenda for this meeting was issued to all members on 12 July, noting that a definitive statement regarding the future of SHAEF and CIOS would delivered on this date.[187]

The imminent closure of SHAEF in July came at a time when CIOS investigation teams were urgently needed to assess intelligence sites in Germany. With the war still raging in the Far-East, it was essential to review what German technology had been shared with the Japanese. The urgent need to despatch investigation teams was emphasised by the news that research centres in Germany were being destroyed by the Allied disarmament

---

[185] TNA FO 935/24, Minutes of twenty-second CIOS meeting, 4 July 1945, p. 4, point 4, future of CIOS.

[186] TNA FO 935/24, Minutes of twenty-second CIOS meeting, 4 July 1945, p. 4, point 9, date of next meeting.

[187] TNA FO 935/24, Published Agenda for next meeting of CIOS called for 18 July 1945, point 3, Future of CIOS, expected verbal statement from the Officers, 12 July 1945.

authorities before they could be investigated. In the immediate post-defeat period, the US authorities were operating under a directive issued by the Joint Chiefs of Staff – JCS1067 that laid out immediate objectives of disarmament, demilitarisation, denazification and decentralisation of German administration.[188] The destruction of military manufacturing centres and research facilities was a direct consequence of this directive. Sir Roy Fedden of the Ministry of Aircraft Production (MAP), returned from inspecting numerous GAF research establishments in Germany during June, alarmed by the news that the high altitude laboratory at BMW Munich were scheduled to be destroyed in mid-July.[189] Fedden wrote to CAS Air-Marshal Portal, requesting his intervention and the assistance of Churchill. Although Munich was within the US zone, Churchill became involved, with the PM writing to the Governor of the British Zone, Field-Marshal Montgomery, requesting that no research establishments were to be destroyed before they had been inspected.[190] Montgomery contacted US authorities to prevent the BMW site being destroyed, while the CCG(BE) liaised with Twenty-First Army Group attempting to prevent further destruction in the British Zone.[191] Donald MacDougall, a member of Churchill's S Branch had argued that if factories and mines in Germany were not destroyed immediately, the anti-German 'fit of anger will soon pass' and facilities would be 'repaired to provide relief and reparations' at some point in the future. S Branch were the 'Prime Minister's Statistical Branch', created by Churchill and headed by Lord Cherwell. MacDonald had pushed for

---

[188] Nicholas Balabkins, *Germany Under Direct Controls: Economic Aspects of Industrial Disarmament 1945-48* (New York: Rutgers University Press, 1964), p. 14.

[189] NUF CSAC 80.4.81/H.286, Roy Fedden MAP to Air-Marshal Portal, RAF, 2 July 1945, document H.286/5. Sir Roy Fedden 1885-1973, chief designer of engines for the Bristol Engine Company, a subsidiary of the Bristol Aeroplane Company and responsible for engines like the Bristol Hercules that powered many of the RAF's fighters and bombers used during the Second World War.

[190] NUF CSAC 80.4.81/H.286, Churchill to Montgomery via Air Ministry Special Signals Office (AMSSO), Twenty-First Army Group, 14 July 1945, document H.286/5.

[191] TNA FO 1012/422, CCG (British Element), Brigadier Bader to Brigadier Spedding, Economics Division, PI/Econ/2241, 23 July 1945.

Churchill to decide whether German infrastructure, factories, mines, should be destroyed, left unprepared or repaired[192]

The fifteen day Fedden Mission was intended as a review of German engine development, research facilities and technological innovation.[193] The frenetic tour commenced in the British zone, east into the soon to be Soviet zone - days before the scheduled hand-over to Soviet forces, then south to SHAEF headquarters at Frankfurt AM. Fedden was in a unique position to observe the condition of multiple sites, many having been damaged and looted by liberating troops or freed workers. Other sites had been systematically cleared by US investigators who had been stationed in Germany for weeks, with artefacts, drawings and staff moved to the US. Fedden was touring sites during the month before the closure of CIOS, where he noted that the British inspectors were in the minority when compared to the numbers of US investigators 'of the order of 1-30'. He noted that in addition to CIOS inspectors, other US intelligence groups including ALSOS, TIIC, Air Technical Intelligence (ATI) were operating independently. Evaluation teams from the USSTAF and Wright Field in the US were collecting serviceable examples of the latest German aircraft for shipment to the US for flight testing and evaluation.[194] US manufacturers such as the Bell Aircraft Corporation had also been in Germany for six weeks collecting aircraft samples and technical information for return to their facilities in the US. Fedden observed that much information had gone directly to US firms or air force establishments, with little chance of information ever being pooled and made known to

---

[192] NUF CSAC 80.4.81/H.274, The Need for high Level Decisions on Principle on the Future of Germany, G D A MacDonald, Undated but content would suggest written in March or April 1945. Sir George MacDougall, 1912-2004, Scottish economist and a member of wartime Prime Minister's Statistical Branch under Lord Cherwell.

[193] Graham Simons, *Operation Lusty: The Race for Hitler's Secret Technology* (Barnsley: Pen & Sword Military, 2016), pp. 120-127.

[194] NUF CSAC 80.4.81/H.286, Sir Roy Fedden General Policy Note on Mission to Germany, 27 June 1945, document H.286/10. The USSTAF evolved out of the Eighth Air Force and existed between February 1944 and August 1945.

British authorities. He described the British as 'lamentably unenterprising in visiting factories', while acknowledging that information and samples being dealt with by CIOS, were being handled faithfully for the common good of both countries.

In the last two weeks of June alone, two hundred and forty-four investigators had been despatched by CIOS to targets in Europe with as many scheduled to leave in the same period in July. Judging by Fedden's observations, US authorities were stealing a march on the Anglo-US CIOS teams. Preparing for the end of CIOS, the Combined Chiefs of Staff instructed the commanders of the US and British zones to maintain access for investigation teams. Writing on 11 July, the Combined Chiefs of Staff were reasserted that both Britain and the US would need to investigate and exploit any intelligence relating to the war with Japan.[195] In an attempt to preserve research and production facilities, guards were being allocated ahead of the arrival of investigation teams however, with sites already graded and earmarked for destruction. Lord Cherwell argued that with limited resources in Germany, much effort was being wasted guarding such sites, while preventing other sites from being re-energised to contribute to Germany's economy.[196] The destruction of sites before inspection remained an issue for the British inheritors of CIOS in August 1945. BIOS member Mr Abraham, representing the Ministry of Aircraft Production, advocated a ban on the destruction of any target site prior to 31 December 1945 without specific approval from BIOS. After that date targets could be destroyed, unless specifically frozen by

---

[195] TNA CAB 81/130, Combined Chiefs of Staff, Future of Combined Intelligence Objectives Subcommittee Activities During Control Council Period, CCS 633/3, 11 July 1945, point 4.

[196] NUF CSAC 80.4.81/H.288, Memoranda by M.R. Jefferis, Future of War Development and Production Facilities in Germany, MRJ/AVH, 7 July 1945, document H.288/1. Major-General Sir Millis Jefferis, 1899-1963, MoS and head of unit developing unusual weapons and atomic research.

BIOS.[197] This date was later extended to 1 April 1946 to enable BIOS to access and exploit all establishments.[198]

Ivone Kirkpatrick chronicled the final days of SHAEF, the preceding weeks consumed with the rapid demobilisation of the Allied armies. He described the depressing atmosphere in the operations room each day, noting the speed at which 'these magnificent formations were melting away'. General Eisenhower, feeling the wrench more than anyone, held an informal gathering of his senior officers and advisers including Kirkpatrick. After an affecting little speech of thanks and a farewell, SHAEF was terminated at midnight. In Kirkpatrick's words, Eisenhower 'exchanged the hat of Supreme Commander for that of American Military Governor of Germany' the following day.[199] For CIOS, the twenty-third meeting was never held. The committee was terminated at the same moment as SHAEF - 23:59 hours on 13 July 1945. The following morning, Kenneth Strong and Tom Betts distributed signed certificates to their G2 staff in commemoration of working together in SHAEF.[200]

Anticipating the end of the combined command, Lieutenant-General Bedell Smith confirmed on 11 July that FIAT would split after the termination of SHAEF, although he accepted that the Anglo-US staff would continue working together until a later date when separate new premises had been organised. DUSTBIN would continue to be operated on a joint basis.[201] Four days later with SHAEF dissolved, FIAT was split into US and British

---

[197] TNA FO 1031/50, Minutes of third meeting of BIOS, p. 4, point 5 a, Other Business, 12 September 1945.

[198] TNA BT 211/541, British Intelligence Objectives Sub-Committee, Destruction of Targets, BIOS (45) 14, 21 September 1945.

[199] Kirkpatrick, *The Inner Circle,* p. 198.

[200] Strong, *Intelligence at the Top*, p. 217.

[201] TNA FO 1031/72, SHAEF, Division of Field Information Technical (FIAT) into British and US Components, Lieutenant-General Bedell Smith, Chief of Staff, GBI/FIAT/322-17, 11 July 1945.

sections along the lines prepared for at the Agency's conception in May, with Deputy

Military Governor Lieutenant-General Lucius Clay issuing a statement to that effect on 14

July.[202] Clay reasserted the function and authority of the new FIAT(US), though

unchanged from the former combined version. The separate British and US elements

operated as separate bodies, while offering each other reciprocal support.[203] This enabled

investigation personnel from FIAT(US) to operate in locations within the British zone and

vice-versa. By close liaison, it was hoped that joint Anglo-US teams could operate in either

zone whenever possible.[204] National staffing levels were similar, with FIAT(Br) totalling

three hundred and forty-two military staff while FIAT(US) totalled three hundred and

twenty-five staff.[205]

In June, FIAT took over the operation of DUSTBIN, along with administrating the

Enemy Personnel Exploitation Section (EPES). Separating EPES into British and US

components had been considered, with an instruction to that effect issued by FIAT(US). In

August however, it was realised that only two US officers had worked in the EPES making

a split impractical. It was further realised by FIAT(US), that all EPES files and indices -

essential to the function of EPES and DUSTBIN, were British property. Were a second

DUSTBIN and EPES(US) to be created, the two administrations would have to coordinate

the smallest actions with each other – a prospect that Captain Staempfli of EPES noted

would result in 'spectacular and unprecedented confusion'.[206] EPES and DUSTBIN

---

[202] TNA FO 1031/72, Headquarters US Group Control Council, INT/FIAT/321.01-1, Lieutenant-General Lucius D Clay, Deputy Military Governor, 14 July 1945.

[203] TNA FO 1049/139, Control Commission for Germany (British Element) JIC, JIC (CCG) 45/2 (Final), p. 2, point 4, Present Organisation of FIAT, 25 August 1945.

[204] TNA FO 1049/139, , Control Commission for Germany (British Element) JIC, JIC (CCG) 45/2 (Final), 25 August 1945, Annex A, Establishment of Field Information Agency, Technical (FIAT), British component, p. 2, Point 7, Relationship with Field Information Agency, Technical (US), 26 June 1945.

[205] TNA FO 1049/139, Control Commission for Germany (British Element) JIC, JIC (CCG) 45/2 (Final), p. 2, point 6, Present Organisation of FIAT, 25 August 1945.

[206] TNA FO 1031/72, Disintegration of EPES into US and British Halves in FIAT E 316-76, Captain George W Staempfli, EPES & FIAT, 10 August 1946.

remained under British Administration up to late 1946, although Hall suggests that US authorities began to assert their authority over the EPES before the end of the year, restricting British access to detainees until left with 'virtually no control in any matters appertaining to this detention camp'.[207] Analysing TNA file FO 1031/70 containing DUSTBIN detainee lists prepared by the British during 1946, all paperwork was issued by EPES (BR), through the British Army of the Rhine (BOAR) up to the end of the year, although there are a few US documents appearing by December.[208] This may confirm Hall's suggestion that US authorities were increasing their involvement in DUSTBIN in late 1946. A directive was issued by Lieutenant-Colonel Wilson of EPES and FIAT(Br) in September 1946 that stated that from 1 January 1947, all requirements for exploitation of enemy personnel should be routed through the BIOS secretariat and thence to T Force HQ.[209] By February 1947, FIAT(Br) comprised fifteen officers and two hundred and forty-eight enlisted men. At the same time, US authorities were pushing for a reduction of British operatives in the US zone, yet FIAT(US) were 'quite willing to retain the EPES section of FIAT', with US forces administering the British officers and ordinary ranks staffing DUSTBIN. This small British contingent comprised seven officers and ten ordinary ranks stationed at Frankfurt, with a further three liaison officers and seven clerks at Karlsruhe.[210]

From small beginnings in early 1944 collating details of research centres in German-held territory, the British targeted intelligence remit was expanded first to

---

[207] Hall, British Exploitation of German Science and Technology, 1943-1949, p. 149, also TNA FO 1031/69, Lieutenant-Colonel P M Wilson writing to Brigadier Maunsell, 9 November 1946.

[208] TNA FO 1031/70, Informal Route Slip, Correspondence from Frank Else, Headquarters, 28 October 1946.

[209] TNA FO 1031/68, Coordination of Intelligence Regarding German Scientific and Technical Personnel, Point 5h, Recommendations, 13 September 1946 detailing procedure after 1 January 1947.

[210] TNA FO 943/292, Future of FIAT to Mr Robinson, Economic Department, Control Office for Germany and Austria (COGA), Brigadier Grylls, 6 February 1947. Brigadier Grylls was an officer in T Force, regularly representing the formation at BIOS committee meetings throughout 1946. He was the grandfather of British adventurer and ex-member of the SAS, Bear Grylls.

consider all military targets in Western Europe – the Black List - then later to compile a Grey List of German industrial and commercial concerns. The minutes of all the IPC, CIPC and CIOS meetings are preserved in TNA. A review of these documents charting fortnightly committee meetings suggests there was a smooth transition as US military and government representatives joined the collation teams in June 1944, with the chairmanship shared between Linstead and Betts from August with the creation of CIOS. The original research model with its multiple target subject groups, established by Noton and the IPC in April 1944, remained unchanged by the US for the remainder of the War. Only the merging of the Black and Grey lists in May 1945 saw any revision to the target group structure. CIOS also proved their adaptability in the field with the creation of CAFT teams who ensured site investigation of targets behind the front were carried out as efficiently as possible. Now with the War in Europe and the combined command SHAEF at an end, targeted intelligence collation and site investigation would continue without close US involvement.

Chapter VI

Spreading the Word:

Truman, Printed Reports and the Dissemination of Captured Know-How,

1945 to 1947

> What can be done consistent with military security, and with the prior approval of the
> military authorities, to make known to the world as soon as possible the
> contributions which have been made during our war effort to scientific knowledge?
> The diffusion of such knowledge should help us stimulate new enterprise, provide
> jobs for our returning servicemen and other workers, and make possible great
> strides for the improvement of the national well-being.

President Franklin D Roosevelt in a letter to Dr Vannevar Bush, 20 November 1944.[1]

Up to early July 1945, Anglo-US CIOS inspection teams had investigated

multiple intelligence targets in Europe, with their findings compiled in reports that would

be returned to the commissioning government departments. The reports were detailed and

candid with their contents, unrestricted, as they were only intended for government

consumption. The responsibility of deciding who would have access to these reports lay

with the commissioning service chiefs or ministers and not with CIOS. The widening of

the CIOS remit in 1945 to include industrial and commercial intelligence, necessitated

involving trade associations to act as advisors to the government departments and

commission investigations. Once these targets had been visited, the resulting reports would

be shared with the trade associations but were still not intended for general public

circulation. In June 1945, President Truman issued an executive order decreeing that

scientific and industrial information obtained from vanquished Germany, would be shared

with the rest of the world thus ensuring no single power would have a monopoly on know-

how. Truman confidently assured US industry that all other countries investigating German

technology would also share their findings with the US.

---

[1] NUF CSAC 80.4.81/H.243, President Franklin D. Roosevelt writing to Dr Vannevar Bush, 20 November
1944, document H.243/2.

By August 1945, the original Anglo-US CIOS had bifurcated along national lines, superseded by BIOS in London and JIOA in Washington. Many of the tasks formerly carried out by CIOS were now undertaken by BIOS. Working parties defined targets, despatching investigators to Germany and disseminated the resulting know-how. The reports were pragmatically prepared, eliminating any unnecessary information that might inadvertently elevate the final security rating. The BOT, now the masters of BIOS, were keen to ensure that know-how discovered in Germany was available for 'prompt, public, free and general dissemination', yet not at the expense of revealing trade secrets of British firms. US authorities did not agree, wanting all intelligence made public, with the ensuing issues analysed in this chapter. Dissemination was achieved by publishing reports for purchase or making them available to review in selected libraries. It will be argued that while the trade associations directly involved with investigations benefitted greatly from commercial intelligence recovered from Germany, dissemination to the wider British industry was hampered by an inadequate distribution infrastructure. This was caused by poor index planning that resulted in impenetrable and confusing listings of final reports. Equally, many libraries, who were keen to assist the BOT in sharing the captured German know-how, struggled to find ways of clearly presenting the reports in their reference sections. Examples of indexing issues will be analysed along with solutions suggested by report users. Attempts to improve the accessibility of German know-how will be analysed along with the legacy of the dissemination project.

This chapter will focus on the period from July 1945 to the end of 1947, when investigation of German industry and the removal of plant, equipment, samples and technical data was to be wound up. During this period, the character of the investigations evolved from relatively small bands of military investigators evaluating CIOS targets, to much larger investigation teams from multiple countries intent on revealing Germany's

commercial secrets. The departure from targets of urgent military value to the questionable exploitation of Germany's trade secrets by unethical groups of individuals acting under the auspices of BIOS will be analysed, leading to British government pressure to terminate the exploitation and leave Germany to rebuild her economy and establish trading relationships with the rest of the world.

6.01   An Evolving Future – From War to Peace

July 1945 was a month of great change in Europe and the UK. At midnight on Friday 13 July in Frankfurt AM, the Anglo-US SHAEF was disbanded along with all subordinate bodies and committees – including CIOS. General Eisenhower relinquished his position of Supreme Commander Allied Expeditionary Forces, taking the position of Governor of the US occupation zone. Germany had passed from being a single country to one divided into four occupation zones, the largest by population in the north-west under British control.[2] Field Marshal Montgomery had been appointed Governor of this zone by Churchill weeks earlier on 8 May and now assumed his command. By the end of the year, twenty-nine thousand officials were based in Germany under Monty's leadership.[3] In the UK, a general election had been held the week before on Thursday 5 July, though counting was delayed allowing the votes cast by the many overseas servicemen to be included. The result was announced on 26 July with Clement Atlee - Churchill's wartime Deputy Prime Minister - returned as new PM and head of a majority Labour government.

The UK, US and USSR were due to attend the Berlin TERMINAL Conference to be held in Potsdam from Wednesday 17 July. In preparation, Atlee commissioned a 'stock-

---

[2] UK zone 22,304,509, US zone 17,254,945, USSR zone 17,313,734, France 5,077,806, Berlin 3,199,938. <https://www.ccgermany.org.uk/introduction> [Accessed 07-07-2024].

[3] Andrew Adonis, *Ernest Bevin: Labour's Churchill* (London: Biteback Publishing, 2020), p. 246. Field-Marshal Bernard Montgomery, having commanded Twenty-First Army Group until the end of the war, became the Governor of the British Zone after the end of hostilities in May 1945.

take' of the general political situation after the end of the European War. Sir Orme Sargent, Deputy Under-Secretary to the Foreign Office issued the response on 11 July. He drew attention to Britain now being the smallest and weakest of the Great Powers, with the Soviets occupying much of eastern Europe to effectively create a bulwark against the expansion of western liberal states. As Sir Edmund Hall Patch pointed out on 3 August 1945, Britain was now the world's greatest debtor nation, stating that it needed to reduce the national debt by generating income through exports.[4] Fearing a general economic collapse at home and on the Continent, Sargent stated the need for urgent economic rehabilitation.[5] He asserted that a restored British export economy, a prosperous Europe that imported British goods and US material resources would be an effective counter throughout Europe, to Communist propaganda.[6].

The expansion of peacetime industry was also essential to offer employment to demobilised personnel. The British Government was concerned at the prospect of over four million men and women in the services or war related trades returning to civilian occupations and finding mass unemployment. The release of service personnel and war-workers commenced on 18 June 1945, with one third demobilised by Christmas.[7] In the hope of stimulating economic growth, Hugh Dalton, ex-President of the BOT and now Labour Chancellor, released thirty-five of the wartime munitions factories to be repurposed for civilian use.[8] While the EIPS called for reparations from Germany, the BOT were not

---

[4] *Britain and the making of the Post-War World: the Potsdam Conference and beyond (Documents from the British Archives)* ed. Gill Bennett & Richard Smith, (London: Foreign & Commonwealth Office, 2020), p. 70. Referring to TNA FO 371/45706, UE 3595/1094/53.

[5] *Britain and the making of the Post-War World,* ed. Bennett & Smith, p. 26. Referring to TNA FO 371/50912/5471/70.

[6] *Britain and the making of the Post-War World,* ed. Bennett & Smith, pp. 32-34. Referring to TNA FO 371/50912/5471/70. Sir Harold Orme Garton Sargent, 1884-1962. Sargent succeeded Cadogan in 1946 becoming head of the Foreign Office until his retirement in 1949.

[7] Juliet Gardiner, *Wartime: Britain 1939-1945* (London: Headline, 2004), p. 586.

[8] Ben Pimlott, *Hugh Dalton* (London: Macmillan, 1985), p. 404. Hugh Dalton (1887-1962), Wartime President of the Board of Trade, then Chancellor of the Exchequer in the post-war Labour government.

interested in the prospect. The EIPS argued that even modest reparations of German rolled steel could free up Britain's manufacturers, allowing them to concentrate on exports. EIPS economist Peter Vinter suggested an alternative reparation might be to remove the steel rolling mills from Germany, or better still, manufacture new steel mills in the UK once 'we have secured the necessary know-how' from Germany.[9] Exploiting the tacit knowledge of Germany's secret industrial techniques and encouraging British Industry to adopt these new or improved working practices could be more valuable to the country than financial reparations, physical materials or equipment. Hugh Dalton would later refer to this exploitation as 'invisible reparations'.[10] US policy maker Dean Acheson referred to this exploitation as 'a unique type of reparation'.[11]

Whether to allow public access to the know-how contained in CIOS reports was debated by the British JIC on 7 November 1944, with a memorandum promulgating their conclusions issued the following January. The British JIC stated that Anglo-US commissioning ministries would be permitted to release information to select industries in Britain and the US, subject to appropriate security clearance.[12] The reports produced by Anglo-US CIOS investigators would no longer be reserved exclusively for use of government or service departments but could be circulated to restricted industries. To ensure the release of this information was not delayed, the JIC informed their US counterpart of the policy change. The JIC were aware that the dissemination of captured intelligence could raise questions of policy in the US that would lead to the need to ensure

---

[9] NUF CSAC 80.4.81/H.273, Reparations from Germany, a plea for reparations from Germany by economist Peter Vinter of the EIPS to the Paymaster General, Lord Cherwell, 24 November 1944. Document H 273/28.

[10] TNA FO 943/292, Notes prepared for the Chancellor for debate in the house on 5 February 1947, draft speech dated 3 February 1947.

[11] John Gimbel, *The Origins of the Marshall Plan* (Stanford: Stanford University Press, 1976), p. 146.

[12] TNA FO 935/11, Release to Civil Industry of Information Obtained Through CIOS, JIC/88/45, 21 January 1945, JIC Secretary, Lieutenant-Colonel King-Slater.

'correlation of policy' between the Anglo-US governments. By January 1945, no objections had been raised by the US.

Reports prepared by CIOS investigators would be reviewed by the commissioning ministries, who would allocate a security rating in accordance with Chiefs of Staff guidelines.[13] The Chiefs of Staff Committee had defined the four classifications of secret British Services and ministerial documents on 22 June 1942, followed by review by numerous government departments including the Treasury, the Dominions Office, MoS and MAP. The ratings were accepted and promulgated by the JIC on 4 August 1942.[14] For CIOS reports destined for ministerial use, the default security rating would be CONFIDENTIAL, though this would be reduced to RESTRICTED if they were to be shared with industry advisors. In the interests of national security, a minority were rated SECRET.

President Truman issued Executive Order 9568 on 8 June 1945, enabling the release of 'certain scientific and technical data' that such 'information may be of maximum benefit to the public'.[15] The US Director of War Mobilisation and Reconversion , Fred Vinson, was given authority to review for public disclosure, all classified scientific and technical information to 'effectuate the release for publication of scientific information'. Currently the JIC(Washington) was responsible for the dissemination of reports in the US.[16] Vinson would operate through the US Department of State to deal with any foreign governments where the exchange of classified information had taken place, to ensure they

---

[13] For definitions of the four document security classifications, please refer to Appendix X.

[14] TNA CAB 81/109, Classification of Secret Documents, JIC (42) 295 (Final), 4 August 1942.

[15] President Truman Executive Order 9568, 8 June 1945. <https://www.presidency.ucsb.edu/documents/executive-order-9568-providing-for-the-release-scientific-information> [accessed 12 December 2023].

[16] TNA FO 935/23, Nineteenth CIOS Meeting, 23 May 1945, Point 5, Instructions for Preparation of Team Reports for CIOS Reproduction, p. 7.

followed a similar policy and declassify and release the same information in their

countries. In other words, the British Government were compelled to follow the lead of the

US and declassify and release existing CIOS reports.[17]

After further consultation with Vinson, Truman issued a second Executive Order,

number 9604 on 25 August 1945, extending the terms of the original order issued in June.[18]

A clearer definition of the original text 'enemy scientific and industrial information' was

expanded to:

> comprise all information concerning scientific, industrial and technological
> processes, inventions, methods, devices, improvements and advances heretofore or
> hereafter obtained by any department or agency of this Government in enemy
> countries regardless of its origin, or in liberated areas, if such information is of
> enemy origin or has been acquired or appropriated by the enemy.[19]

CIOS were now placed under pressure to downgrade or remove security ratings from

reports, leaving only a handful RESTRICTED.[20] The Combined Intelligence Committee in

Washington wrote to CIOS requesting that 'all CIOS printed matter henceforth be

classified with the lowest security grading consistent with the nature of the document and

with general security regulations'.[21] CIOS reduced the classification of some SECRET

reports to RESTRICTED or CONFIDENTIAL, with only a few remaining unaltered. The

JIC(Washington) requested that classification of reports be relaxed even further, with the

matter debated at the twenty-second CIOS meeting. General Betts believed all reports

---

[17] TNA FO 935/23, twenty-first CIOS Meeting, 20 June 1945, Point 2, Secretary's Report Number 18, p. 2. As of 20 June 1945, this amounted to one hundred and ten completed reports, fifty-five at the printing facility and another twenty ready to be printed.

[18] Gimbel, *Science, Technology, and Reparations*, p. 27.

[19] President Truman Executive Order 9604, 25 August 1945. <https://www.presidency.ucsb.edu/documents/executive-order-9604-providing-for-the-release-scientific-information-extension-and> [accessed 12 December 2023].

[20] TNA FO 1031/51, Reclassification of CIOS minutes, papers and Reports, CIOS 70 (Revised), CIOS Secretariat - Dean & Harris, 7 June 1945.

[21] TNA FO 1031/51, Reclassification of CIOS minutes, papers and Reports, CIOS 70 (2nd Edition), point 1, CIOS Secretariat - Dean & Harris, 3 July 1945.

should be classified as a minimum RESTRICTED which would have entailed 'for official use only', passing the responsibility for dissemination back to the commissioning ministry.[22]

6.02   BIOS and JIOA – Formation and Function

The British members of CIOS has been advised that the duties of the committee would be transferred to a new 'British Intelligence Objectives Sub-Committee' (BIOS), but no information was provided regarding US membership, or the status of investigators currently stationed in Europe. On 30 July, the JIC issued their approval establishing BIOS, with copies issued to the Cabinet and the Minister of Defence.[23] Clarification regarding investigators was provided by the CIOS secretariat on the same day, confirmed that CIOS investigation teams operating in Europe would remain to complete their tasks, with subsequent reports published under the CIOS title. The CIOS secretariat would remain active in the hope that most duties would be completed by September, though final closure would be deferred until 30 November.[24] After the closure of the CIOS secretariat in November, outstanding CIOS reports were managed by the BIOS secretariat who continued to process submitted documents, organise security rating and print CIOS reports well into 1946.[25]

---

[22] TNA FO 935/24, twenty-second CIOS Meeting, 4 July 1945, Point 8 B, Classification of Documents, p. 8.

[23] TNA CAB 81/130, JIC issue of the British Intelligence Objectives Sub-Committee Directive, JIC (45) 236, 30 July 1945.

[24] FO 1031/51, Secretariat, 2 January 1945, the CIOS Secretariat consisted of a mere seven staff, Major Edgar P. Dean, US Secretary, Squadron Leader S. M. Harris, British Secretary, who would both attend meetings to take and publish the minutes. Captain K. J. Hawkinson and Miss B. I. Brigden were responsible for the movement of Field Teams, Mrs C. M. Warburton and Captain R. C. Lennox who compiled Field Reports and finally J/Cmdr. Mc Recnil-Ferguson who was responsible for revisions made to the Black List.

[25] TNA FO 1031/50, Minutes of seventh BIOS Meeting, 7 November 1945, p. 2, point 2, Secretariat Report No. 7.

The US contingent of CIOS were replaced by a new permanent US based organisation titled the Joint Intelligence Objectives Agency (JIOA) who were to be subservient to the JIC(Washington).[26] JIOA comprised a full time military director, a civilian deputy and an advisory board representing JIC(Washington) of the US JCS and the following US Government departments: Departments of the Treasury, Justice and Commerce, Office of War Mobilization and Reconversion, War Production Board and Office of Scientific Research and Development (OSRD). The Secretariat would be shared with JIC(Washington). JIOA was created in the US within days of the termination of CIOS in London, with members accepting target suggestions from the US Government, proposing and prioritising intelligence targets in Germany and Austria and sourcing expert investigators.

The Washington based TIIC, established on 14 October 1944 to process commercial intelligence targets, and the US Intelligence Archives Section (IAS) were also absorbed into JIOA at inception. The new agency was permanently located in Washington, where it was anticipated it would be easier to coordinate requests for intelligence investigations from the US government and industry. Representation in Europe and exchange of new reports with the British would be achieved through FIAT, otherwise BIOS and JIOA would operate independently.[27] Outstanding reports that had been commissioned by the US and investigated by Anglo-US teams prior to the CIOS termination would be processed through BIOS in the UK using the JIOA title - with the first report arriving with the BIOS secretariat for publication in March 1946.[28] Although

---

[26] TNA CAB 81/130, Joint Intelligence Objectives Agency (JIOA), Basic Directive, JIC (45) 230, 27 July 1945. The title of USIOS muted by Brigadier Frank Spedding in a letter to Brigadier Jack Bader and dated 20 July 1945 was never adopted – For further reading, please refer to FO 1012/422.

[27] TNA CAB 81/130, Exchange of Reports on Intelligence Investigations in the United States and British Zones of Occupation in Germany, CIC 81/1, 27 July 1945.

[28] TNA BT 211/16, BIOS Secretary's Report No. 14, BIOS/100/5/R, 1 March 1946, p. 2, point 3 d, JIOA Reports duplicating existing CIOS reports.

the US would bring pressure on BIOS regarding security ratings and dissemination of the reports detailing UK investigations, the British were effectively excluded from future US intelligence investigations. According to Crim in *Our Germans*, JIOA comprised predominantly military personnel with limited civilian input, with their major function being to locate and facilitate the transfer of numerous German scientists, designers and technicians to the United States under the umbrella of operation OVERCAST - later renamed operation PAPERCLIP.[29] Crim states that over five hundred scientists and engineers were recruited through PAPERCLIP, with four hundred and fifty nine emigrating to the US on a permanent basis.[30] JIOA was terminated in 1962.

A month's hiatus followed the final meeting of CIOS on 4 July, with BIOS only coalescing once CIOS secretariat Dean and Harris had issued a directive document on 31 July 1945. This document listed the new BIOS functions, membership and procedure.[31] Formal approval for the establishment of BIOS had been issued by the JIC on 30 July, with the inaugural meeting held on 8 August.[32] Attendees included representatives of the Admiralty, War Office, Air Ministry, Foreign Office, MoS, MAP, Ministry of Fuel and Power (MFP), Department for Scientific and Industrial Research (DSIR), the BOT and the government of Canada. Spokesmen for the CCG (British Element) and FIAT(Br) were also present. To provide continuity, ex CIOS Chairman Professor Linstead, representing the MoS, was retained in the chair till 21 November, after which he was replaced by Somervell of the BOT.[33] The responsibilities of the committee were debated during the inaugural meeting. BIOS were to accommodate all requests from British Government departments

---

[29] Brian Crim, *Our Germans: Project Paperclip and the National Security State* (Baltimore: John Hopkins University Press, 2018), p. 60.

[30] Crim, *Our Germans,* 185.

[31] TNA BT 211/541, British Intelligence Objectives Sub-Committee, BIOS (45) 1, 30 July 1945.

[32] TNA FO 1031/51, Chiefs of Staff Committee, Joint Intelligence Committee, JIC (45) 236, 30 July 1945.

[33] TNA FO 1031/51, Chairman of BIOS, BIOS (45) 19, 19 October 1945.

for intelligence of military, political, industrial or economic significance that may be found in Germany or any country previously under German occupation – including Austria.[34]

For a few months after Austria was liberated, intelligence targets had been processed by IOSS as part of SACMED, though by May, their remit only covered southern Austria with SHAEF and CIOS handling the rest of the country. An IOSS liaison officer was appointed to combined command to maintain communication.[35] SHAEF decided in June 1945 that CIOS should process all Austrian target nominations, with the responsibility transferred to BIOS in August. BIOS investigations were not to become involved with combat intelligence, which would normally be investigated directly by the service ministries, or technical intelligence sought by British secret and security services. BIOS were to liaise with government departments who had knowledge of a specific German industry, such as the Ministry for Economic Warfare (MEW) or the Economic Advisory Branch (EAB), then prepare target lists of intelligence objectives. They would subsequently commission the expert personnel who would undertake technical investigations in the field. Completed target lists were then forwarded to FIAT, enabling them to make any arrangements they felt appropriate to procure the listed intelligence. BIOS would ensure maximum exchange of intelligence concerning targets in the US occupation zone, liaising with FIAT(US) to request visits and advising when targets had

---

[34] Austria had been part of Greater Germany since the 'unification' of the two counties on 13 March 1938, popularly termed the Anschluss. Independence had been declared by the new provisional government - established on 27 April 1945 - after which Austria was recognised as an independent country. Independence was ratified by the Berlin Declaration of 5 June 1945. Austria was partitioned after the war, being unified in 1955 with the Austrian State Treaty being signed by representatives of the Soviet Union, the UK, US, France and the Austrian Foreign Minister on 27 July 1955. The treaty established a democratic, free and sovereign Austria.

[35] TNA FO 935/23, Minutes of nineteenth CIOS Meeting held on 23 May 1945, p. 2, Point 1 C1, Minutes of the Last Meeting.

been investigated. After the end of the War against Japan, the BIOS directive was amended to accommodate investigations in the Far-Eastern territories formerly occupied by Japan.[36]

BIOS was also expected to advise the Deputy Chiefs of Staff Committee (DCOS) on how best to exploit German science and technology in the interests of the defence ministries. The committee had to deal with problems relating to the employment of German scientists and 'technologists' in the UK, in the US, or in Germany – but all calculated to achieve the best results for the UK.[37] Any government department could prepare target lists, provided they forwarded the resulting document to BIOS for approval and coordination. In the performance of their duties, BIOS were given the authority to request information or assistance from any government departments or agency. In response to Truman's Executive Orders, BIOS was also tasked with disseminating the intelligence, obtained by investigating teams, to British industry. Adopting the successful model developed by CIOS, intelligence gained would be published as final reports, passed back to commissioning government departments to be distributed via Trade Associations to UK industry. It was hoped that by adopting German know-how, British industry would more easily transition from war-time production to peacetime productivity, be competitive in the post war markets and enhance domestic research and development programs. This in turn would resurrect British exports, bringing desperately needed funds back into the country as well as providing employment for the thousands of demobilised personnel. This ambitious

---

[36] TNA FO 1031/51, BIOS Directive, BIOS (45) 1, 30 July 1945, revised to accommodate investigations in Japanese territories, BIOS (45) 33, 23 September 1945.

[37] TNA FO 1031/51, Chiefs of Staff Committee, Joint Intelligence Committee, JIC (45) 236, Annex, 30 July 1945.

programme would be coordinated by the new masters of BIOS, the BOT under the newly

appointed President, Sir Stafford Cripps.[38]

During the War, the BOT had forged connections with British industry, controlling

war time production through licencing and nurturing contacts with Trade Associations.

These trade associations now counselled the BOT, proposing intelligence targets. They

would nominate industrialists or scientists within their own industries to represent them

and undertake investigative trips to occupied Germany. For the investigation to proceed,

BIOS required the support of the German Economic Department (GED). This government

body was created in October 1945 after the merger of the MEW and the EAB technical

departments. During the war, the EAB had prepared reports assessing German Industry,

created handbooks reviewing German manufacturing - by industry sector, by company and

by geographical region. EAB handbooks and staff were now accessible through the GED,

providing valuable information on many German intelligence targets. BIOS recommended

that all staff who initiated investigations into German industry, should routinely consult the

GED staff.

The GED received copies of all CIOS and BIOS final reports, each carefully

assessed and filed by subject. Ironically, BIOS staff assessed the GED filing system to be

superior to their in-house system, where reports were filed by target type. This subtle

difference in filing methodology enabled the GED to quickly advise what investigations

had already been carried out on a given subject, while the BIOS filing system meant that

BIOS researchers were unable to distil this information. This efficient appreciation of

previous investigations enabled the GED to work in partnership with the department

---

[38] Sir Richard Stafford Cripps(1889-1952), Ambassador to the Soviet Union from 1940 to 1942, Minister for Aircraft Production on his return to the UK until 1945. In July 1945, he was appointed President of the Board of Trade before replacing Hugh Dalton as Chancellor of the Exchequer in November 1947 until October 1950.

'fathering the enquiry' and establish the best way to acquire new information. If the GED were unaware of a proposed investigation subject, it was their responsibility to act as a clearance house. They would pursue either the Economic Control Centre of the Control Commission in Bad Oeynhausen or FIAT, or both - gathering the necessary information to progress an investigation and report back to the commissioning department.[39] The GED would brief investigators leaving for Germany until the role was transferred to a newly created body titled the BIOS / FIAT 'Technical Intelligence Section' (TIS) based in Bryanston Square. Formed on 1 April 1946, TIS comprised a nucleus of fourteen experienced former GED staff, supported by thirteen officers and men transferred specially from FIAT(Br) in Frankfurt. To enhance the TIS target resources, the FIAT reference library, originally compiled and housed in Frankfurt, was duplicated and installed at the TIS London offices, becoming operational on 23 April 1946.[40]

6.03   CIOS, BIOS, JIOA and FIAT – The Printed Reports

The final reports published by BIOS followed an approved format incorporating photographs, drawings, data tables or whatever was necessary to impart the essence of the subject. The paperback reports were approximately ten inches by eight inches and contained between six and two hundred pages.[41] The report authors were members of the original investigation team who had visited the intelligence targets, selected as recognised experts in their field. This assured the validity and credibility of the final report. The final report distilled findings from multiple field investigations, interrogations at DUSTBIN and

---

[39] TNA FO 1031/51, BIOS, Facilities Offered to BIOS by German Economic Department, BIOS (45) 16, 4 October 1945.

[40] TNA BT 211/16, BIOS Secretary's report No. 16, 12 April 1946, p. 3, point 3, BIOS/FIAT Technical Intelligence Section. TIS were established at 36 and 37 Bryanston Square, while BIOS were based next door at 32 Bryanston Square.

[41] TNA BT 211/11, Draft letter from BOT to the Chief Librarian of regional libraries introducing the idea of holding CIOS, BIOS, FIAT reports in their reference libraries. The report specification was detailed for the librarian's information, 16 October 1945.

supported by interviews with designers, technicians or factory workers providing hands-on experience of their subjects. Authors now appreciated the need to ensure maximum report distribution, being careful to avoid inappropriate statements or information that might cause the distribution of an OPEN report, to be limited by a restrictive security rating. Final reports were passed to the BIOS secretariat for review, with any that failed to reach minimum standards of presentation or infringed security content returned to the author for revising.[42]

Once accepted by the BIOS secretariat, reports received a limited draft print run with copies passed to the commissioning ministries and the 'selection board', chaired by the BOT, who would consider the appropriate security rating. Once the rating was agreed, a further print run and distribution would follow. BIOS agreed that a consignment of one hundred complimentary reports would be printed and issued to the advising trade association for their further distribution. Additional copies could be purchased directly from the nominated government printers, with lists of published reports created by the BOT for reproduction in the 'Board of Trade Journal' and national newspapers such as the Daily Mail. TIS received examples of all security rated reports, adding copies to their repository of original investigation documents. They would then circulate an unclassified list of all completed reports to sixty-seven recipients, including BIOS and FIAT members, government departments, the three service ministries in London and equivalent bodies based with the British Army of the Rhine (BAOR) in Minden, Germany.[43]

Printing could be delayed while sponsoring ministries debated the security rating, with the BIOS secretariat occasionally contesting their decisions and requesting

---

[42] TNA FO 935/23, twenty-first CIOS Meeting, 20 June 1945, Point 2, Secretary's Report Number 18, p. 3.

[43] TNA BT 211/23, Distribution of BIOS Final Reports, Unclassified Summary and TIS Library List.

reassessment.[44] Reports with a RESTRICTED rating could be forwarded to trade associations or individuals, at the discretion of the sponsoring ministry. CONFIDENTIAL reports, that might contain an individual's personal information, might be made available to view at the ministry, but not circulated. SECRET reports would be retained by the sponsoring government or service ministry. The imperative for BIOS and FIAT was to publish as many reports as possible, disseminating the crucial intelligence they contained and ensure the maximum quantity of reports were unclassified. The security rating was prominently displayed on the front cover with a typical print run for OPEN reports of between five and seven hundred copies.[45] Print quantity was specified by letter from the BIOS secretariat at the time of printing.[46] The quality of the British reports was acknowledged to be very high compared with FIAT(US) reports printed in Frankfurt AM – a view shared by US exploitation officials according to Hall.[47]

Reports compiled and printed by the US element of FIAT, based at Hoechst west of Frankfurt am Main, would be published using the FIAT prefix and numbering, with size and layout reminiscent of the BIOS standard. The modest German print run would only satisfy US domestic requirements, with FIAT(US) advising BIOS that they lacked printing capacity to reproduce copies on behalf of British Agencies.[48] Completed FIAT final reports would be announced on an official accession list published by FIAT(US) every few weeks. This document provided a description of the intelligence target, the report's subject and

---

[44] TNA, FO 1031/50, Minutes of sixth BIOS Meeting, Secretariat's report No 6, 24 October 1945, p. 3.

[45] For details of HMSO print quantities and report distribution to libraries and learned institutions, please refer to Appendix XIV.

[46] TNA BT 211/163, Typical BIOS letter to HMSO, Reproduction of Reports, BIOS/Pb1/143/1, 19 February 1947.

[47] Hall, *British Exploitation of German Science and Technology*, p. 89.

[48] TNA BT 211/13, Minutes of Meeting of the Working Party for the Release to Industry of BIOS, CIOS, FIAT and JIOA Reports, p. 1, point 3, 25 February 1946. In 1946, FIAT(US) were based in the Hoechst Buildings in Frankfurt. Hoechst were one of a number of German coloured dye manufacturers that founded the coloured dye advocacy group IG Farben during the First World War and later merged into the conglomerate IG Farben in 1925. Hoechst specialised in chemicals and pharmaceutical products.

whether the report would be published.[49] On Sunday 23 September 1945, and on each Sunday thereafter, FIAT(US) circulated a 'Weekly Target Digest' that included CIOS, BIOS and later JIOA final reports.[50] A number of reports by the United States Strategic Bombing Survey (USSBS) were also recorded on the weekly lists. The FIAT digest was distributed to both British and US readers, with a cover note directing British Agencies requiring FIAT reports to contact the BIOS secretariat in London, while US Agencies should contact the Operations Branch of FIAT(US). Reports written by the British element of FIAT in Germany, would be passed to BIOS in London for compilation and printing, incorporating the BIOS prefix and numbering. FIAT(US) reports for distribution in the UK would be reproduced through BIOS but would retain their FIAT numbering and title. In the US, FIAT reports could be purchased as printed copies, photostats or on microfilm via the Office of Technical Services (OTS). By January 1948, at least thirteen hundred and eighty-eight serial numbers had been allocated to FIAT reports, although only 'OPEN' reports were included on the public list, resulting in gaps in the numerical sequence. Cross referencing this list with an index of reports compiled by the Australian Government, the missing numbers were SECRET, CONFIDENTIAL or RESTRICTED reports, that were simply omitted from the OTS list.[51] A covering disclaimer included on the US FIAT register advised that these reports had 'never been forwarded to the OTS due to printing delays'.[52]

---

[49] TNA FO 935/51, Accession List No 1, 14 September 1945 to No 5, 15 November 1945.

[50] TNA FO 935/53, FIAT Weekly Target Digest, No 15, Sunday 30 December 1945 to No 27, Sunday 24 March 1946.

[51] TNA FO 1005/1602, BIOS, Alphabetical Subject Index of CIOS, BIOS, FIAT and JIOA Final Reports, April 1946.

[52] Office for Technical Services, FIAT Reports, Bibliography and Index of Reports Resulting from American Investigations of German Industry, January 1948. University of Nebraska – Lincoln, <https://core.ac.uk/download/pdf/188076844.pdf> [accessed 28 September 2023].

CIOS reports created before Truman's Executive Orders, were prepared for the eyes of the government commissioning ministry and were not written with the prospect of public consumption. A security rating may have been triggered by an insignificant element, a name or an address that could be quietly removed enabling the security rating to be downgraded before the report was reprinted. When multiple CIOS reports had a high security rating allocated by a single ministry, BIOS would request that the gradings be reassessed.[53] BIOS requested through the JIC that the US liaise more closely with the UK and advise which reports they wished to declassify and make changes universally.[54] With maximum dissemination the priority, US authorities pushed for still further downgrading.

In October 1945, the Combined Chiefs of Staff in Washington wrote to the JIC, observing the agreed procedure to downgrade the security classification of existing reports whereby the US or British based JIC should inform the other whenever a change in classification was made. The agreement enabled the US to downgrade reports in anticipation of ratification by the UK 'selection board'. Members of this board could object to the US downgrading but the arrangement, formally signed on 1 November 1945 and promulgated under BIOS (45) 26, stipulated that any reports downgraded in the US would have their classification automatically matched in the UK. Objections could be lodged but would be taken no further. Such downgraded reports would be reviewed by the selection board before released to Industry in the UK.[55] Thus, under this agreement, the JIC were

---

[53] TNA, BT 211/13, Distribution of Field Team Reports, BIOS (45) 15, 3 October 1945, notes from meeting of the Working Party 29 September 1945.

[54] TNA, BT 211/13, Minutes of Meeting of the Working Party for the Release to Industry of BIOS, CIOS, FIAT and JIOA Reports, point 4, 25 February 1946. A hand written note by Mr Derek Wood of the BOT referencing the meeting of 25 February and drawing attention to nearly 20 reports that had been downgraded where the MoS or MAP had raised objections. He also referred to a problem of publishing reports concerning Philips Ltd, Eindhoven. He stated their publication was a breach of confidence towards the Dutch company that had temporarily relocated to the US and UK due to the occupation of Eindhoven by Germany.

[55] TNA, BT 211/13, Declassification and release of CIOS and BIOS reports, BIOS/104/5, 9 November 1945, Squadron Leader S. M. Harris, Secretary. Letter circulated to all members of BIOS, JIC, in reaction to the issue of the first list of CIOS and BIOS reports, dated 4 October 1945, declassified on authority of JIC(Washington).

advised that three hundred and seventy-seven reports had been reviewed by the US Army, Air Forces and navy and were now graded 'Unclassified'. These reports had subsequently been issued to the US Office of the Publication Board (OPB) for publication in the US.[56] The OPB had dispensed with the CIOS serial numbers, allocating instead a sequential new number from one to three hundred and seventy-seven and providing no cross reference.[57] Pressed on the matter, the OPB offered to photocopy their cardex records that retained the original CIOS reference. The OPB reports covered a broad range of subjects, with no apparent grouping or order to the selection included in the index.

According to Balabkins, the economic rivalry between the UK and the US was creating an Anglo-US rift, exasperated by the negative attitude of the US War and State Departments towards the British.[58] Economic rivalry may have influenced US security declassification of reports that were restricted by the British. Often, high security ratings were applied to protect the trade secrets of European companies that were affiliated with British businesses. Minutes of a meeting held on 1 April 1946 relate to the US authorities downgrading 'classified reports' concerning the Philips Ltd Works at Eindhoven in Holland, drawn up after the site was investigated in October 1944. A handwritten note by BOT member and Co-Chairman of BIOS Derek Wood, records that Philips Ltd. complained that the publication of a report detailing their premises in Eindhoven, was a breach of confidence. Furthermore, Wood noted that publishing these reports would advantage US Industry over Philips Ltd. in the UK, although specifics were not given. Mr

---

[56] TNA BT 211/13, Joint Chiefs of Staff, Ref CIC 77/1 and 77/2, list of declassified reports, Peter Vischer, 4 October 1945. 22 documents including a covering letter, followed by twenty-one pages listing the declassified report titles and reference numbers and dated 26 September 1945.

[57] TNA BT 211/27, Letter and index issued by the Department of Commerce, Office of the Publication Board, Washington, 12 October 1945. Attached index of three hundred and seventy-seven reports detailed over twenty-one pages.

[58] Nicholas Balabkins, *Germany Under Direct Controls*, p. 7. In the immediate post war period, the US felt that too close ties to Britain could prevent close co-operation with the Soviet Union.

Stewart Jones of the MoS raised a 'strong protest', recommending that the anomaly should

be referred to the DCOS to deliberate on the unilateral downgrading of reports by the US.

Members of the meeting agreed that this was an appropriate course of action in the case of

Philips Ltd., yet future anomalies should be negotiated, and recommendations made to the

US in future, rather than making a direct challenge to unilateral downgrading.[59] Ironically,

there was a period when all US FIAT reports received by the BIOS Secretariat were graded

RESTRICTED without obvious justification, yet BIOS could not unilaterally downgrade

these reports. The FIAT reports were referred to FIAT(Br) who reclassified the reports

enabling publication.[60]

The UK and US authorities tried to ensure uniform security ratings of all reports,

yet throughout 1946 and 1947, problems were still being experienced. Enquirers in the UK

could potentially access US downgraded reports through the TIS in London, while

equivalent UK report still retained a security ratings restricting publication. TIS requested

guidance about how to administer such enquiries. The MoS had taken exception to some of

the declassifications demanded by the US and refused to pass some reports for publication

in the UK. Against this ministerial intransigence, it was accepted that British industrialists

could openly purchase reports from the US or obtain copies of US reports held at TIS that

would vitiate any restrictive action taken in the UK. It was noted that redaction of sections

in the UK edition of a report that would ensure British distribution, yet left in place in the

US edition, would merely draw attention to a section that might otherwise have been

overlooked. BIOS reached a compromise whereby if enquiries were made with TIS for a

report that was restricted in the UK, yet declassified in the US, TIS would give the original

---

[59] TNA BT 211/13, Minutes of Meeting of the Working Party for the Release to Industry of BIOS, CIOS, FIAT and JIOA Reports, point 2, 1 April 1946.

[60] TNA 211/13, Release to Industry of Final Field Team Reports, for BIOS (46) third meeting, 13 February 1946, p. 3.

commissioning ministry seven days to decide whether the report would be released in full or revised with redacted text.[61]

6.04   Report Distribution – BIOS, HMSO and UK Libraries

The BIOS Working Party tasked with the dissemination of final reports proposed on 29 September 1945 to lodge copies of all unclassified reports that were deemed to be useful to industry, with a proposed fifty regional public libraries.[62] Initially forty-four libraries were chosen, with each free to decide whether to hold reports in their reference sections or lend copies to customers. The BOT wrote to the selected libraries on 16 October 1945, stating that the government wished to make the reports freely available to anyone who was interested and requested that they confirm whether they were prepared to participate.[63] The replies from the libraries are held on file in TNA - all apparently keen to participate in the dissemination program.[64] A further six copyright libraries would also receive reports. The BOT suggested three copies would be issued, however this quantity was eventually raised to five. The BOT hoped that by providing free reports to the regional public libraries, it would enable smaller British firms that were not members of trade associations to access to the reports. According to Hall, the number of participating libraries increased to sixty-six by the spring of 1948, although this number may include the six copyright libraries.[65] Regional libraries were still approaching the BIOS in 1947 requesting to be added to the circulation list and hold reports in their reference section.[66]

---

[61] TNA BT 211/16, Release to British Industry of CIOS Reports Declassified by US Authority and other US Unclassified Reports, BIOS (46) 53, 3 October 1946.

[62] TNA BT 211/13, Distribution of Field Team Reports, BIOS (45) 15, 3 October 1945, notes from meeting of the Working Party 29 September 1945, point 2 c.

[63] TNA BT 211/11, Draft letter from BOT to the Chief Librarian of regional libraries introducing the idea of holding CIOS, BIOS, FIAT reports in their reference libraries, 16 October 1945.

[64] For details of HMSO print quantities and report distribution to libraries, please refer to Appendix XIV.

[65] Charlie Hall, *British Exploitation of German Science and Technology, 1943-1949* (London: Routledge, 2019), p. 88.

[66] TNA BT 211/162, Rugby Library request to BIOS for inclusion on report circulation list, 26 February 1947. They were added to the circulation list 8 March 1947 ref GD.4/47.

Reproduction and distribution in the UK were carried out by a single publishers - His Majesty's Stationary Office (HMSO). The services of HMSO had been proposed in November 1944, being described as the 'finest photo-lithography facilities in the United Kingdom' and holding the essential security clearance to reproduce sensitive or secret documentation.[67] They also had storage capacity to hold the 'forms' or 'negatives' for each report, enabling reprints to be made at a later date.[68] Printing capacity was acceptable and importantly, HMSO could secure sufficient print stock with paper in short supply and rationed in 1945.[69] Alternative US facilities were available in the UK at Bushy Park, but could not match the output capacity of HMSO.[70]

During November 1945, enough reports had been declassified to enable the Documents Section of BIOS Secretariat to start forwarding batches to HMSO for printing and distribution. The printing capacity of HMSO was estimated to be around one thousand reports per week, with a lead time of two weeks for most publications. The first twenty-eight reports were printed and despatched to the designated regional libraries on 7 December.[71] The commissioning ministries would receive one hundred copies of the same report for distribution to relevant trade associations or individuals as the ministry saw fit. Libraries would receive five free copies.[72] On 15 December 1945, a week after the first

---

[67] TNA FO 935/21, Duplication and Dissemination of CIOS Reports, CIOS (44)21, 28 November 1944.

[68] TNA FO 1031/51, Distribution of Final Reports, BIOS (45) 13, 22 September 1945.

[69] NUF CSAC 80.4.81/H.250, Illustrating the lack of paper for the printing of learned journals was taken up by Frederick Linderman, Lord Cherwell writing to Sir Andrew Rae Duncan, Minister of Supply on 21 June and again on 5 July 1945, Documents H 250/1 – H 250/7. During the immediate post war period, publishers were initially allocated 19.5% of their pre-war paper allowance, increasing to 26.3% in early June, then 33% by late June 1945. Learned journals were felt to be an exception to these miserly allowances, resulting in Lord Cherwell's lobbying of the Ministry of Supply for greater paper allocations. Any change in the format of publications, size or quantity of pages was strictly forbidden.

[70] TNA FO 935/21, CIOS, Duplication and Dissemination of CIOS Reports, proposal to use HMSO as one of three photo-lithography sites in the UK, Dean & Harris, 28 November 1944.

[71] TNA BT 211/11, Receipt issued to the German Department of the BOT, by the Central Library of Birkenhead ref HYH / FC, 13 December 1945.

[72] TNA 211/13, Minutes of Meeting of the Working Party for the Release to Industry of BIOS, CIOS, FIAT and JIOA Reports, 4 January 1946.

despatch of reports, a press release appeared in the BOT Journal as well as the technical and daily press, announcing the ongoing publication of CIOS, BIOS and FIAT reports, listing the libraries that would hold copies. Enquiries were received from other regional libraries such as the Patent Office library in London, requesting to be added to the distribution list.[73] Libraries at Richmond (Surrey), Hull and York were duly added, with issue of reports backdated.[74] Weekly updates appeared in subsequent editions of the BOT Journal and national press, listing the new reports that were available to purchase from HMSO and advising what was now held by the libraries. Reviewing progress on 2 February 1946, one hundred and fifty-seven CIOS and thirty-two BIOS reports had been or listed for sale and issued to libraries. A further thirty-three CIOS and eight BIOS reports were due to be issued the following week on 9 February.

BIOS hoped through advertising and the library network, they were fulfilling their remit to disseminate the industrial intelligence to the smaller British firms that were outside the embrace of trade associations. BIOS reports were a distillation of the technical investigator's findings in Germany. Conversely technical documents and drawings from German companies or technical institutions were also captured and it was suggested that these could also be lodged in the same public libraries. These files were held by the Foreign Document Unit (FDU) based in London, where they were being indexed by subject for ease of retrieval.[75] Public dissemination was discussed at a meeting of the BIOS Working Party on 4 January 1946. The head of the FDU, Mr Poole of the GED, proposed that the documents should be made available to libraries and listed in a similar manner to

---

[73] TNA BT 211/11, Letter from Patent Office to the BOT, Industrial Information from Germany, 22 December 1945.

[74] TNA BT 211/11, Letter from G S Mansell, BOT to Major Wheatcroft, Documents Department of BIOS, 29 December 1945, confirming that Richmond and York libraries had been added to the circulation list. The Public Library at Richmond, Surry, had requested to be added to the circulation list on 17 December.

[75] TNA BT 211/13, FDU, Foreign Documents Index, 9 page index sorted alphabetically by subject.

BIOS reports by HMSO.[76] Poole was motivated by a 'non-discrimination' ruling by Sir William Palmer which stated that companies that were not members of trade associations, were to have equal access to industrial intelligence. It appears that Poole's proposal was not adopted as access to the FDU library remained only via the London archive. During discussions held six months later in July 1946, between the BOT and the US Department of Commerce, Office of Publications Board (OPB), it was confirmed that microfilm prints of the entire FDU collection of captured documents would be created and passed to the US.[77] The general public could access the collection, but only by request. Coatbridge Public Library for example, wrote to the BOT requesting access to the FDU in March 1947. The BOT advised that captured documents were stored in London and available for viewing at the FDU library in Berkley Square, after which microfilm or photostat reproductions could be prepared at cost.[78]

Utilising public libraries to disseminate industrial know-how was a logical way for BIOS and the BOT to pass useful information to British industrialists that were not members of trade associations. By early February 1946, libraries had received multiple batches of reports from HMSO and were able to report back to BIOS, reviewing how the reports were being received by the business community. Instead of praise, BIOS encountered consternation. The issue was the lack of robust indexing that was needed to provide concise details of the subjects covered by each report. With each batch of reports issued to libraries, a covering letter would list the report title, serial number and originator

---

[76] TNA BT 211/13 Minutes of Meeting of the Working Party for the Release to Industry of BIOS, CIOS, FIAT and JIOA Reports, 4 January 1946.

[77] TNA BT 211/24, Meeting with Mr John Green, Head of the Office of Publications Board, US Department of Commerce and Mr Somervell of the BOT.

[78] TNA BT 211/162, Letter from J B Liebert, BOT to Coatbridge Library, Access to original German Documents, GD/4/47, 21 March 1947.

- CIOS or BIOS.[79] Some report titles might indicate the contents, while many others provided no clue. For example, FIAT report 518, titled 'Road and Airfields Construction' might cover use of heavy plant, properties of aggregates, tarmacadam applications, concrete curing rates or drainage innovation. [80] CIOS report XXXII-67, contained reports 2, 3, 4, 11, 18 and 21 under the title 'Krupp AG and Bochumer Verein', refers to the heavy engineering firm Krupp AG *Aktiengesellschaft* [stock corporation] and Bochumer Verein [Bochumer Associates] who were both steel producers, armaments makers, casting specialists and manufacturers of heavy engineering products. [81] This report title does not hint to the possible contents yet is all that appeared on the covering letter when the report was advertised by HMSO or issued to public libraries. On reading the report, the preface lists subjects included as: Artillery and Weapons; Bombs and Fuses; Rockets and Rocket Fuel, Torpedoes; Armoured Fighting Vehicles and Metallurgy. This list is contradicted by the table of contents that reveal the focus is on Krupp and BV's varied manufacturing, including their skill with castings in stainless steel and other alloys. Krupp's gun breach designs are assessed along with metallurgy of gun barrels, gun carriage design, designs for ordinance fuses etc. With obscure report titles and contradictory contents listings, it is easy to appreciate the indexing problems faced by librarians and HMSO. Matters were compounded when the librarian or HMSO received enquiries regarding report subjects. Recommending the appropriate report could only be offered, had the librarian read the report was able judge if the report was relevant to the industrialist's enquiry. To make matters worse, many report titles retained their company names and descriptions in German, which were grammatically verified by German proof-reader Dr Frederick Meth

---

[79] TNA BT 211/18, Reports issued by BIOS to the Board of Trade were issued under the reference BIOS/104/5 while reports issued by BIOS to Librarians were all covered by reference BIOS/Pbl/142. In all cases, the reference remained unchanged, while the contents of the covering letter and date of issue were revised with each despatch of reports.

[80] TNA BT 211/18, BIOS to Librarians, Distribution of Reports, BIOS/Pbl/142/3, 4 July 1946.

[81] CIOS Report, *Krupp A. G. and Bochumer Verein: XXXII-67*, (London: HMSO, [1946(?)]; Uckfield: The Naval & Military Press, 2016).

but ignored the fact that much of the British readership were unfamiliar with German terminology making the final index indecipherable.[82]

Librarians requested a detailed subject index that would simplify cataloguing and the processing of enquiries. Mr Joseph Sidwell, Coventry City Librarian, politely wrote to the BOT to enquire if a report index were available - or was one being prepared.[83] Liebert of the BOT and BIOS secretariat replied that the whole question of indexing reports was extremely complex, suggesting it would be an impossible task to make a detailed index. He advised that the BOT had a rough index for internal use, but a shortage of clerical staff 'entirely precludes us from attempting to make copies [of any index] for use in the principle public libraries'. He advised Sidwell to 'make your own index' and apologised that he could offer no further assistance.[84] Surprisingly, Sidwell wrote back on 15 February, thanking the BOT for their advice, confirming that his staff would create their own index for CIOS and BIOS reports in future.[85]

HMSO joined the call for better indexing with their Mr Cox writing to the BOT on 1 March.[86] Attempting to service the increasing number of enquiries, HMSO Sales Office staff spent much time re-reading reports in the hope of finding an appropriate document to match individual enquiries. Attempting to improve efficiency, they had reprinted the report description provided by the BOT in their weekly update of new reports in the hope this

---

[82] TNA BT 211/23, Correspondence regarding proof reading from Dr Meth to G S Mansell, BOT, 6 June 1946. An attached note by Mansell acknowledged the quantity of mistakes and proved that the difficulty and time involved in proof reading had been underestimated. When an alphabetical list of FIAT reports arrived at BIOS in July 1946, Dr Meth was again employed by J. B. Liebert of the BOT to proof read and correct the fifty-four page index.

[83] TNA BT 211/11, CIOS and BIOS Reports, Coventry City Library, Joseph Sidwell, 4 February 1946.

[84] TNA BT 211/11, GD/276/46, Reply to Sidwell of Coventry Library. J B Liebert BOT, 13 February 1946.

[85] TNA BT 211/11, CIOS and BIOS Reports, letter from Coventry City Library to BOT, Joseph Sidwell, 4 February 1946.

[86] Mr W Cox was the official link between BIOS and HMSO, often attending meetings representing HMSO.

would offer some clarity. Surviving examples of the BOT lists issued to HMSO reveal that

only the report serial number and main title were included, with up to seventy random titles

per foolscap page mixing CIOS, BIOS and FIAT reports.[87] These same documents were

issued by the BOT to newspaper editors to create the adverts that would appear in the

national press. Comparing a 1946 edition list of reports sent to libraries and HMSO with

1947 edition lists, BIOS did not improve the format or provide additional information

beyond the report title.[88] Cox concluded that indexing was a hopeless job as the 'report

titles themselves are not fully descriptive of the contents' continuing that 'CIOS group

numbers do not apparently give a clue to industrial groupings' and 'the BIOS series has no

grouping at all'. Cox proposed some form classification by industrial sector, with group

supplements that could be consolidated as new reports were released.[89]

Liebert of the BIOS secretariat made an unannounced visit to Manchester Library

to view how they promoted their reports. Instead of admiring a well-advertised and

dedicated section in the reference library, he was presented with boxes, each containing

around sixty reports sorted by file number and no index or indication of the box's contents.

Liebert immediately appreciated the problems that libraries and HMSO were experiencing.

In notes dated 5 March 1946, Liebert refers to Cox's criticism of the CIOS serial numbers,

concurring that the system is comparatively useless regarding industrial groupings,

although he hoped that if the entire CIOS numbering system were made available to Cox,

he might have perceived a 'slight clue to industrial groupings'. Responding to Cox's

observations, Liebert proposed that a 'card index run by a mechanical man as a full time

job must be set up at the BIOS Secretariat' to sort new and existing reports into industrial

---

[87] TNA BT 211/163, BOT Industrial Teams Reports from Germany, 5 pages, 19 February 1946.

[88] TNA BT 211/164, BIOS Distribution of Reports, BIOS/Pbl/142/3 List 81, 3 July 1947, List 80 26 June 1947, List 79 19 June 1947, List 63 27-02-47, List 56 9 Jan 1947.

[89] TNA BT 211/23, BIOS and CIOS Reports, letter from W. Cox of HMSO to G S Mansell of BOT, 1 March 1946.

groupings. Somewhat late in the day, Liebert recommended that the BOT should liaise with the institute of Librarians, to better understand the 'special problems of indexing a technical library'. No record of contact with the Institute of Librarians remain in the TNA file.

Liebert's notes conclude with a draft letter to all participating libraries, emphasising the fact that large companies are aware of reports through trade journals and associations, but that libraries 'can play a conspicuous part in bringing information to the small man, who is not 'in the know''. Liebert offered the librarians a brief history of CIOS, BIOS and FIAT operations, emphasising the close harmony enjoyed by the western Allies who provide access each other's zones for industrial intelligence investigations. He noted that Russia had only allowed a small number of Anglo-US investigators to access their zone. He concluded by proposing that a poster would be issued to libraries to advertise reports, with a rough layout included in his notes – 'German Industry - Technical Intelligence - The Most Valuable Reparations'.[90] Liebert offered no comment regarding the creation and issue of an index.

The problem of indexing the reports was still causing problems for librarians a year later. The City of Cardiff Public Library opted to invest the time and create their own directory and devised a way of grouping reports into twenty-two logical industry sectors. These they listed, forwarding their idea to the BOT, receiving positive comment.[91] The twenty-two sectors were grouped into six broader subjects and pamphlets printed, listing

---

[90] TNA BT 211/23, J. B. Liebert, hand written notes to Mr G S Mansell of BOT and BIOS, regarding visit to Manchester library and reacting to Cox letter from HMSO, 5 March 1946. His notes included a draft letter titled 'Visit to Manchester Central Library', to be circulated to libraries, with a list of item numbers [reports numbers] and a short historical background.

[91] TNA BT 211/23, Letter from Edmund Rees, Cardiff Public Library to Derek Wood, BOT, 30 September 1946.

relevant reports.[92] Working in partnership with neighbouring Newport Library, these well designed pamphlets were circulated to other libraries around the country for peer review.[93] Manchester Library, where Liebert had found reports stored in boxes in 1946, offered positive comments, recommending the BOT support Cardiff's efforts.[94] Replying to the librarian at Manchester Library, Liebert cavilled the suggestion of adopting the Cardiff indexes, stating that the HMSO classified list was far superior, especially as it would be updated monthly.[95]

Writing to Mansell of the BOT on 5 March, Liebert addressed the matter of a usable subject index, and mentioned the 'Australian Subject Index guide', suggesting it should also be issued to libraries. Whilst BIOS and the BOT lacked the resources to create a robust report index, the Australian Government made the independent decision to allocate the required technical staff to sort reports by subject. On receipt of each printed final report, the title was recorded on a slip of paper for inclusion in a list of report titles. Additional slips were created recording the subjects within each report, then compiled alphabetically on a master subject list. From early 1946, the Australian team passed their subject list to the BIOS Documents Section for reproduction and publishing.[96] Titled 'Alphabetical Subject Index of CIOS, BIOS, FIAT and JIOA Final Reports', the first volume was published on behalf of the Australian Scientific and Technical Mission, listing

---

[92] Cardiff's six groupings were: Chemical Industries; Agricultural Food and Timber Industries; Medical, Optical and Miscellaneous Industries; Metallurgical Industries; Fuel Industries and Engineering Industries.

[93] TNA BT 211/23, Pamphlets prepared by Cardiff Public Libraries, dated October 1946.

[94] TNA BT 211/23, letter from Charles Nowell, Manchester Library to Derek Wood, BOT, 28 November 1946.

[95] TNA BT 211/23, letter from J B Liebert, BOT to Charles Nowell, Manchester Library 30 November 1946.

[96] TNA BT 211/23, letter from L. R. Denton, BOT to Lieutenant-Colonel Ezra, BIOS, Indexes of BIOS Etc. Reports, 10 March 1947.

all report subjects completed up to April 1946.[97] Of three thousand, eight hundred and twelve subjects, just over ninety-three percent were CIOS, just under seven percent BIOS plus and a single FIAT subject. Although a few JIOA reports had been sent to BIOS for publication early in 1946, none had been printed when the first Australian Index was compiled. Addenda were issued for reports completed up to 13 June 1946 and again for reports completed up to 25 October 1946 and these three iterations are preserved at TNA. This index contains approximately six hundred pages with typically nineteen subjects per page. By methodically uploading each subject line into spreadsheet software, subsequent analysis reveals ten thousand and ten subject entries. It is probable that the Australian team produced subsequent addenda into 1947 and 1948 as additional reports were completed, though these have not been identified in TNA. BIOS were keen to utilise this Australian Index, with a note in the BIOS Secretariat's Report of 14 June 1946 referring to the first part of the index having been distributed to Ministries, while the first addendum including reports completed up to 13 June had just been passed to HMSO for reproduction.[98]

The HMSO classified list of OPEN reports dated 27 July 1946 and available to purchase is preserved at TNA. CIOS, BIOS, FIAT and JIOA reports are sorted by industry type but do not appear to be in any order within each industry group. The report title, reference number and price are also included.[99] As noted earlier in this chapter, the report title provides little detail of the report contents, often only noting the German Company name and location. The Australian Index by comparison, provides subjects sorted

---

[97] TNA FO 1005/1602, BIOS, Alphabetical Subject Index of CIOS, BIOS, FIAT and JIOA Final Reports, April 1946. The cover carries the reference 4/46 but no more detailed publication date. The title page is also missing. Two addendum are included in the volume dated 13 June 1946 and 25 October 1946 and reference the involvement of the Australian Scientific and Technical Mission. No later editions have been found at TNA.

[98] TNA BT 211/16, BIOS Secretary's Report No. 19, BIOS/SEC/105/2, 14 June 1946, p 2, Point 2b.

[99] TNA BT 211/24, A Classified List of Industrialists' Reports on Germany, CIOS, BIOS, FIAT and JIOA, reports published up to and including 27 July 1946, HMSO, ref Classified No 1.

alphabetically complete with the security rating of each line enabling accurate analysis of how subjects were rated. By analysing the six hundred pages of subject data using spreadsheet software, the following percentages are revealed. Of the 10010 subject lines, 8343 are rated OPEN (83.4%), 1160 RESTRICTED (11.6%), 282 CONFIDENTIAL (2.8%) and 219 SECRET (2.2%).[100] Analysing the same 10010 subject lines further by splitting them into CIOS, BIOS, FIAT and JIOA reports, then sub-dividing these by security rating, the following results are revealed:

CIOS subjects, 4548 (45.4%), of with 3811 OPEN (83.8%), 536 RESTRICTED (11.8%), 143 CONFIDENTIAL (3.1%) and 58 SECRET (1.3%).

BIOS subjects, 3097 (30.9%), of which 2555 OPEN (82.5%), 350 RESTRICTED (11.3%), 49 CONFIDENTIAL (1.6%) 143 SECRET (4.6%).

FIAT subjects, 2076 (20.7%), 1773 OPEN (84.5%) 274 RESTRICTED (13.2%), 11 CONFIDENTIAL (0.5%) and 18 SECRET (0.9%).

JIOA subjects, 289 (2.9%), 210 OPEN (72.7%) 0 RESTRICTED (0%), 79 CONFIDENTIAL (27.3%) and 0 SECRET (0%).

Publishing final reports with an OPEN security rating would ensure the widest readership, while those rated RESTRICTED or CONFIDENTIAL could only be disseminated at the discretion of the commissioning ministry. What of the minority of reports that were graded as SECRET? Of the 10010 subject lines, two hundred and nineteen were classified as SECRET, representing 2.2% of subjects. Up to April 1946, 20 CIOS subjects were classified as SECRET, grouped across six reports. Subjects included chemical weapons, production of Sarin, Tabun and mustard gas, techniques for filling ordinance with these gasses and the synthesis of other hydrocarbons such as ethylene chlorohydrin – a key compound used in the production of mustard gas. Other reports rated SECRET covered aerodynamic research, rocket motor development and gas turbines. Up

---

[100] For the breakdown of the report subject groupings of the Australian Index, please refer to Appendix XV.

to October 1946, a further thirty-eight subject lines deemed SECRET were added. These included telephony and speech scrambling, while the other thirty-six lines make a single report that detailed the investigations at the Mauser Werke. Mauser were a major arms manufacturer, producing rifles for the German armies from the early nineteenth century though till the end of the Second World War.[101] Subjects covered by the Mauser report ranged from ballistics, gun design, flak guns, barrel specification, to gun manufacturing processes and component inspection.

Of the SECRET BIOS subjects, one hundred and forty-three were drawn from a mere thirty reports. Subjects included chemical weapons, submarine research including anti-ASDIC (Radar) rubber coatings, jet aircraft design, Zimmerit anti-magnetic mine coatings for tanks, flamethrowers, hollow charge weaponry, tank armament, rail guns and coastal batteries. Research carried out at Dachau into the effects of carbon dioxide poisoning in gas chambers, by determination of carboxyhaemoglobin levels in the blood, were also to be withheld from the public. Eighteen FIAT subjects were classified SECRET, all making up a single report numbered F288. This report probably covers investigations of a single unspecified company or research establishment. Subjects covered include telephone secrecy, automatic speech recording, magnetic tape research and torpedo proximity fuses. The range of subjects covered by this one report, again emphasises the problem faced by institutions indexing reports by target location or title alone. Grouped by industry sector, number sequences are difficult to ascertain, however a 1948 index advertising FIAT reports for the US market is sorted numerically. The FIAT serial number

---

[101] Mauser were founded in 1811 and remained a major weapons manufacturer until they were bought out by Rheinmetall Berlin AG in the 1996. They produced the majority of rifles for the German armies of the Second and Third Reich, as well as handguns, ammunition and a range of automatic aero-cannon for the Luftwaffe.

of the SECRET report F288 is included, with the simple note stating that the report was 'Not Received'.[102]

Five months after the second appendix of the Australian Scientific Index had been completed, BIOS issued a tally of final reports up to 27 March 1947 with the number completed standing at two thousand, six hundred and ninety-four. Eighteen hundred and thirteen (67.3%) had been distributed to industry, with two hundred RESTRICTED (7.4%), sixty-six CONFIDENTIAL (2.4%) and fifty-five SECRET (2.0%). The remaining five hundred and sixty (20.8%) reports were either not worth reprinting or were awaiting review for publication.[103] This means that with most reports completed, only three hundred and twenty-one (11.9%) final reports received a security grading. Comparing these totals with those produced by the assessment of the 'Australian Index', the results are similar.

6.05   The Board of Trade Exhibition and BIOS Technical Information Service

The BOT believed that they had provided a good service to British Industry, distributing BIOS reports via the country's many trade associations. The chief beneficiaries would be the original field investigators, often nominated by their trade association whose companies would have instantly benefited their observations trade secrets of their German competitors. Gimbel cites many examples of US investigators returning to the States, armed with tacit knowledge acquired during their investigations in Germany, which subsequently transformed processes carried out by their employers company.[104] Although the investigation teams were obliged to draft evaluation reports and interview transcripts

---

[102] Office for Technical Services, FIAT Reports, Bibliography and Index of Reports Resulting from American Investigations of German Industry, January 1948. University of Nebraska – Lincoln, <https://core.ac.uk/download/pdf/188076844.pdf> [accessed 28 September 2023].

[103] TNA BT 211/235, Letter from BIOS to Derek Wood, BOT, BIOS/SEC/108/2, 3 April 1947. Totals of reports and security rating up to 27 March 1947.

[104] Gimbel, *Science, Technology, and Reparations*, pp. 147-149.

after interrogations held at DUSTBIN, it was often many months before their findings were incorporated into a Final Report. Clearly delays in publishing reports could benefit the investigator's company by providing a few months head start with a new process, yet there was no suggestion in the BIOS meeting correspondence reviewed that would suggest investigators were brought to task for delays in presenting their report. More time would pass before the Final Report received its security clearance, was printed and available to buy from HMSO, or access at one of the regional libraries. trade associations and their members would receive free copies of the Final Reports, but for companies in the same industry that were not members, they would have to source copies for themselves. By the early summer of 1946, the BOT started to consider smaller firms and sole traders who might be ignorant of BIOS and the potential held within the reports being published.

A question was raised in Parliament, requesting that the BOT outline what measures were in place to ensure 'all manufacturers in the country' were aware of the published reports.[105] The response by the Parliamentary Secretary for the BOT, John Belcher, suggested that by regular advertising of reports in the trade press and the BOT Journal, all manufacturers should be aware. This did not satisfy two MPS, Mr Errol and Mr Solley who advocated broadening the advertising of the reports beyond the BOT Journal.[106] Derek Wood of the BOT highlighted the need to ensure 'that British industry makes the utmost use of the information which has been obtained through BIOS' continuing 'It has always been appreciated that it was not sufficient just to put a mass of reports on the Stationary Office shelf and hope that industry would search those shelves until it found

---

[105] Hansard, volume 423, 3 June 1946, question from Commander John Maitland, with response by Mr Belcher. Sir John Maitland 1903-1977, Conservative MP for Horncastle. John Belcher, 1905-1964, labour MP and Parliamentary Secretary to the Board of Trade. <https://hansard.parliament.uk/Commons/1946-06-03/debates/bc384c11-7314-4786-bd88-95d0d3540905/GermanTradeProcesses(Information)> [accessed 19 May 2024].

[106] Charlie Hall, *British Exploitation of German Science and Technology, 1943-1949* (London: Routledge, 2019), pp. 219-220.

what it really wanted'.[107] Wood envisaged that small firms lacking adequate research facilities could instead turn to BIOS for support; advocating the creation of a technical enquiry service.

Responding to the concerns of the MPs, the BOT held a meeting on 18 July 1946 with attendees representing the Admiralty, the CCG and various government ministries. The meeting was convened primarily to discuss how to maximise the dissemination of reports, manage technical enquiries from industrialists and how to publicise the availability of industrial and technical intelligence. It was agreed that a new sub-section of the TIS should be created to handle written technical enquiries from the public. This sub-section, consisting of two officers and up to six clerks, would form a link between the industrialist making an enquiry and the relevant government ministry or department. It should 'be a focal rather than an end-point'.[108] By the end of August, the new enquiry team, titled the BIOS Information Service, was sufficiently well established to advertise that from 1 September 1946 it was ready to accept enquiries.[109] Publicity for the expanding library of final reports and the new enquiry service were also discussed at the 18 July meeting resulting in a three phase operation. Phase one would see HMSO, who regularly published lists of newly created reports, now start to publish a complete list of all available reports. Within all newly printed matter, an advertisement for the BIOS Information Service would be published, repeated in the BOT Journal. Phase two would involve a poster circulated to libraries and trade associations advertising the BIOS Information Service. Phase three

---

[107] TNA BT 211/22, Letter from Derek Wood, BOT to Major A. A. Stark, German Section BOT, 11 June 1946.

[108] TNA BT 211/16, BIOS, Panel Meeting on Proposals for Publicising the Availability of German Industrial Information to British Industry, BIOS (46) 38, 24 July 1946, p. 1, point 1 a.

[109] TNA BT 211/22, Letter from Major Stark, German Division, BOT, 23 August 1946, regarding the creation of the BIOS Information Service, to be based at 37 Bryanston Square, London. BIOS was based a few doors away at 32 Bryanston Square, London.

would involve a Trade Press Conference, possibly with a speech by a government minister from the Board of Trade, followed by a National Press conference.[110]

The poster was eventually issued to libraries in the autumn, supported by an editorial reproduced in the national press. An example cutting survives from the Daily Express, dated 9 October 1946 and reveals a 'probe into German trade secrets' under the headline 'Smith and the Secrets of Schmidt'.[111] Using 'Smith', a fictional British industrialist who was attempting to research information regarding his German competitor 'Schmidt', the ensuing editorial detailed how applying for information would start with an approach to the appropriate trade association, ending with a supported visit to the German company. The article discussed CIOS and later BIOS, revealing that teams had been in Europe since the Normandy landings, investigating German technology and industrial innovation. Five thousand British scientists, specialists and businessmen had dissected German industry as agents of their specialist fields or trade associations and on their return, technical reports were produced for all to share. Ten thousand sites had been scrutinised and more than twelve hundred reports produced. The writer of the article stated that the value of the information received from German trade to date would exceed one hundred million pounds according to a 'British Government authority'.[112]

Advertising the BIOS Information Service started to draw enquiries from a wide audience, including from companies in Germany that were the subjects of the reports. The British were aware that German newspapers such as the *Westdeutsche Wirtschaftzeitung* had been advertising the sales of BIOS reports since the summer of 1946, with requests for

---

[110] TNA BT 211/16, BIOS, Panel Meeting on Proposals for Publicising the Availability of German Industrial In formation to British Industry, BIOS (46) 38, 24 July 1946, p. 2, point 2, Phases A to C.

[111] TNA BT 211/22, Newspaper article from Daily Express, 9 October 1946.

[112] Ibid. There is no detail provided in the article suggesting which government authority was being quoted.

reports received by the British Military Government in Minden.[113] Although the reports were advertised by HMSO for anyone to purchase, BIOS were concerned that for German companies to have access to reports regarding their own facilities might prejudice future BIOS investigations.[114] Although the decision not to sell reports to German Industry had been made by BIOS, an advert appeared in the German business paper the *Handelsblatt* on 12 September 1946 detailing the BIOS Information Service and suggesting enquiries should be sent to 37 Bryanston Square in London.[115] The British were still adamant that reports should not be made available to German companies, yet were fully aware they could not prevent these companies receiving copies via a third party. FIAT(US) concurred with this policy.[116] There was caution over the infringement of German copyright, though the British held the belief that the broadcasting of German trade secrets through BIOS reports was only a consequence of Germany losing the war. As such there were no grounds on which the legal German copyright owner could expect to be compensated for his loss.[117]

The idea of the trade and national press conferences discussed in July, coalesced into an exhibition promoting BIOS as an organisation, the industrial know-how contained in the reports, and the BIOS Information Service. The BOT hoped this direct approach would reach smaller firms, opening the exhibition in London in December, then moving round the Country to regional centres in the early months of 1947. The goal for the exhibitions was to inspire enquiries from people or companies who had little or no knowledge of BIOS or its investigations. The BIOS Information Service would offer

---

[113] TNA BT 211/16, Request from German Agencies for BIOS/CIOS Reports, BIOS (46) 40, 25 July 1946.

[114] TNA BT 211/16, Minutes of eleventh meeting of BIOS, 31 July 1946, p. 4, Point 5, Requests from German Agencies for BIOS/CIOS Reports.

[115] TNA BT 211/16, Information Section: Publicity in the German Press, BIOS (46) 58, 15 October 1946.

[116] TNA BT 211/16, Minutes of twelfth meeting of BIOS, 21 August 1946, p. 2, B. Actions, Point ii.

[117] TNA BT 211/16, Use by German Firms of Information Obtained by Allied Investigators, telegram from Berlin Control Commission, to Wood - BOT and Ezra - BIOS, 0215 G/1366, 1 March 1947.

industrialists and manufacturers support and guidance in finding the most appropriate

information. It was hoped that advertising the exhibition in trade journals would be the

most effective way of contacting these smaller firms.[118] A poster campaign was also

mounted by the BIOS Information Service in late November.[119] The exhibition would

debut at 'I C House' at Millbank, with the displays purposely kept small to enable panels

to be taken down and swiftly reinstated without modification at subsequent exhibition

venues. Staffing limitations meant it was not possible to offer detailed advice to exhibition

attendees, however a desk was manned to accept enquiries which were forwarded to the

BIOS Information Service. Invitations to attend the exhibition were issued in late

November to around one hundred trade associations, research associations and chambers of

commerce, along with leading representatives of Britain's unions.[120]

The exhibition opened on 9 December 1946, with an address to the waiting press

by the President of the Board of Trade, Sir Stafford Cripps. His speech was to be repeated

by other speakers opening the subsequent regional exhibitions, with printed copies

provided for the press.[121] The speech provided a brief history of BIOS, how they replaced

the Anglo-US CIOS and outlined their role in the post-war investigation of German

industry. Cripps emphasised that British industry should benefit from the very best

technical information, based on the scientific and technical developments that took place in

Germany during the war, easing the transition from wartime to civilian manufacture. He

affirmed that ten thousand investigators forming three thousand investigation teams had

---

[118] TNA BT 211/22, BIOS Exhibition, Letter from G S Mansell, to Mr Wood, BOT, Exhibition proposals, 5 October 1946.

[119] TNA BT 211/11, Birkenhead Library acknowledging receipt of German Trade Secret poster, 23 November 1946. Similar acknowledgements are preserved in file BT 211/11 from other regional libraries.

[120] TNA BT 211/26 Trade Associations, invitation mailing list for BIOS Exhibition, with union representation including the Trades Union Congress (TUC), National Union of Mineworkers (NUM) and Federation of British Industry (FBI) – superseded by Confederation of British Industry (CBI) since 1965. For the full breakdown of the trade associations involved, please refer to Appendix XVI.

[121] TNA BT 211/22, Sir Stafford Cripps 'Press Handout', 9 December 1946, 4 pages.

visited Germany, with thirteen hundred and ninety reports completed and published up to November 1946. These, Cripps broke down into five hundred and seventy-two British reports (BIOS reports), two hundred and seventy-eight US reports (FIAT reports) and five hundred and forty Anglo-US reports (CIOS reports). The distribution of these finished reports amounted to four hundred and sixty thousand copies provided free to trade associations, libraries and government departments. An additional four hundred and ninety thousand had been purchased by individuals through HMSO.

The mass of documents collected by the investigation teams that had been distilled to create these reports, were retained in the TIS, who provided facilities for translating, abstracting and supplying copies to any party who was interested. Preliminary reports had totalled ten thousand, six hundred and eight. These were the documents created by the field investigators, consolidated later in the final report.[122] From this, it is logical to assume that the fourteen hundred reports referred to by Cripps on 9 December only refer to 'OPEN' reports.[123] Cripps confirmed that over seventy thousand German documents had been obtained, including research and technical reports and patent specifications. These were held at the FDU, with the patents re-registered at the London Patent Office and available for public perusal. Observing that the technical know-how collated through BIOS held great potential for UK industry, he highlighted that Britain was not the only country to have access to this knowledge, urging its use while it was still relevant and maintain Britain's position in the post-war world markets. In finishing his speech, he suggested that there was much that could be learned from German research, at the very least what areas proved to be fruitless and would equally be a waste of time for British researchers. The exhibition remained for one week, closing on 15 December after which it moved to Bristol

---

[122] TNA BT 211/22, Summary of Statistics Displayed in BIOS Exhibition.

[123] TNA BT 211/13, Draft speech for Sir Stafford Cripps containing handwritten notes confirming that the figures included are correct to 7 December 1946.

in January 1947, thence to Birmingham, Nottingham, Cardiff, Glasgow, Newcastle, Sheffield, Manchester and finally Belfast in May 1947.[124]

6.06   BIOS End - Legacy and the Technical Information and Document Unit

Investigations had expanded far beyond military targets and in some cases the acquisition of know-how had degenerated into little more than industrial theft. One case that damaged the reputation of BIOS involved 'Team 1972' who were assembled to secure secret formula 4711.[125] Five British industrialists were joined by Chemist and German speaker Mr Demuth, family friend of the owners of Ferdinand Mühlens who produced 4711, better known as Eau-de-Cologne. Demuth was a onetime producer of a solid variant of 4711 known as Frozoclone. Initial requests for the formula were refused but with Demuth's access to the family, Team 1972 pursued their claim to the private address of the sixty-seven-year-old owner, Frau Mühlens, who vehemently refused to divulge the formula. Demuth threatened to close her company and relocate manufacture in the UK as part of Unilever, enforced by the British military government in Dusseldorf. Mühlens still refused to part with her family's secret. Matters were handed over to the military authorities who assured Team 1972 that they would secure the formula under the threat of closure or 'penal measure'.

The treatment of the aged Mühlens received condemnation in the Anglo-US press, with Team 1972 accused of abusing their official position, attempting to secure a German trade secret for private profit and the use of improper pressure to achieve that end.[126] The

---

[124] TNA BT 211/22, BIOS Exhibition, 30 December 1946.

[125] TNA BT 211/169, HQ T Force, BOAR, BIOS Trip 1972 (Operation Eau de Cologne 4711), 17 August 1946. Team 1972 comprised Mr Adam of Pears Soap and Manager of the Perfumery Branch of Unilever, Perfume manufacturers Middlemiss of Max Factor, Dyas of Grossmith, Seager of Yardleys and Madden of Potter and Moore. German speaking Mr Demuth completed the investigation team.

[126] TNA BT 211/169, Draft letter from Sir John Wood of the BOT to Sir Gilmore Jenkins of the Foreign Office, 30 January 1947.

Foreign Office investigated the allegations thoroughly, with members of Team 1972 interrogated. Sir Gilbert Jenkins of the Foreign Office concluded to Sir John Wood of the BOT, that the team had acted improperly, that Demuth probably intended to use the formula for personal gain, yet 'the proper course is to let this affair die a natural death'.[127] The case of 4711 was not isolated, with the New York Herald Tribune quoting other stories from the British Press under the headline of 'German Patent Racket' and accusations of corruption based on 'definitive evidence' at sites such as the Hanomag of Hamburg and the Bauer und Schauerte of Cologne.[128] Team 1972 stressed that access to 4711 would bring great employment to the UK and was a worthy target. In fact, understanding the process and constituents of 4711 would have benefited few members of Team 1972 - possibly only Demuth. The reputation of BIOS was tarnished by these scandals, with the future of investigations discussed by the BOT, CCG and foreign office.

On 1 January 1947 the British and US zones of occupation merged economically to create Bizonia, with Washington softening its negative and repressive attitude towards Germany.[129] In the weeks following the zonal merger, Anglo-US authorities debated not if, but when BIOS investigations should end. The Foreign Office telegrammed the US State Department on the 3 February, advising that a date of the 31 March 1947 that had been proposed by the Office of Military Government United States (OMGUS) in Berlin.[130] The BOT was 'extremely anxious to announce the end of BIOS', however they suggested this

---

[127] TNA BT 211/169, Letter from Sir Gilmore Jenkins to Sir John Wood of the BOT concluding the actions of the British investigation team were irregular, 9 May 1947.

[128] TNA BT 211-169, Text from New York Herald Tribune, 9 November 1946, based on excerpts from British 'New Statesman' 'Daily Express' and 'Tribune' newspapers.

[129] Nicholas Balabkins, *Germany Under Direct Controls*, p. 21. It was hoped that by pooling the economic resources of the two zones, considerable economic reconstruction would follow.

[130] OMGUS, Office for Military Government, Unit States, existed between 1 October 1945 until it was disbanded on 5 December 1949.

termination date was 'unsatisfactory' and submitted a compromise end date of 30 April as more appropriate - assuming an immediate announcement was made.[131]

Hugh Dalton, Chancellor of the Exchequer, had prepared a statement regarding the future of BIOS and investigations in Germany to be given during a debate on 5 February 1947. Although notes prepared for this debate are preserved at TNA, there is no record of the debate on Hansard so presumably was not held in the House. Hansard is the verbatim record of all debates in parliament. Dalton stated that the investigations – by authorised British and Allied investigators - had nearly come to an end.[132] Quoting Stafford Cripps' opening address at the BIOS exhibition two months earlier, Dalton repeated that ten thousand investigators had visited targets in western Germany, enabling British industry to benefit from seventy thousand German patents that were evacuated - in addition to the Reich's wartime technological developments.[133] But now, with the agreement of the US, it was time to free German Industry from exploitation within the next two or three months. Dalton praised the assistance provided by the CCG, who transported investigators nine million, eight hundred thousand miles in the British zone alone and a further three million five hundred in the US zone. He suggested that these investigations had been beneficially conducted, while acknowledging that:

> the Germans have been forced to divulge their wartime secrets to the industry of the United Nations, and in this way have achieved something which might be called an invisible reparation. That operation is now nearly over and German industry can now settle down to peacetime activity without the inconvenience of continued investigations by Allied scientists and technicians.[134]

---

[131] TNA FO 943/292, Telegram from British Foreign Office to US State Department, ref UE 656, No. 1034, 3 February 1947. Author not stated.

[132] TNA FO 943/292, Notes prepared for the Chancellor for debate in the house on 05-02-47, dated 03-02-47.

[133] Sir Stafford Cripps 1889 – 1952 – president of the Board of Trade July 1945 to September 1947.

[134] TNA FO 943/292, Notes prepared for the Chancellor for debate in the house on 5 February 1947, draft speech dated 3 February 1947.

Throughout the remainder of February and into March, telegrams passed between the Control Commission and the Foreign Office, refining the wording of the termination statement. The Final hurdle before issuing a public statement terminating BIOS, was the requirement for the French Government agreeing to the termination of investigations. French agreement was necessitated by them being one of the four occupying powers and was deemed an essential by the US. The French failed to respond to communications in March. US General Clay[135], de facto head of OMGUS in Berlin, refused to issue a termination announcement until the French replied either for or against the ending of BIOS operations.[136] Another telegram was sent to Paris on 18 March reiterating the reasons for closing BIOS and including the agreed wording of a joint statement that the Foreign Office hoped incorporated French sentiments.[137] No formal reply from the French has survived in the TNA file, yet when the official statement of the termination of BIOS was broadcast on 27 March 1947. The text referred to the agreement made by the Military Governors of the British, US and French zones, suggesting either the French agreed to the termination, or General Clay withdrew his veto.

The official termination of BIOS activities was promulgated by a memo issued by the Bipartite Board Secretariat (BISEC) of Lieutenant-Colonel Prescott and Major Mather.[138] The single page document referred to the 'Allied technical Investigations into German Industry under BIOS and FIAT auspices', having been ongoing since June 1945.

---

[135] Brigadier-General Lucius D. Clay, 1898 – 1978, deputy to General Joseph T. McNarney although often acting as head of OMGUS until McNarney was posted back to Washington. Clay assumed the role of head of OMGUS on 15 March 1947, along with Governor of the US Occupation Zone based in Frankfurt. He was promoted to General two days later.

[136] TNA FO 943/292, Telegram from OMGUS Berlin to Control Office London, ref BGCC 4131, 121 A, 14 March 1947, responding to earlier telegram from Control Office to Berlin OMGUS, ref CCG/1367, 116 A, 6 March 1947, point 2 stating that the Control Office did not believe they needed to wait for concurrence from the French.

[137] TNA FO 943/292, Telegrams from British Foreign Office to Paris, CE 278/67/74, 123 A and 124 A, 18 March 1947.

[138] TNA FO 943/292, BISEC/memo (47) 9, 129 A, Bipartite Board, Termination of FIAT and BIOS Activities, 27 March 1947.

Participation in investigations had been open to all Allied governments using facilities offered by the Zone Authorities where 'results of these investigations are, subject to security considerations, public and available to all'. However, the 'current German economic situation in the Western Zones' and the difficulty in providing accommodation for investigation teams was given as the reason investigations would close. They specified that no new industrial investigation teams would be allowed to enter the US or British Zones after 15 May 1947, and all ongoing investigations must be terminated by 30 June. Writing in a telegram to the German Reparations Distribution in Brussels, the British Foreign Office noted that in addition to the published BISEC statement:

> The following considerations have weighed with us:
> i. Complaints from several governments that German subsidiaries of firms located in their countries have, in common with subsidiaries of British firms, been forced to disclose their trade secrets etc. It is time this ended.
> ii. The grave effect that continuation of these investigations has on rehabilitation of German industry. [139]

Copies of the BISEC statement were issued by the Foreign Office by telegram to Moscow Washington and Paris, confirming the termination of BIOS.[140]

The closing of BIOS was not popular with some European Countries. The Czechoslovak government on 21 April, presented an 'aide mémoir' - an informal diplomatic message - protesting the termination of BIOS and announced they would bring the matter to the CCG in Berlin and the Inter Allied Reparations Agency (IARA).[141]

---

[139] TNA FO 943/292, Telegram from Foreign Office to Brussels – German Reparations Distribution, Termination of BIOS investigations in Germany, CE 769/67/74, 128 A, March 1947. The author of text and recipient are not specified other than issued by the Foreign Office to Brussels. Brussels may refer to IARA, the Inter-Allied Reparations Agency.

[140] TNA FO 943/292, Foreign Office to Moscow – German Reparations Distribution, CE 769/67/74, 128 A, 31 March 1947. Author of text not shown other than issued by the Foreign Office.

[141] TNA FO 943/292, British Embassy in Paris to Ministry of Foreign Affairs, 90/37/47, No. 506, 23 May 1947. Notice issued that the Czechoslovak government had presented an Aide Mémoire on 21 April 1947. The Inter Allied Reparations Agency (IARA) was the body based in Brussels, established in 1946 after the Paris Peace Conference, charged with distributing German reparations among the eighteen signatory countries.

Responding on behalf of the CCG, Mr Robinson noted that the Czech government were

informed in November 1946 that there was no objection to their investigation team's entry

to the British Zone, yet they didn't send their first team till March 1947. Robinson

continued that 'only now that the Allied technical investigations are ending that they are

beginning to take interest'. Writing on 19 May, he confirmed that every assistance had

been offered, to clear the great number of Czech teams for whom applications have been

received in the last ten days. The Danish Government also objected to the ending of Allied

technical investigations, although it was suspected they would merely support the Czech

protest and not raise their own independent objection.[142] They did make the point that

termination of BIOS investigations was not made officially to individual governments.

Robinson noted that the joint declaration by the US, UK and French authorities in Berlin

on 27 March was all that was necessary, and that nothing more official was needed.[143]

Robinson concluded that the decision to terminate BIOS was tripartite, advising the Czechs

and Danes that the UK, US and France had no intention of reversing it.

Press coverage on 21 March 1947 in Pravda, the official newspaper of the

Communist party in the Soviet Union, questioned the British removal of German Patents

from the German Patent Office in Berlin. The article stated that the haul allegedly included

seventy thousand war time specifications and patents that an Anglo-US organisation had

acquired. [144] Pravda, meaning 'Truth' in Russian, stated that the most important sections

were withheld on the pretext of security yet provided the western powers enormous

---

[142] TNA FO 943/292, British Embassy in Paris to Ministry of Foreign Affairs, 90/37/47, No. 506, 23 May 1947, point 2.

[143] TNA FO 943/292, Telegram, Termination of Allied Investigations, GRA /877, 135 A, 19 May 1947, originator Mr A C Robinson, Foreign Office to Berlin. The text also appears in a telegram issued the following day titled 'Termination of BIOS', CE 1965/67/74 136 A, 20 May 1947, issued to Washington, Brussels and Paris.

[144] TNA BT 211/235, Briefing documents provided to Mr Havilland of the foreign office, for use in discussions at the Council of Foreign Ministers. The comments in Pravda were raised by P. S. Kislitsin, Head of the Department of Physics at Khabarovsk Medical Institute. Pravda

financial gain - a vast reparations sum that would not be shared with the USSR or any other country. Pravda finally asserted that the published information from Anglo-US organisations (presumably by FIAT and BIOS) 'was vitiated by a lack of detail and documentation'.[145] The Soviet accusations were raised in Parliament, with Richard Stokes, MP for Ipswich, quoting Soviet Minister Vyacheslav Molotov, who claimed that the Allies had taken from Germany, patents, processes, designs, secrets and know-how with an assessed valued of £2,000,000,000.[146] The Secretary of State for Foreign Affairs Christopher Mayhew, questioned Molotov's figure, stating it was a fantastic over-estimate, while observing that the products of investigations had not been sold. Instead, the information was published in reports shared with the world. [147]

It transpired it was Soviet forces who first seized the patents and subsequently prepared four positive microfilm copies for issue to the Allies. The patent applications had been registered and later captured in Berlin, applying to Germany, Japan, Italy and Austria. The Soviets retained one copy themselves, while issuing a copy to the US, British and French authorities.[148] The British copy ended up at the London Patent Office for safe keeping, transported in ninety-four large biscuit tins. Unfortunately, the Soviet microfilm used highly inflammable celluloid.[149] Duplication was swiftly carried out by HMSO, creating a non-flammable version - complete by the end of July 1947. The new copy

---

[145] TNA BT 211/235, Briefing documents provided to Mr Havilland of the foreign office, for use in discussions at the Council of Foreign Ministers. Pravda assertions, points 1-4.

[146] Hansard, volume 445, 3 December 1947, Mr Stokes' question to Mr Mayhew. Mr Richard Stokes 1897-1957, Labour MP for Ipswich. Mr Christopher Mayhew 1915-1997, Labour MP for South Norfolk and Under-Secretary of State at the Foreign Affairs. < https://api.parliament.uk/historic-hansard/commons/1947/dec/03/reparation-plants#S5CV0445P0_19471203_HOC_164> [accessed 12 August 2023]. Vyacheslav Molotov, 1890-1986, Soviet Peoples Commissar for Foreign Affairs, May 1939 to 1947.

[147] Christopher Mayhew (1915-1997), Secretary of State for Foreign Affairs under Foreign Secretary Ernest Bevin, in office 1945-1950.

[148] TNA BT 211/236, Meeting briefing document headed 'The Microfilm', point 1, 23 September 1948.

[149] The patent office staff were seriously concerned that the microfilm, estimated to be in the region of one hundred thousand feet long was highly inflammable and was giving off a pungent smell in the June heat. HMSO resolved to copy the records as swiftly as possible, creating a non-flammable contact sheet that was accessible to the public at the Patent Office Library.

comprised nine hundred thousand individual frames across one thousand and eighteen reels. The Patent Office advocated this inert version should become the new master copy, enabling duplication to issue to other interested parties – presumably including the Soviet authorities should they request another copy.[150] The cost for each complete copy was set at £1750 based on a quote issued to the Czech Government in 1947.[151] Nothing was expunged from the original Soviet print. Were items removed by the British, comparison with copies held by the Soviets, French or US would merely draw attention to items seen as sensitive, thus the microfilm was duplicated in full.[152] The Soviet claims in Pravda in March were proven to be completely without merit.

Closer evaluation of the usefulness of the Berlin patents revealed only about thirty percent were valuable. Eventually, around forty-seven thousand patent applications were lodged with US repositories and the FDU in London.[153] One hundred and thirty 'secret' German patents did find their way to BIOS in May 1947, some very badly damaged by fire, with a twenty page accession list forwarded to the BOT for comment by Liebert of the BIOS secretariat.[154] The London Patent Office had refused to accept secret patents, recommending that the files should be downgraded to 'unclassified', after which they would register the patents.[155]

---

[150] TNA BT 211/236, London Patent Office to Ministry of Works, German Patent Microfilm, 27 June 1947.

[151] TNA BT 211/236, Letter to C.Vojta, Czech Embassy, GD 770/48, 2966.48, I G Perryman, BOT, 07 June 1948.

[152] TNA BT 211/236, Letter to Perryman, BOT, 239/Germany/4/1, G F Shuman, Ministry of Supply, 3 June 1948.

[153] TNA BT 211/236, BIOS Washington Representative, letter from Major J E Parkinson to Poole – FDU and Stark-BIOS London, 310-0-8, 10 July 1947.

[154] TNA BT 211/165, Liebert BIOS to Mansell BOT, BIOS/Pbl/142/4, 17 May 1947, plus twenty pages detailing the 130 secret patents – many detailing military innovations developed during the war.

[155] TNA BT 211/165, Minutes of Meeting of the Working Party for the Release to Industry of BIOS, CIOS, FIAT and JIOA Reports, p. 2, point 5, 13 May 1947.

The repository for captured enemy documents and technical writings – the FDU merged with the archive for all CIOS, BIOS, FIAT and JIOA reports - the TIS on 3 November 1947. The merger had been proposed in April, but it had been a major undertaking to combine the storage facilities into a single usable archive.[156] The FDU library and the TIS library used different indexing methodologies causing further problems. Differences were eventually resolved in the combined facility, under the auspices of the BOT, opened for public enquiries under the new name of the Technical Information and Document Unit or TIDU. Correspondences that would have been sent to the BIOS Information Service and TIS, would now be handled by this new unit. Services of the TIDU were promoted to the public with advertisements referring to the investigations of over thirty thousand research centres and German factories being available to British industry. English summaries of the German language documents had been produced by the FDU, with sixty-five thousand available to British Industry to view in the TIDU reading room in Cadogan Square. By November 1947, fifteen hundred visitors had examined just under four thousand German documents, and orders for copies had exceeded a quarter of a million pages. HMSO were still printing and selling reports taken from the two and a half thousand completed, with half a million sold by the autumn of 1947.[157] The TIDU continued this cataloguing of captured documents with detailed index sheets produced and circulated within the UK, US and to the CCG in Europe.[158]

Allied technical investigations were terminated in the late summer of 1947, ending the exploitation of German industrial secrets and process for the benefit of Allied industry. It was agreed by the UK and US that all investigation teams were to have left Germany by

---

[156] TNA FO 211/171, Notes on Visit to FDU and Suggestions for Merger of TIS Library and FDU, 15 April 1947.

[157] TNA BT 211/171, Announcement to be carried in earliest available issue of Board of Trade Journal, technical information from Germany and Japan, 19 October 1947.

[158] TNA BT 211/335, BOT German Division (Documents Unit), document summary sheets 1947 to 1948.

30 June.[159] The policy of the Foreign Office was now to restore 'normal commercial intercourse between Germany and the rest of the world as soon as possible'.[160] With investigation visits prohibited, the BOT and the US Department of Commerce feared that essential know-how might have been missed by the investigation teams, only to be revealed after 30 June. Although Allied access to information was enshrined in the German Terms of Surrender, the reality of accessing information in Germany was getting more difficult. The closure of FIAT in the US zone had made visiting businesses harder, particularly with US Governor, General Clay's opposition to investigation teams accessing the US Zone. In spite of earlier French agreement to the termination of BIOS in March, they now objected, fearing that the door would be 'slammed tight on procurement of technical data' and suggesting that a protocol be created to maintain access to technical information in the three western zones. There was a suggestion that German companies might sell their trade secrets to investigators after 30 June, though inflated sums were anticipated. [161]

The Board of Trade's distribution of CIOS, BIOS, FIAT and JIOA reports through the HMSO enabled technical information and know-how, gleaned from a defeated Germany, to be disseminated around the world. Less than one fifth of reports carried a security grading, leaving the rest to be purchase though HMSO. Publicising the reports in the popular press and trade exhibitions ensured UK industry could access the published information. International interest in the reports was also strong, with evidence that the Soviets were big buyers.[162] The Soviet Union were so impressed with BIOS publications,

---

[159] TNA FO 943/292, The Future of Technical Investigations in Germany, Letter from the BOT to Mr Haviland of the Foreign Office (German Section), GD 1698/46, p. 1, 30 May 1947.

[160] TNA BT 211, Letter to Patrick O'Regan, Foreign Office regarding the termination of BIOS and exit of investigators by 30 June 1947. Letter dated 28 May 1947, E 21/12/30.

[161] TNA FO 943/292, The Future of Technical Investigations in Germany, Letter from the BOT to Mr Haviland of the Foreign Office (German Section), GD 1698/46, p. 3, 30 May 1947.

[162] TNA FO 943/292, Text regarding BIOS, unnamed but dated 26 February 1947.

that they spent approximately four hundred thousand dollars annually purchasing every report.[163] By April 1948, the Foreign Office had stated to the TIDU that reports and documents and services should be withheld 'administratively' from countries other than the Dominions, USA, France and the Netherlands who all offer reciprocal services. This meant Belgium, Norway and other friendly countries were treated in the same way as ex-enemy countries. More specifically, as far as possible by 1949, the priority was to ensure documents did not reach Russia or 'unfriendly' Iron Curtain countries.[164] As the decade ended, the British Foreign Office viewed Japan as a 'friendly ally', although were still hesitant to provide unlimited access to the technical information held by TIDU - Japan would be in competition with British exports. By 1952, Japan had been given permission to translate and reprint CIOS, JIOA and FIAT reports covering German and Japanese wartime industry.[165]

Physical removals of plant and technology were due to end in September 1947, though acquisitions were still being pursued in the months that followed. According to Hansard, the removal of items from Germany as reparations was due to end on 27 September 1947, with the last items being shipped out of the country by 16 October.[166] Heavy machine tools were still being removed from factories under the guise of 'multilateral reparations' as late as 8 October for shipment to the UK, suggesting there was a last scramble to take advantage of German industry before the window of opportunity closed. Removal of items continued up to December, with further debates in parliament attempting to determine when removals would cease. By the end of November, Mayhew,

---

[163] Hall, *British Exploitation of German Science and Technology*, p. 89.

[164] TNA BT 211/539, General notes regarding report and documents usage by foreign powers, undated.

[165] TNA BT 211/539, letter from HMSO to TIDU regarding Japanese reproduction of reports and copywrite of BIOS documentation, C54/150, 23 July 1952.

[166] Hansard, volume 443, 27 October 1947, question from Mr Stokes to Mr Mayhew, < https://api.parliament.uk/historic-hansard/commons/1947/oct/27/multilateral-reparations#S5CV0443P0_19471027_HOC_42> [accessed 21 May 24].

the Under Secretary for Foreign Affairs advised that seven hundred and forty-one machine

tools had been removed by T Force, with a final eight scheduled for removal; after which

no further requisitioning was sanctioned.[167] The British Foreign Office hoped German

industry would be left to restore 'normal commercial intercourse between Germany and the

rest of the world as soon as possible'.[168]

---

[167] Hansard, volume 445, 3 December 1947, Mr Stokes' question to Mr Mayhew. < https://api.parliament.uk/historic-hansard/commons/1947/dec/03/reparation-plants#S5CV0445P0_19471203_HOC_164> [accessed 12 August 2023].

[168] BT 211, Letter to Patrick O'Regan, Foreign Office regarding the termination of BIOS and exit of investigators by 30 June 1947, E 21/12/30, 28 May 1947.

Conclusion

> The modern analyst can readily be overwhelmed with material, and it must always be remembered that if an adequate end-product is to be provided, all the available data on a given subject must at some point be assembled in one place and in one mind.

Major-General Sir Kenneth Strong KBE, CB on the subject of intelligence gathering[1]

This dissertation analysed how and why British intelligence target collation, capture and dissemination evolved between 1942 and 1947 and adapted in response to changing military, operational and political needs. These two dates bookend targeted intelligence capture with the creation and deployment of the first permanent Intelligence Assault Unit (IAU) tasked with the capture of specific intelligence in 1942, and the ending of targeted intelligence exploitation by BIOS in the second half of 1947.

In the Spring of 1942, Britain's immediate need was for cryptographic intelligence to counter the threat of Germany's U-boat offensive in the Atlantic. The solution devised by British Naval Intelligence was the Intelligence Assault Unit (IAU), a permanent and highly trained team of commandos given additional specialist training in identifying and capturing high level cryptographic intelligence. Their creation was inspired after observing the success of a German intelligence unit operating during the invasion of the Balkans in 1941. The motivation to create the IAU ten months later has been argued to be a change of German encryption protocol in February 1942 that prevented the decryption of Atlantic U-boat communications for the rest of the year. The use of existing intelligence structures such as the army's FSS were considered but deemed to be unsuitable for the needs of Naval Intelligence. Once formed, the IAU was first deployed in North-West Africa, where their performance was deemed to be beyond expectations. The IAU, initially titled 30

---

[1] Strong, *Men of Intelligence*, p. 153.

Commando and later 30AU, remained in Europe in the Mediterranean and later France from 1944, with the remit broadened to include other naval and military targets. They adapted their processes to work in parallel with their equivalent US unit - the FIU – and alongside other British intelligence investigators commissioned by CIOS. Their skill and versatility made them an essential addition to the intelligence gathering teams operating in Europe.

Preparing for the capture of Tunis and Bizerte, a Security Intelligence Force or S Force had been created to handle the increased number of potential targets. The Navy IAU operated alongside the FSS, who would locate human targets, while the RAF regiment would provide the muscle to secure and guard intelligence targets. Although officially disbanded, key members of S Force remained in the Mediterranean to participate in future intelligence assaults. Target collation had been undertaken by Advance Intelligence sub-section of the G2 AFHQ for Tunis and later preparations for the fall of Rome. With Rome's liberation and at the recommendation of JIC(AF) in Algiers, this team had been retitled the Intelligence Objectives Sub-Section (IOSS) and continued the collation of targets in Italy and Austria for the remainder of the war. After Rome was secured, S Force was also made a permanent body, with the nucleus retained as the Intelligence Collection Unit (ICU) and the naval IAU a key permanent member.

Though target collation and capture had been refined during 1944 with the IOSS and ICU, success in the Mediterranean still had little influence over the way targets were registered and secured in Western Europe. This was despite many of the senior officers that had served in AFHQ in the Mediterranean transferring to SHAEF in the UK and bringing their experience of S Force to the Combined Command. Target research and collation considered the entirety of the Western, Eastern and Northern European theatres,

planning for the collapse of German Forces and the sudden vacation of these territories.
This eventuality was embodied by operation RANKIN and would dominate target
identification for the remainder of the War. Even after the Normandy landings in June, the
Combined Chiefs of Staff still prepared for a sudden German withdrawal and occupation
of key intelligence sites by Anglo-US forces. The precepts of RANKIN were only replaced
in the final months of the War by operation ECLIPSE as it was realised that Germany
would not collapse but would have to be forced to surrender. The Naval IAU (30AU)
adapted to work within ECLIPSE, preparing to occupy costal installations with limited
notice.

Target analysis was carried out across the continent, from the Baltic States to
Scandinavia, France to Hungary. This was initially undertaken by the British alone,
working under the Joint Intelligence Committee, but by the middle of 1944, they were
assisted by a US contingent. The makeup of the British committee and working parties was
adapted to accommodate US members, with control of the coordinating body, now titled
Combined Intelligence Objectives Subcommittee (CIOS), absorbed by the Anglo-US
combined command SHAEF. With this evolution of governance, CIOS took on the remit
to assemble and despatch investigators to the continent to survey target sites as they were
liberated. Experience of S Force in Italy showed that speed was essential, with immediate
access to targets needed before intelligence was destroyed or contaminated by the
liberators or the liberated. Without an equivalent permanent S Force in Western Europe to
guard and secure target sites in advance of investigation teams arriving, this would prove
difficult to achieve. A permanent S Force equivalent, named T Force, was not created and
deployed until after the crossing of the Rhine in March 1945. The staff element of T Force
had been assembled in Brussels in November but lacked an allocation of troops to provide
a presence near the front line. The adaptability of CIOS is well illustrated by their creation

of Anglo-US CAFT teams in March 1945, allocated to each Army Group. CAFT members, fluent in German and understanding the significance of targets, would reconnoitre sites and only call in specialist investigators if sites merited evaluation. They were empowered to review sites discovered by chance, calling on forces such as the new T Forces to secure and guard facilities (if required), while waiting for specialists to arrive.

With the successful conclusion to the European War in sight, the remit of intelligence capture was expanded beyond urgent military targets to encompass commercial intelligence during the final months of 1944. Initially receiving a cool response from members of CIOS, a new subcommittee would eventually be formed to handle commercial subjects, with duties split equitably between parallel British and US staff. Only after the conclusion of the War in May 1945 did the Grey Lists and Black Lists merge into a single list of intelligence targets to be investigated. CIOS chairman Linstead, writing in 1946, observed that the CIOS machinery proved to be conveniently adaptable to dealing with longer term peacetime interests of science and industry.[2] He justified commercial investigations, suggesting that German developments were often made in the face of the Allied blockade as they attempted to create Ersatz solutions. Allied investigations could assess which developments were useful to the wider world, and which were only pertinent to Germany's wartime predicament.

With military operations concluded in Europe, the combined command SHAEF was terminated in July 1945, to be replaced by four Governors of independent occupation zones. CIOS was terminated at the same time. Though CIOS was an exemplar of Anglo-US cooperation, it had been decided that post-war intelligence investigation would be

---

[2] BT 211/22, Notes of Telephone Conversation regarding CIOS with ex-chairman Professor Linstead, 27 November 1946.

simpler to run independently along national lines, though findings would be shared. The targeting and investigation of German intelligence in post-war Europe was continued by the UK through the British Intelligence Operations Subcommittee (BIOS), now subservient to the Board of Trade (BOT). This committee met for the first time in August 1945, and thereafter sat fortnightly, agreeing policy and process for target proposals, dispatching investigators and, from December, publishing final reports.[3] The US commitments from CIOS were inherited by JIOA in Washington. Analysis of reports published up to October 1946 indicate that JIOA subjects amounted to less than three percent of total report subjects.[4]

With the decision to disseminate the findings of CIOS (and BIOS) investigations, assuming security clearance, the major commitment of BIOS for the two years after the end of the War was to draft and publish the findings of the hundreds of investigators sent to Europe. The first batch were released to the public in December 1945 and weekly releases followed.[5] Efforts were made to publicise the available reports with press releases and exhibitions staged to contact Britain's industry. Less than one fifth of reports carried any security rating and copies had been issued to much of the globe. BIOS and the BOT deserve praise for completing so many investigations in post-war Europe with its conflicting national agendas. BIOS can also take credit for ensuring so much industrial and commercial intelligence was placed in the public domain through nearly three thousand reports, thereby supporting British Industry in the austere years after the end of the Second World War.

---

[3] Inaugural meeting of BIOS committee 8 August 1945, twenty six days after the termination of CIOS and thirty-six days after the twenty-second and final CIOS committee meeting held on 4 July 1944.

[4] TNA FO 1005-1602, CIOS BIOS FIAT JIOA Report Subject Index. For the full breakdown of the report subject groupings of the Australian Index, please refer to Appendix XV.

[5] TNA BT 211/13, Public statements were issued in the Board of Trade Journal and daily and technical press, 15 December 1945.

Analysis undertaken throughout this dissertation has established how the thread of targeted intelligence capture, which runs through the interconnected events detailed in each chapter, evolved in response to changing military, operational and political needs – de quo supra. The narrow 1942 brief to capture cryptographic intelligence was expanded to secure military and naval intelligence, with disparate intelligence bodies such as the 30 Commando, FSS and ALSOS brought together in Italy under the umbrella of S Force. With the prognostication of a collapse of German forces during 1943 or 1944, intelligence target research was directed to the entire European continent, deviating from the proven IOSS model in Italy, with CIOS coordinating the collation of resulting data into the consolidated Black List. The post-war change of focus from military targets saw tested collation structures adapted and expanded to exploit Germany's industrial and commercial infrastructure. The same operatives who compiled target lists of military research centres in 1944 were organising exhibitions and publishing industrial intelligence in 1947 - disseminating industrial know-how to manufacturers globally in order to begin the reconstruction of a war ravaged world.

Bibliography

Primary Sources - Published

Alanbrooke, Lord, *War Diaries 1939-1945: Field Marshal Lord Alanbrooke* (London: Weidenfeld & Nicholson, 2001)

*Britain and the making of the Post-War World: the Potsdam Conference and beyond (*Documents from the British Archives) ed. Gill Bennett & Richard Smith, (London: Foreign & Commonwealth Office, 2020)

CIOS Report, *Krupp A. G. and Bochumer Verein: XXXII-67,* (London: HMSO, [1946(?)]; Uckfield: The Naval & Military Press, 2016)

Howard, Michael, *Otherwise Occupied: Letters Home From the Ruins of Nazi Germany* (Tiverton: Old Street, 2010)

Neitzel, Sönke, *Abgehört: Deutsche Generäle in britischer Kriegsgefangenschaft 1942-1945* (Berlin: Propyläen Verlag, 2007)

Primary Sources – Unpublished

Amersham Museum

Transcript of audio *Interview with Gerry Dyche 2*, 14 May 2018, accessed 20 May 2019

Cambridge University, Churchill College (CHU)

GBR/0014/GDFY
The Papers of Admiral John Henry Godfrey
13 volumes

GBR/0014/GDFY 1/6
Naval memoirs, Vol. 5, pt. 1, 1939-1942, 1965

GBR/0014/GDFY 1/7
Naval memoirs, vol. 5, pt. 2, 1939-1950, 1965

GBR/0014/GDFY 1/8
Naval memoirs, Vol. 6, 1943-1946, 1964

Oxford University, Nuffield College Library (NUF)

CSAC 80.4.81
Catalogue of the Papers of Frederick Alexander Lindemann, C.H., F.R.S. Viscount Cherwell of Oxford (1886-1957)

CSAC 80.4.81/H.236
Scientific Research and Development
Miscellaneous minutes and correspondence, January 1943-December 1944, re planning and organisation of post-war scientific research

CSAC 80.4.81/H.237
Scientific Research and Development
Draft for speech by Cherwell to the House of Lords, 6 July 1943, re need for expansion of scientific research particularly in relation to fuel development

CSAC 80.4.81/H.243
Scientific Research and Development
Minutes exchanged between Cherwell and Churchill, 3 December 1944

CSAC 80.4.81/H.250
Scientific Research and Development
Correspondence with the Ministry of Supply, June-July 1945, re possibility of increasing the allocation of paper for scientific periodicals in order to speed up the dissemination of scientific knowledge gained during the war

CSAC 80.4.81/H.262
Miscellaneous
Minutes to Cherwell re various aspects of post-war reconstruction

CSAC 80.4.81/H.273
Post-War Treatment of Germany
Minutes to Cherwell re post-war treatment of Germany from T. Wilson, F.R.P. Vinter and others, June 1943-December 1944

CSAC 80.4.81/H.274
Post-War Treatment of Germany
The Need for High-Level Decisions on Principle on the Future of Germany, by G.D.A. MacDougall

CSAC 80.4.81/H.275
E.I.P.S. (Economic and Industrial Planning Staff)
Correspondence re appointment of F.R.P. Vinter as a member of E.I.P.S.

CSAC 80.4.81/H.286
Post-War Treatment of Germany
Miscellaneous correspondence re Germany

CSAC 80.4.81/H.287
Post-War Treatment of Germany
Minutes to Churchill re German reparations, etc., March-July 1945

CSAC 80.4.81/H.288
Postwar Treatment of Germany
Memoranda by M.R. Jefferis

The National Archives (TNA)

File Prefix Groupings

ADM	Admiralty Papers
AIR	Air Ministry Papers
BT	Board of Trade Papers
CAB	Cabinet Office Papers
DEFE	Ministry of Defence
FO	Foreign Office Papers
HW	GC&CS / GCHQ Papers
PRO	Public Records Office Papers
T	Treasury Papers
WO	War Office Papers

Intelligence Assault Unit (IAU), Conception, Formation and Deployment

DEFE 2/942	Intelligence Assault Unit
DEFE 2/955	Intelligence Assault Unit: formation and operational reports

30 Commando / 30 Assault Unit / 30 Advanced Unit

ADM 1/15798	Combined Operations: "Operation Woolforce": report of activities of No.30 Assault Unit in Paris during 1944
ADM 202/308	30 Assault Unit
ADM 202/598	30 Assault Unit: photographs Vol 1
ADM 223/213	Appendix 1 (Part 5): History of SIGINT operations undertaken by 30 Commando/30 Assault Unit
ADM 223/214	Appendix 1 (Part 5): History of 30 Commando (later called 30 Assault Unit and 30 Advanced Unit also known as Special Engineering Unit): includes part played by Commander Ian Fleming, Operation Torch (North Africa), Dieppe Raid, Operation Bantam (Calabria), Operation Baytown (Calabria), Operation Avalanche (Salerno), Operation Overlord (Normandy Landings), Operation Neptune (Normandy), Eclipse operations (special duties in Germany after organised resistance had ceased), discovery of gold and bearer bonds, Operation Zipper (landings at Penang), Operation Tiderace (occupation of Penang and Singapore)

ADM 223/349   No 30 Assault Unit: target lists for operations in Germany (Second Edition)

ADM 223/464   History of Naval Intelligence and the Naval Intelligence Department 1939-1945 including raids on the Scharnhorst, Gneisenau and Graf Spee. Also, Operation Ruthless (capture of German Enigma cypher machine) planned by Commander Ian Fleming, Operation Husky, Operation Mincemeat, Operation Tracer, Operation Torch (landings in North Africa), Room 40 and the raid on St Nazaire

ADM 223/500   30 Assault Unit (formerly Special Engineering Unit) and 30 Commando: papers. Includes Field Information Agency Technical and correspondence with Commander Ian Fleming, intelligence information and capture of weapons required for Operation Overlord (Normandy Landings), Woolforce (target in Paris area) and copy of war diary for No 3 Ship Signal Section Detachment, Royal Signals, 12 Feb-5 Aug 1945

ADM 223/501   30 Assault Unit: targets

DEFE 2/1107   30 Assault Unit (formerly Special Engineering Unit, formerly 30 Commando, later 30 Advanced Unit): mobilisation, control, disbandment, Honours and Awards

HW 8-46   The Handling of Naval Special Intelligence

HW 8/103   Report on British Procedures for Capturing and Exploiting Enemy Naval Documents
U.S. Navy report on the work of N. S. VI at GC&CS and the 30th Assault Unit responsible for the capture of enemy documents.

HW 8/104   History of 30 Commando (latterly called 30 Assault Unit and 30 Advanced Unit) including History of Sigint Operations Undertaken by 30 Commando/30 AU
This is a detailed account of wartime operations conducted by 30 Commando to obtain enemy documents and equipment

HW 8/116   Accession Lists of Captured Documents. ULTRA/ZIP/NS/PU/I/1-16 (Italian); PU/J/1-39 (Japanese); PU/G/1-62 (German)

WO 204/12365   The Brandenberg Regiment [German sabotage organisation]

Government Code and Cypher School (GC&CS) and Bletchley Park

HW 41/137   A short history of the naval branch of the organisation , called the "Y" service, which was set up to intercept enemy communications

HW 50/2   Minutes of the Meeting of the Editorial Committee of the Naval Section History with Historical Committee 'Y' and minutes of successor committees. Minutes of meetings to progress all aspects of work on the writing of the history of British naval sigint during World War II

HW 50/15   GC&CS European Naval Section Extracts and Dossiers collected apparently for historical purposes and/or research

HW 50/65   Hut 8 - Dossier. Historical notes on the work of Hut 8, which contained the 'bombe' machines used for breaking German naval ENIGMA cypher messages

HW 50/70   Naval ENIGMA - Traffic Statistics and Notes on Breaks. Various notes and charts on code breaking (mainly ENIGMA) in Naval Section

HW 50/71   Dossiers - Captured Documents. Historical notes concerned with arrangements for handling and exploiting captured enemy documents and also the setting up of TICOM to coordinate and implement the seizure of enemy documents and equipment of intelligence interest in the closing stages of the World War I

Special Engineering Unit (SEU) and 34 Troop 30 Commando

WO 170/5495   Special Engineering Unit: Military Sec

WO 204/7322   Special Engineering Unit for collection of intelligence during operations: organisation

RAF Regiment / S Force Italy, 1944

AIR 20/3658   RAF Regiment, Formation and Role

AIR 23/6317   `S' Force: airforce participation

Malkin Report

FO 942/52   Committee on reparations and economic security: Malkin Report

S Force - Tunisia 1943, Rome 1944, Dragoon 1944

WO 204/795	Exploitation of intelligence in Italy: organisation of `S' Force
WO 204/796	Exploitation of intelligence in Italy: organisation of `S' Force
WO 204/907	`S' Force operations: co-ordination of special intelligence tasks including capture of enemy agents and documents in Italy
WO 204/943	'S' Force operations in Rome: final report
WO 204/6321	Italy: `S' Force reports on political and military conditions in newly captured towns
WO 204/6992	North Africa: `S' Force operation orders
WO 204/9917	8 Army area: organisation of `S' Force for exploitation of intelligence in the Rome area
WO 204/11445	`S' Force in Italy: organisation and establishments
WO 204/13034	S-Force target list of buildings in Rome area (unit detailed to seize and hold important public and other buildings, search for documents, equipment etc. and hold personnel for interrogation)

Intelligence Priorities Committee (IPC)

CAB 81/144	Joint Intelligence Sub-committee (JIC) special sub-committee on intelligence priorities: meeting 1
CAB 81/145	Intelligence Priorities Committee: meetings 1-4
FO 935/1	Research and Development Centres in Germany
FO 935/19	Intelligence Priorities Commission

Combined Intelligence Priorities Committee (CIPC)

CAB 81/146	Combined Intelligence Priorities Committee: meetings 1-3 and Working Party reports B and D
FO 935/20	Combined Intelligence Objectives Sub-Committee (CIOS), British Intelligence Objectives Sub-Committee (BIOS) and Combined Intelligence Priorities Committee: organisation and minutes of meetings
FO 1050/1417	Combined Intelligence Priorities Committee (CIPC) black list.

FO 1050/1419 — Combined Intelligence Objectives Sub-Committee (CIOS) black list: geographically arranged

WO 219/1698 — SHAEF Joint Intelligence Committee: organisation and functions

Combined Intelligence Objectives Sub-Committee, CIOS

FO 1005/1602 — Alphabetical Subject Index of CIOS, BIOS, FIAT & JIOA final reports

FO 898/40 — Post-war policy: correspondence with J.I.C. and C.I.O.S.

FO 935/2 — New targets (Operational)

FO 935-9 — Russian Zone targets

FO 935/11 — Release of information to industry

FO 935/21 — CIOS Black List duplicate papers: Vol 1

FO 935/22 — CIOS Black List duplicate papers: Vol 2

FO 935/23 — CIOS Black List duplicate papers: Vol 3

FO 935/24 — CIOS Black List duplicate papers: Vol 4

FO 935/25 — General correspondence

FO 935/33 — Scientific Intelligence Advisory Section

FO 935/41 — Russian Zone Targets

FO 1031/50 — BIOS - Minutes of Meetings

FO 1031/51 — British Intelligence Objectives Sub-committee – General

FO 1032/475 — Organisation and functions of Combined Intelligence Objectives Sub-committee (CIOS)

FO 1050/1417 — Combined Intelligence Priorities Committee (CIPC) black list

FO 1050/1419 — Combined Intelligence Objectives Sub-Committee (CIOS) black list: geographically arranged

FO 1050/1420 — Combined Intelligence Objectives Sub-Committee (CIOS) black list: geographically arranged, amendments, etc.

CIOS Grey List

CAB 81/130	Papers: 216-280
FO 935/27	Grey List
FO 935/28	CIOS Grey List
FO 942/53	Committee on reparations and economic security: Malkin Report
FO 1050/1421	Combined Intelligence Objectives Sub-Committee grey list - intelligence targets prepared by CIPC

Consolidated Advance Field Teams / CAFT

FO 1020/3071	Consolidated Advance Field Team (CAFT) assessments and industrial intelligence reports
PRO 30/95/15	Control Commission for Germany, Field Information Agency - Technical: liaison on procurement of books and periodicals

German Patents

BT 211/235	Appropriation of German patents by Britain and America: Russian allegation
BT 211/236	Microfilm of German patent applications

Field Information Agency – Technical (FIAT)

FO 935/51	FIAT accession lists of evaluation reports and CIOS assessment, evaluation and interim investigation reports Nos. 1-6
FO 935/53	FIAT accession lists of evaluation reports and CIOS assessment, evaluation and interim investigation reports Nos. 1-6: weekly target reports
FO 1031/72	FIAT policy, office methods and administration: vol I
FO 1031/85	V Weapon personnel agreement to share

FO 1049/139   Joint Intelligence Committee Conference

PRO 30/95/15   Control Commission for Germany, Field Information Agency - Technical: liaison on procurement of books and periodicals

Dustbin / EPES

FO 1031/68   EPES

FO 1031/69   DUSTBIN: policy (Dustbin: Anglo American detention centres at Versailles and Kransberg until 30.11.46 for exploiting German scientists and technicians)

FO 1031/70   Policy - Dustbin: exploitation of detainees

FO 1031/72   FIAT policy, office methods and administration: vol I

FO 1031/75   EPES: policy

FO 1031/86   Poison gas: interrogation and reports

British Intelligence Objectives Sub/Committee – BIOS

BT 211/11   Distribution of technical reports: correspondence with Public Libraries

BT 211/13   Working Party for the release to industry of reports held by the British Intelligence Objectives Sub-Committee: papers

BT 211/16   Minutes of meetings 1-17

BT 211/18   Distribution of reports of British Intelligence Objectives Sub-Committee, Combined Intelligence Objectives Sub-Committee and Field Information Agency, Technical

BT 211/22   Publicity of reports and British Intelligence Objectives Sub-Committee exhibitions

BT 211/23   Lists of British Intelligence Objectives Sub-Committee, Combined Intelligence Objectives Sub-Committee, Field Information Agency, Technical and Joint Intelligence Objectives Agency reports

BT 211-24	Responsibilities and organisation
BT 211-26	Invitations to attend British Intelligence Objectives Sub-Committee exhibition
BT 211/27	Index of Industrial and Scientific technical reports
BT 211/162	Distribution of technical reports: correspondence with Public Libraries
BT 211/163	Printing of technical reports: correspondence
BT 211/164	Distribution of technical reports: correspondence
BT 211/165	Working Party for the release to industry of technical reports: minutes of meetings
BT 211/167	Minutes of meetings
BT 211/169	Alleged irregular behaviour of British Intelligence Objectives Sub-Committee team No 1972
BT 211/541	Meeting papers
FO 1005/1602	Alphabetical Subject Index of CIOS, BIOS, FIAT & JIOA final reports
FO 1031/50	BIOS - Minutes of Meetings
FO 943/292	BIOS: terms of reference, constitution and function
FO 1012/422	British Intelligence Objective Sub-Committee *(BIOS meeting notes, outstanding reports 1945 to 1946)*

Technical Intelligence and Documents Unit - TIDU

BT 211/171	Re-organisation
BT 211/335	Summaries of documents held by the Technical Information and Documents Unit of the Board of Trade
BT 211/539	Japanese application to reproduce items from BIOS reports

Operation BACKFIRE

WO 33/2554	Report on Operation Backfire: Vol 1 scope and organisation of operation
WO 33/2555	Report on Operation Backfire: Vol 2 technical report
WO 33/2556	Report on Operation Backfire: Vol 3 field procedure
WO 33/2557	Report on Operation Backfire: Vol 4 description of equipment and special vehicles
WO 33/2558	Report on Operation Backfire: Vol 5 recording and analysis of trajectory
WO 231-22	Operation "Backfire": Vol 1
WO 231-23	Operation "Backfire": Vol 2
WO 231-24	Operation "Backfire": Vol 3
WO 231-25	Operation "Backfire": Vol 4
WO 231-26	Operation "Backfire": Vol 5
WO 219/2165	Operation Backfire
T 294-9	Sterling/Reichsmarks exchange and comparison of category A and B accounting

Operation RUTTER

WO 106/4194	"Rutter": combined operation raid on Dieppe

Operation ECLIPSE

WO 205/853	Operation Eclipse: the occupation of North West Germany
WO 219/2125	Miscellaneous operations, mainly on the Rhine

T Force

BT 211/169	Alleged irregular behaviour of British Intelligence Objectives Sub-Committee team No 1972
FO 1050/1423	SHAEF target lists
FO 1050/1424	Lists of targets: Operational Intelligence (OI) briefs for Germany
FO 1031/49	History of `T' Force

General

FO 1082/1	A glossary of abbreviations, contractions, code names, etc.

Cabinet Files, Memoranda - Chiefs of Staff Committee (COS)

CAB 80/56	CAB 80. Memoranda (O) Nos. 1-39, 1940 Sept 7-Dec 30 Memoranda (O) Nos. 1-40, 1941 Jan 3-Feb 18 *(September 1940 to February 1941)*
CAB 80/58	CAB 80. Memoranda (O) Nos. 101-150 *(June to July 1941)*
CAB 80/60	CAB 80. Memoranda (O) Nos. 231-294 *(October to December 1941)*
CAB 80/61	CAB 80. Memoranda (O) Nos. 1-75 *(January to March 1942)*
CAB 80/79	CAB 80. Memoranda (O) Nos. 101-133 *(Jan to February 1944)*
CAB 80/80	CAB 80. Memoranda (O) Nos. 134-190 *(February 1944)*
CAB 80/81	CAB 80. Memoranda (O) Nos. 191-305 *(February to March 1944)*
CAB 80/86	CAB 80. Memoranda (O) Nos. 666-778 *(July to August 1944)*

Suffix '(O)' denotes 'Operational' and thus a restricted circulation.

Note that TNA have correctly used a capital letter (O) in the file reference.

Cabinet Files, Memoranda - Joint Intelligence Committee (JIC)

CAB 81/26	Papers 1 - 47 *(January to December 1945)*	
CAB 81/109	Papers: 256(0)-320(0) *(July to August 1942)*	
CAB 81/112	Papers: 256(0)-320(0) *(November to December 1942)*	
CAB 81/116	Papers: 286(0)-350(0) *(July to August 1943)*	
CAB 81/118	Papers: 411-470 *(October to November 1943)*	
CAB 81/119	Papers: 471(0)-531(0) *(November to December 1943)*	
CAB 81/121	Papers: 71(0)-150(0) *(February to April 1944)*	
CAB 81/122	Papers: 151(0)-225(0) *(April to May 1944)*	
CAB 81/123	Papers: 226(0)-300(0) *(June to July 1944)*	
CAB 81/126	Papers: 451(0)-519(0) *(October to December 1944)*	
CAB 81/127	Papers: 1(0)-75(0) *(January to February 1945)*	
CAB 81/130	Papers: 216-280 *(July to September 194)*	

Suffix '(O)' denotes 'Operational' and thus a restricted circulation.

TNA have incorrectly used a zero (0) in the file reference, instead of (O).

Primary Sources - On Line References

History of COSSAC (Chief of Staff Supreme Allied Commander)
Historical Sub-Section, SHAEF, (1944)
Historical Manuscripts Collection, 8-3.6A CA
<https://history.army.mil/documents/cossac/cossac.htm>
[accessed 1 July 2023]

Operation ECLIPSE
Operation Eclipse; Appreciation and Outline Plan
SHAEF (44) 34
Combined Arms Research Library
<https://cgsc.contentdm.oclc.org/digital/collection/p4013coll8/id/2948/1000>
[accessed 1 August 2023]

United Kingdom Parliament - Hansard

German Trade Processes
Hansard, volume 423, 3 June 1946, Commander John Maitland's question to Mr
John Belcher, <https://hansard.parliament.uk/Commons/1946-06-
03/debates/bc384c11-7314-4786-bd88-
95d0d3540905/GermanTradeProcesses(Information)> [accessed 19 May 2024]

Reparation Plant
Hansard, volume 445, 3 December 1947, Mr Stokes' question to Mr Mayhew.
< https://api.parliament.uk/historic-hansard/commons/1947/dec/03/reparation-
plants#S5CV0445P0_19471203_HOC_164> [accessed 12 August 2023]

Multilateral Reparations
Hansard, volume 443, 27 October 1947, question from Mr Stokes to Mr Mayhew, <
https://api.parliament.uk/historic-hansard/commons/1947/oct/27/multilateral-
reparations#S5CV0443P0_19471027_HOC_42> [accessed 21-05-24]

Wartime Conferences – US Minutes

ARCADIA Conference
Washington   December 1941 to January 1942
Papers and Minutes of Meetings, US Department of Defence
<https://www.jcs.mil/Portals/36/Documents/History/WWII/Arcadia3.pdf>
[accessed 27 November 2023]

QUADRANT Conference
First Quebec   August 1943
Papers and Minutes of Meetings, US Department of Defence
<https://www.jcs.mil/Portals/36/Documents/History/WWII/Quadrant3.pdf>
[accessed 27 November 2023]

SEXTANT Conference
First Cairo   November 1943
Second Cairo   December 1943
Papers and Minutes of Meetings, US Department of Defence
<https://www.jcs.mil/Portals/36/Documents/History/WWII/Sextant_Eureka3.pdf>
[accessed 27 November 2023]

EUREKA Conference
Tehran   November and December 1943
Papers and Minutes of Meetings, US Department of Defence
<https://www.jcs.mil/Portals/36/Documents/History/WWII/Sextant_Eureka3.pdf>
[accessed 27 November 2023]

OCTAGON Conference
Second Quebec   September 1944
Papers and Minutes of Meetings, US Department of Defence
<https://www.jcs.mil/ Portals/36/Documents/History/WWII/Octagon3.pdf>
[accessed 25 November 2023]

CROWCRASS
Instructions, detention and wanted lists
<https://archive.org/details/CROWCASS>
[accessed 18 October 2023]

President Truman Executive Orders

President Truman Executive Order 9568, 8 June 1945
The American Presidency Project, Documents,
<https://www.presidency.ucsb.edu/documents/executive-order-9568-providing-for-the-release-scientific-information>
[accessed 12 December 2023]

President Truman Executive Order 9604, 25 August 1945
The American Presidency Project, Documents,
<https://www.presidency.ucsb.edu/documents/executive-order-9604-providing-for-the-release-scientific-information-extension-and>
[accessed 12 December 2023]

FIAT Report List
Bibliography and Index of Reports Resulting from American Investigations of German Industry, January 1948.
University of Lincoln, Nebraska
<https://core.ac.uk/download/pdf/188076844.pdf>
[accessed 28 September 2023]

Major-General Thomas Betts

The Eisenhower Presidential Library, Thomas J Betts Papers.
<https://www.eisenhowerlibrary.gov/sites/default/files/research/oral-histories/oral-history-transcripts/betts-thomas.pdf, [accessed 10 June 2021]

Sir Montagu Norman,
Diary entries for May 1939
< https://www.bankofengland.co.uk/-/media/boe/files/archive/montagu-norman-diary/1939/may-1939.pdf >
[accessed 24 September 2022]

The Red Book
MIRS – Order of Battle of the German Army, February 1944.
U.S. Army Intelligence Center of Excellence
M E Bigelow, INSCOM Command Historian
<https://www.dvidshub.net/news/464142/mirs-produces-red-book-feb-1944 >
[accessed 14 April 2024]

Operation BACKFIRE

Reports published 1946
    The Smithsonian Library – online resources
    Five volumes.
    Volume I – Scope and Organisation of Operation, II - Technical Report, III - Field
    Procedure, IV – Description of Equipment and Special Vehicles, V – Recording
    and Analysis of the Trajectory
    <https://library.si.edu/digital-library/book/report-operation-backfire>
    [accessed 16 April 2018]

British film produced as part of operation BACKFIRE
    Documenting launch procedure, December 1945
    Youtube.com
    <https://www.youtube.com/watch?v=V_fPdXLx48c> [accessed 15 July 2024]

Secondary Sources – Published

Adonis, Andrew, *Ernest Bevin: Labour's Churchill* (London: Biteback Publishing, 2020)

Balabkins, Nicholas, *Germany Under Direct Control: Economic Aspects of Industrial Disarmament 1945-48* (New York: Rutgers University Press, 1964)

Batey, Mavis, *From Bletchley With Love* (Milton Keynes: Bletchley Park Trust, 2008)

— *Dilly: The Man Who Broke Enigmas* (London: Dialogue, 2009)

Beesly, Patrick, *Very Special Intelligence: The Story of the Admiralty's Operational Intelligence Centre 1939-1945* (London: Hamish Hamilton, 1977)

Beevor, Antony, *Ardennes 1944: Hitler's Last Gamble* (London: Viking, 2015)

Bishop, Patrick, *Operation Jubilee: Dieppe 1942, The Folly and the Sacrifice* (London: Viking, 2021)

Brophy, L, W. Miles and R. Cochrane, *The Chemical Warfare Service: From Laboratory to |Field* (Washington: Centre of Military History, 1988)

Brown, Colin, *Operation Big: The Race to Stop Hitler's A-Bomb* (Stroud: Amberley, 2016)

Bower, Tom, *The Paperclip Conspiracy: The Hunt for the Nazi Scientists* (Boston: Little Brown & Co, 1987)

Boyd, Andrew, *British Naval Intelligence Through the Twentieth Century* (Barnsley: Seaforth Publishing, 2020)

Cabell, Craig, *The History of 30 Assault Unit: Ian Fleming's Red Indians* (Barnsley: Pen & Sword Military, 2009)

Caddick-Adams, Peter, *1945 Victory in the West* (London: Hutchinson Heinemann, 2022)

Cave Brown, Anthony, *Bodyguard of Lies: The Vital Role of Deception in World War II* (London: W, H, Allen, 1975)

Clayton, Anthony, *Forearmed: A History of the Intelligence Corps* (London: Brassey's, 1993)

Colville, John, *The Fringes of Power: Downing Street Diaries 1939-1955*, rev. edn (London: Weidenfeld & Nicolson, 2004; Hodder & Stoughton, 1985)

Crim, Brian, *Our Germans: Project Paperclip and the National Security State* (Baltimore: John Hopkins University Press, 2018)

Dalzel-Job, Patrick, *From Arctic Snow to Dust of Normandy* (Barnsley: Pen & Sword Military, 1991, 2002 edition)

Donnison, F. S. V., *Civil Affairs and Military Government North-West Europe 1944-1946* (London: Her Majesty's Stationary Office, 1961)

Dorrian, James, *Storming St Nazaire* (London: Leo Cooper, 1998)

Eckert, Astrid, *The Struggle for the Files: The Western Allies and the Return of German Archives after the Second World War* (Stuttgart: Franz Steiner Verlag, 2004; English translation Cambridge University Press, 2012)

Farrin, Guy Allan, *The Official History of 30AU* (Independently published, 2007)

Fennell, Jonathan: *Fighting the People's War, The British Commonwealth Armies and the Second World War* (Cambridge: Cambridge University Press, 2019)

Fournier, Gérard and Heintz, André, *If I Must Die: From Postmaster to Aquatint, the Audacious Raids of a British Commando 1941-1943*, trans. by Heather Costil (Cully: Orep, 2006)

Fry, Helen, *Denazification: Britain's Enemy Aliens, Nazi War Criminals and the Reconstruction of Post-war Europe* (Stroud: The History Press, 2010)

— *The London Cage: The Secret History of Britain's World War II Interrogation Centre* (London: Yale University Press, 2017)

— *Spymaster: The Secret Life of Kendrick* (London: Marranos Press, 2014)

— *Women in Intelligence: The Hidden History of Two World Wars* (London: Yale University Press, 2023)

Gardiner, Juliet, *Wartime: Britain 1939-1945* (London: Headline, 2004)

Garrett, Leah, *X Troop: The Secret Jewish Commandos of World War II* (Boston: Houghton Mifflin Harcourt, 2021)

Goodman, Michael, *The Official History of the Joint Intelligence Committee: From the Approach of the Second World War to the Suez Crisis* (Abingdon: Routledge, 2014; repr. 2016)

Gimbel, John, *The Origins of the Marshall Plan* (Stanford: Stanford University Press, 1976)

— *Science, Technology, and Reparations: Exploitation and Plunder in Post War Germany* (Stanford: Stanford University Press, 1990)

Hall, Charlie, *British Exploitation of German Science and Technology, 1943-1949* (London: Routledge, 2019)

Harrod, RF, *The Prof: A Personal Memoir of Lord Cherwell* (London: Macmillan, 1959)

Harling, Robert, *Ian Fleming: a Personal Memoir* (London: The Robson Press, 2015)

Hastings, Max, *Operation Biting, The 1942 Parachute Assault To Capture Hitler's Radar* (London: William Collins, 2024)

Hesketh, Roger, *Fortitude: The D-Day Deception Campaign* (New York: The Overlook Press, 2000)

Hinsley, F.H., *British Intelligence in the Second World War*, 5 vols (London: Her Majesty's Stationary Office, 1979), I.

— *British Intelligence in the Second World War*, 5 vols (London: Her Majesty's Stationary Office, 1981), II.

Hopton, Richard, *A Reluctant Hero: The life of Captain Robert Ryder, VC* (Barnsley, Pen & Sword Maritime, 2011)

Howarth, Patrick, *Intelligence Chief Extraordinary: The Life of the Ninth Duke of Portland* (London: The Bodley Head, 1986)

Jacobsen, Annie, *Operation Paperclip: The Secret Intelligence Program That Brought Nazi Scientists to America* (New York: Back Bay Books, 2014; repr. 2015)

Jennings, Christian, *The Third Reich is Listening: Inside German Codebreaking 1939-45* (Oxford: Osprey, 2018)

Jones RV, *Most Secret War: British Scientific Intelligence 1939-1945* (London: Hamish Hamilton, 1978)

Johnson, Brian, The Secret War (London: BBC, 1978; repr 1979)

Kahn, David, *Seizing the Enigma: The Race to Break the German U-boat Codes 1939-1943* (London: Frontline 1991; repr. 2023)

Kepher, Stephen, *COSSAC: Lt. General Fredrick Morgan and the Genesis of Operation Overlord* (Annapolis: Naval Institute Press, 2020)

Kirkpatrick, Ivone, *The Inner Circle: The Memoirs of Ivone Kirkpatrick* (London: Macmillan, 1959)

Lavine, Joshua, *Operation Fortitude* (London: Harper Collins, 2011)
Lefevre, Eric, *Brandenburg Division: Commandos of the Reich*, trans. by J. Finel (Paris: Histoire & Collections, 2000)

Lewin, Ronald, *Ultra Goes to War: The Secret Story* (London: Hutchinson, 1978)

Longden, Sean, *T-Force: The Race for Nazi War Secrets, 1945* (London: Constable & Robinson, 2009)

Lorenz-Meyer, Martin, *Safehaven: The Allied Pursuit of Nazi Assets Abroad* (Columbia: University of Missouri Press, 2007)

Lownie, Andrew, *The Mountbattens: Their Lives and Loves* (London: Blink, 2019)

Lycett, Andrew*, Ian Fleming* (London: Weidenfeld & Nicholson, 1995)

McLachlan, Donald, *Room 39: Naval Intelligence in Action 1939-45* (London: Weidenfeld & Nicholson, 1968)

Macintyre, Ben, *Operation Mincemeat* (London: Bloomsbury, 2010)

Matthews, Peter, *SIGINT: The Secret History of Signals Intelligence in the World Wars* (Stroud: The History Press, 2013; repr. 2018)

McKay, Sinclair, *The Secret Listeners: How the Y Service Intercepted German Codes for Bletchley Park* (London: Aurum Press, 2012)

Morrison, Alan, *1945: Statements on the Atomic Bomb* (MacKay: Glasgow, 2019)

Nesbit, Roy Conyers, *Ultra Versus U-Boats: Enigma Decrypts in the National Archives* (Barnsley, Pen & Sword, 2008)

O'Keefe, David, *One Day in August: Ian Fleming, Enigma and the Deadly Raid on Dieppe* (London: Faber & Faber 2013; repr. London: Icon Books, 2020)

O'Reagan, Douglas M, *Taking Nazi Technology: Allied Exploitation of German Science After the Second World War* (Baltimore: John Hopkins University Press, 2019)

Pearson, John, *The Life of Ian Fleming* (London: Jonathan Cape, 1966)

Pimlott, Ben, *Hugh Dalton* (London: Jonathan Cape, 1985; repr. London: Macmillan, 1986)

Preston, Diana, *Eight Days at Yalta: How Churchill, Roosevelt & Stalin Shaped the Post-War World* (London: Picador, 2019)

Rankin, Nicholas, *Ian Fleming's Commandos: The Story of 30 Assault Unit in WWII* (London: Faber & Faber, 2011)

Sebag-Montefiore, Hugh, Enigma: The Battle for The Code (London: Weidenfeld & Nicolson, 2000; repr. 2011)

Shakespeare, Nicholas, *Ian Fleming: The Complete Man* (Vintage: London, 2024)

Simons, Graham, *Operation Lusty: The Race for Hitler's Secret Technology* (Barnsley: Pen & Sword Military, 2016)

Simmons, Mark, *Ian Fleming's War* (Cheltenham: The History Press, 2020)

Smith, Michael, *The Secrets of Station X: How Bletchley Park Helped Win the War* (London: Biteback, 2011)

Smith, Stuart, *Otto Skorzeny: The Devil's Disciple* (Oxford: Osprey, 2018)

Steers, Robin, *FSS: Field Security Section* (Ashford: Intelligence Corps Association, 1996)

Strong, Sir Kenneth, *Intelligence at the Top: The Recollections of an Intelligence Officer* (London: Cassell, 1968)

— *Men of Intelligence*: *A Study of the Roles and Decisions of Chiefs of Intelligence from World War I to the Present Day*, (London: Cassell, 1970)

Taylor, Frederick, *Exorcising Hitler: The Occupation and Denazification of Germany* (London: Bloomsbury Publishing, 2011)

Urquhart, Brian, *A Life in Peace & War* (London: Wiedenfeld & Nicholson, 1987)

Van der Bijl, Nick, *Commandos in Exile: No. 10 (Inter-Allied) Commando 1942-1945* (Barnsley: Pen & Sword, 2008)

Van Valkenburgh, Christopher, *Fifty Years of Silence: Ordnance Technical Intelligence Team Depot O-644 1944-1945* (Independently published, 2020)

Whittel, Giles, *The Greatest Raid: St Nazaire, 1942: The story of Operation Chariot*, (Dublin: Viking Penguin, 2022)

Williams, Allan, *Operation Crossbow: The Untold Story of Photographic Intelligence and Search for Hitler's V Weapons* (London: Preface, 2013)

Wyllie, James & Michael McKinley, *The Codebreakers: The Secret Intelligence Unit That Changed the Course of the First World War* (London: Ebury, 2015)

Zachary, Greg Pascal, *Endless Frontier: Vannevar Bush, Engineer of the American Century* (New York: Simon & Schuster, 1997; repr. 2018)

Zaloga, Steven, *V-1 Flying Bomb 1942-52, Hitler's Infamous 'Doodlebug'* (Oxford: Osprey, 2005)

— *V-2 Ballistic Missile 1942-52* (Oxford: Osprey, 2003)

Secondary Sources - On Line References and Academic Sources

Operation NEPTUNE
Landings in Normandy, June 1944, (HMSO, 1947)
Australian Navy Archive - Battle Summary No 39 Volume
<https://www.navy.gov.au/sites/default/files/documents/Battle_Summary_39_Vol_
1_Part1.pdf> [accessed 16 June 2023]

RAF Regiment – History of RAF Regiment Squadrons
RAF Regiment Squadrons 2700 – 2850
RAFweb.org (private website)
<https://www.rafweb.org/Organsation/Regiment2.htm> [accessed 23 April 2023]

FSS and S Force

Keith Ellison, Frontline Intelligence in WW2: (I)
German Intelligence Collection 2012, p. 1.
<https://www.academia.edu/35156437/Frontline_Intelligence_in_WW2_I_German
_Intelligence_Collection> [accessed 6 March 2024]

Keith Ellison, Frontline Intelligence in WW2: (II)
The Development of Allied Intelligence Collection Units
<https://www.academia.edu/35156351/Frontline_Intelligence_in_WW2_II_The_D
evelopment_of_Allied_Intelligence_Collection_Units_doc> [accessed 6 March
2024]

Lori Stewart, S Force Enters Rome: 5 June 1944
U.S. Army Intelligence Center of Excellence, 2023
<https://www.dvidshub.net/news/446222/s-force-enters-rome-5-june-1944>
[accessed 22 June 2023]

GC&CS and Enigma

Enigma G: The Counter Enigma
David Kenyon and Frode Weierud
Bletchley Park Trust and Crypto Cellar Research, 2019
<https://www.cryptomuseum.com/crypto/enigma/g/files/CounterEnigma_V2_2019
0505.pdf > [accessed 6 June 2024]

Enigma Usage
Enigma Message Procedures
<https://www.ciphermachinesandcryptology.com/en/enigmaproc.htm>
[accessed 08 March 2024]

Monica Zambra
<https://www.gchq.gov.uk/person/monica-zambra> [accessed 15 March 2025]

TICOM

Randy Rezabek, 'TICOM: The Last Great Secret of World War II',
Intelligence and National Security, 27, 4, (2012) 513-530 (p. 515)
<https://zenodo.org/records/898714> [accessed 18 January 2024]

Operation ECLIPSE

Planning the Peace: Operation Eclipse and the Occupation of Germany
Fort Leavenworth, Defence Technical Information Centre School of Advanced
Military Studies
Major Kenneth McCreedy,
<https://apps.dtic.mil/sti/pdfs/ADA300988.pdf>
[accessed 16 August 2023]

Control Commission for Germany 1945-49

Diana Goldsworthy
<https://www.ccgermany.org.uk> [accessed 7 July 2024]

Major-General Thomas Betts

The Eisenhower Presidential Library, Thomas J Betts Papers.
<https://www.eisenhowerlibrary.gov/sites/default/files/research/oral-histories/oral-history-transcripts/betts-thomas.pdf, [accessed 10 June 2021]

Wing Commander Oscar Adolph Oeser

<https://pursuit.unimelb.edu.au/articles/the-secret-life-of-the-professor> [accessed 9 December 2023]

Reginal Patrick Linstead - Biography

<https://royalsocietypublishing.org/doi/10.1098/rsbm.1968.0014> [accessed 14 July 2020]

Reginal Patrick Linstead - Papers
CSAC 30/7/75

Papers of Sir Patrick Linstead CBE FRS (1902 - 1966)
< https://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/records-and-archives/public/Linstead,-Professor-Sir-Patrick-FRS-catalogue-of-papers.pdf> [accessed 18 September 2025]

HMS Rodent

commissioned 30 October 1943, paid off 17 February 1944,
<https://www.combinedops.com/Training%20EST%20UK.htm> [accessed 10 June 2023]

History of the Special Boat Service (SBU) within Special Services Group (SSG)

<https://www.coppsurvey.uk/chain-of-command> [accessed 10 June 2023]

U-Boat Statistics

U-boat database of all commissioned units,
<https://uboat.net/boats.htm> [accessed 10 November 2023]

Allied Shipping Losses

<https://uboat.net/allies/merchants/losses_year.html> [accessed 27 March 2024]

German Raiding ship Atlantis and SS Automedon

Australian War Memorial

Anthony Fitzgerald, 22 February 2021

<https://www.awm.gov.au/articles/blog/ss-automedon> [accessed 15 January 2025]

Prisoner Interrogation CSDIC

Journal of Contemporary History 2022

Artemis Joanna Photiadou

Un British No More: Torture and Interrogation by Britain in Germany 1945-1954, LSE, 2022

<https://journals.sagepub.com/doi/pdf/10.1177/00220094221087854> [accessed 15 January 2024]

Dr Charlie Hall

British Exploitation of German Science and Technology, 1943-1949

PhD, Kent University, 2016

<https://kar.kent.ac.uk/60242/1/84PHD%20THESIS.pdf> [accessed 8 February 2022]

Andrew Hargreaves,

An Analysis of the Rise, Use, Evolution and Value of Anglo-US Commando and Special Forces Formations 1939-1945

PhD, Kings College London, 2008

 <https://kclpure.kcl.ac.uk/ws/portalfiles/portal/2929338/521594.pdf > [accessed 10 June 2023]

Appendices

Appendix I

Biographies of Key Personalities

Rear-Admiral John Henry Godfrey, CB, 1888-1970.
     DNI 1939-1942.
After serving as the Deputy Director of Plans Division at the Admiralty, Godfrey was appointed Director of Naval Intelligence (DNI) in January 1939 and promoted to Rear-Admiral on 22 February 1939. As DNI, he was a permanent member of the Joint Intelligence Sub-Committee (JIC) representing the Admiralty. A promoter of inter-service bodies, he created the Inter Service Topographical Department in Oxford that provided a broad range of intelligence on most of the theatres where allied troops saw combat during the Second World War. In 1942, he instigated the formation of the Intelligence Assault Unit, later titled 30 Commando and 30 Assault Unit. In November 1942 he was promoted to Vice-Admiral 15 September 1942 and accepted the posting as Flag Officer Commanding the Royal Indian Navy, departing the UK on 25 February 1943.[1]

Rear-Admiral Edmund Gerard Noel Rushbrooke, DSC, CBE, 1892-1972.
     DNI 1942-1946.
Replaced Rear Admiral John Godfrey as DNI in November 1942 and remained in post until July 1946. Rushbrooke was promoted to Rear-Admiral on 5 July 1945 and Vice-Admiral on 22 October 1948.

Commander Ian Lancaster Fleming, 1908-1964.
     Assistant to DNI 1939-1945.
Ian Fleming joined the Royal Navy Volunteer Reserve (RNVR) with the rank of Lieutenant Commander after meeting Godfrey in May 1939. By the late summer he was promoted as Commander and accepted the position of Personal Assistant to the DNI within Naval Intelligence Division 17. Instrumental in facilitating the formation of the Intelligence Assault Unit, later titled 30 Commando and 30 Assault Unit. Post-war, he worked for the Sunday Times and pursued a career as a writer, penning the children's classic Chitty-Chitty-Bang-Bang:The Magical Car and a series of popular spy stories.

Lieutenant Commander Ewen Edward Samuel Montagu, CBE, QC, 1901-1985.
     Naval Intelligence Officer NID 17M.
Naval Intelligence representative on the Double Cross (XX) Committee that ran double agents. He spotted the German *Abwehr* operations in Yugoslavia and Greece in 1941 in decrypted Enigma traffic, passing the intelligence to DNI Godfrey.

---

[1] For further reading, please refer to CHU GBR/0014/GDFY 1/6, 1/7 and 1/8, Vice Admiral Godfrey Memoirs.

Frank Birch, 1889-1956.

Head of Naval Section (HNS), Bletchley Park.

Frank Birch was a member of the Room 40 cryptanalysts during the First World War after which he became a fellow of Kings College, Cambridge. He enjoyed a successful career as an actor in the 1930s before returning to the navy in 1939, joining the Naval Section (NS) at GC&CS. As the head of the section, he regularly liaised with Godfrey and Fleming of Naval Intelligence, working closely on pinch policy. After the war, he commissioned the NS history, pooling the recollections of members of NS before the staff were demobilised and dispersed. Although this history has not been published in full, much is recorded within file HW 50 held at the National Archives.[2]

Commander Norman Allon Bacon RNVR, 1905-1990.

Officed at GC&CS providing liaison with NID.

Commander Bacon was an Olympic sailor and was recruited to GC&CS because of his fluent German. He had participated in the capture of the German weather ship Lauenburg on 27 December 1941, retrieving a sizable haul of cryptographic artefacts. Later, his role was to brief Naval Intelligence prior to raids, advising types of artefacts GC&CS required. To this end, he was posted to Gibraltar during the TORCH landings to brief Curtis with target data as it became available as well as receiving captured items – ensuring a swift courier service back to Bletchley Park.[3]

Captain Robert Edward Dudley 'RED' Ryder, VC, 1908-1986.

First Commanding Officer of 30 Commando.

Ryder won his Victoria Cross for leading Operation CHARIOT - the successful raid on St Nazaire in February 1942. He commanded commandos attempting to land at Dieppe during operation JUBILEE aboard HMS Locust. Rear-Admiral Godfrey was keen to appoint Ryder as commander of the Intelligence Assault Unit (IAU), writing personally to Chief of Combined Operations Lord Mountbatten on several occasions. Godfrey did not wish Ryder to lead any further combat operations but admired his organisational and leadership qualities. Mountbatten eventually agreed that Ryder should be involved with the formation of the Commando only. He handed over command of 30 Commando on 4 March to Lieutenant-Commander Quentin Riley who was in post by 24 March 1943.

Commander Dunstan Michael Carr Curtis, CBE, DSC and Bar, 1910-1983.

OIC 30 Commander, North Africa, Section Commander Med and ETO.

Dunstan Curtis received the DSC for his command of the MGB 314 during operation CHARIOT, the raid on St Nazaire in February 1942. In November 1942, he led the small force of 30 Commando during operation TORCH, the landings in North Africa. His mission was to recover several cryptographic items which he successfully achieved, receiving a Bar to his DSC in recognition. He went on to command the expanding 30 Commando forces in North Africa, Italy and Normandy. He was Mentioned in Despatches for actions in western Europe.

---

[2] For further reading, please refer to Sebag-Montefiore, *Enigma*.

[3] For further reading, please refer to Sebag-Montefiore, *Enigma* and Boyd, *British Naval Intelligence*.

Admiral of the Fleet, Louis Francis Albert Victor Nicholas Mountbatten, 1st Earl Mountbatten of Burma, 1900-1979.
  Combined Operations 1942-1943.
Mountbatten was promoted to Commodore and replaced Admiral of the Fleet, Sir Rodger Keyes as Advisor to Combined Operations from October 1941. The following March, his position was elevated to Chief of Combined Operations. He was personally involved in the formation of the IAU, later 30 Commando, liaising with John Godfrey and Ian Fleming during the formation period. In August 1943, he had been promoted to full Admiral, with Churchill appointing him to the position of Supreme Allied Commander South East Asia Command (SEAC). He took up his new posting in October 1943.

Major-General Sir Robert Edward Laycock, KCMG, CB, DSO, KStJ, 1907-1968.
  Chief of Combined Operations 1943-1945.
As a member of the Royal Horse Guards, Laycock formed one of the early commando units – No 8 (Guards) Commando, with one of the sections trained for marine operations developed into the Special Boat Service. Promoted to Brigadier, he commanded the Special Service Brigade (SSB) between 1942 and 1943. The SSB was the administrative body that oversaw several special naval units, including 30 Commando. Laycock succeeded Mountbatten as Chief of Combined Operations in October 1943, holding the position until 1947.

Colonel David Inderwick Strangeways, DSO, OBE 1912-1998.
  S Force Tunisia 1943.
Based in Cairo in 1942, Strangeways was involved in deception of Axis forces to hide the location and date of the invasion of North Africa – operation TORCH. In Tunisia in 1943, he was the Commander of S Force Tunis & Bizerte. Later in 1944, he was involved with operation FORTITUDE, the deception element of OVERLORD. He made himself extremely unpopular by rewriting previous plans prepared before his arrival, advocating the creation of a completely fictitious First US Army Group or FUSAG as part of operation QUICKSILVER – the fictitious landings in the Pas-de-Calais.

Colonel George Stanley 'Budge' Smith, 1900-1968.
  AFHQ, S Force Rome, ICU Florence 1944.
The US George S Smith was appointed G2 to the 15th Army Group in June 1943, after conducting an inspection of intelligence in all theatres. Commander of Rome S Force from January to December 1944. Created ICU after the successful exploitation of Rome in June 1944. In 1945, joined the staff of General Harold Alexander as Head of G2 and promoted to Brigadier General in 1945.

Major-General Sir Claude Francis Liardet, KBE, CB, DSO, TD, DL**,** 1881-1966.
>   Commandant-General of the RAF Regiment 1942-1945.
In 1941 he was appointed Inspector General of Airfield Defence and went on to be
Commandant-General of the newly formed RAF Regiment in 1942 and Director-General
of Ground Defence. He was instrumental in three squadrons of the RAF Regiment being
held in the Mediterranean specifically for S Force duties in Rome and other Italian cities.

Lieutenant-General Frederick. E. Morgan, KCB, 1894-1967.
>   Chief of Staff to the Supreme Allied Commander – COSSAC.
The British General Morgan was the Chief of Staff Supreme Allied Commander
(Designate) or COSSAC, the planning team involved in preparing RANKIN,
COCKADE/FORTITUDE and OVERLORD. COSSAC existed until the Supreme
Commander Allied Expeditionary Force (SCAEF) had been appointed and took up his
post. At this point, in January 1944, COSSAC was absorbed into the Supreme
Headquarters Allied Expeditionary Force or SHAEF. Morgan turned down the command
of Thirteen Corps, preferring to remain on the staff at SHAEF under the new Chief of
Staff, Major-General Walter Bedell Smith.[4]

Major-General Ray Wehnes Barker 1889-1974.
>   Deputy Chief of Staff to the Supreme Allied Commander – D/COSSAC.

General David Dwight Eisenhower, 1890-1969.
>   AFHQ and SHAEF 1942-1945.
Appointed Commander of AFHQ in June 1942 and promoted to Major-General in
December 1942, Eisenhower returned to the UK on 13 January 1944 to become Supreme
Commander Allied Expeditionary Force (SCAEF) of Supreme Headquarters Allied
Expeditionary Force (SHAEF). He was promoted to Lieutenant-General on accepting his
position of SCAEF. After SHAEF was dissolved on 13 July 1945, Eisenhower became
Governor of US zone in Germany.

Field-Marshall Henry Maitland Wilson, GCB, GBE, DSO, 1881-1964.
>   AFHQ.
Commander in Chief Middle East in 1943 and later Supreme Allied Commander
Mediterranean in 1944, succeeding General Eisenhower when the US General returned to
the UK as Supreme Commander of SHAEF. Wilson was promoted to Field-Marshal in
December 1944, before a move to the US becoming British military representative dealing
with the production and testing of the atom bomb as part of the Manhattan Project. He was
replaced by General Harold Alexander as SACMED.

---

[4] For further reading, please refer to Stephen Kepher, *COSSAC*.

General Sir John Whiteley 1896-1970.
AFHQ and SHAEF G2 and later G3
Served as a General Staff officer in the Middle East theatre, forging strong links with the USA, negotiating in America for much needed supplies for North Africa. He served on the staff of AFHQ under Lieutenant-General Eisenhower and returned to the UK with Eisenhower when staff were relocating to prepare for the invasion in Normandy. His position of Assistant Chief of Staff G2 was handed to his Mediterranean colleague Brigadier-General Strong on 19th May 1944 with Whitely taking up his preferred G3 position.

Major-General Sir Kenneth Strong KBE, CB, DSM, 1900-1982.
MI 14, AFHQ & SHAEF
Strong was a member of the British Intelligence Section at the War Office when in 1937 he became military attaché in Berlin under Ambassador Sir Neville Henderson. He became the head of the German Section of MI 14, later working under Sir Alan Brooke. In 1943, he was appointed Assistant Chief of Staff for Intelligence G2 at Lieutenant General Eisenhower's AFHQ where he forged a strong friendship with the US commander. He was instrumental in ensuring the army contingent of 30 Commando remained in Italy to participate in S Force operations. Although Sir Alan Brooke, Chief of the Imperial General Staff was reluctant to release Strong from serving in the Mediterranean, pressure from Eisenhower and Churchill eventually made Brooke accept Strong's transfer to SHAEF, arriving in late May 1944. After the war, he headed the Political Warfare Executive (PWE), retiring in 1947. Strong's deputy in SHAEF was Brigadier-General Tom Betts.[5]

Brigadier-General Thomas J Betts, 1913-1977.
Intelligence Officer COSSAC & SHAEF, 1944-1945, Chairman CIOS 1944-1945.
US Brigadier-General Betts was a senior G2 Staff officer, having attended the QUADRANT and SEXTANT conferences as part of the US delegations. He was appointed to the intelligence staff of COSSAC who later evolved into SHAEF. He became deputy to General Kenneth Strong in May 1944 until the termination of SHAEF, after which he was appointed Director of Intelligence, U.S. Group, Control Council for Germany.[6]

---

[5] For further reading, please refer to Sir Kenneth Strong, *Intelligence at the Top: The Recollections of an Intelligence Officer* (London: Cassell, 1968).

[6] For further reading, please refer to The Eisenhower Presidential Library, Thomas J Betts Papers. <https://www.eisenhowerlibrary.gov/sites/default/files/research/oral-histories/oral-history-transcripts/betts-thomas.pdf?#> [accessed 10 June 2021].

Brigadier Raymond John Maunsell, CBE, 1903-1976.

> SHAEF and FIAT.

British army intelligence officer, head of Security Intelligence Middle East (SIME), based in Cairo in 1939, for which he was awarded a CBE in 1944. As a G2 staff officer in SHAEF, he represented Combined Command at many CIOS meetings throughout 1945. In May 1945, he was nominated by General Lucius Clay to command FIAT after its creation on 31 May. He is noted for adding the word 'Technical' to the title of 'Fiat Intelligence Agency' to create a more usable acronym. Attending CIOS and later BIOS meetings, he represented SHAEF until its dissolution in July, then continued to command and represent FIAT(Br).

Sir Ivone Augustine Kirkpatrick, GCB, GCMG, 1887-1964.

> Control Commission for Germany 1944-1945.

Pre-war, Kirkpatrick was the first secretary at the British Embassy in Berlin from 1933 to 1938, accompanying Prime Minister Neville Chamberlain to Munich to meet with Hitler in 1938. In 1940, he was appointed Director of the Foreign Division of the Ministry of Information and Controller of Foreign Services at the BBC. In September 1944, he was appointed to create the British Element of the Control Commission for Germany, after which he became British Political adviser to General Eisenhower in the last months of SHAEF.[7] He advised on various options regarding the continuation of an Anglo-US CIOS after the termination of CIOS. He recommended that CIOS be split along national boundaries, with BIOS representing British interests and JIOA representing the US.

Victor 'Bill' Cavendish-Bentinck, CMG, 1897-1990.

> Chairman of the Joint Intelligence Committee (JIC) 1939-1945.

A diplomat in the foreign office, Cavendish-Bentinck was appointed to chair the Joint Intelligence Sub-Committee (JIC) as a 'neutral' member to oversee the competing directors of intelligence from the Admiralty, War Office and Air Ministry. He was instrumental in the creation of the IPS, CIOS and the gradual move from targeting only military intelligence to industrial and commercial intelligence from January 1945 leading to the formation of the Grey List Panel. After the war, he became British Ambassador to Poland.[8]

---

[7] For further reading, please refer to Ivone Kirkpatrick, *The Inner Circle: The Memoirs of Ivone Kirkpatrick* (London: Macmillan, 1959).

[8] For further reading, please refer to Patrick Howarth, *Intelligence Chief Extraordinary: The Life of the Ninth Duke of Portland* (London: The Bodley Head, 1986).

Reginald Patrick Linstead FRS, CBE, 1902-1966.
          Chairman IPC, CIPC, CIOS and BIOS 1944-1945.

Described as one of the world's leading organic chemists, Linstead was internationally recognised, receiving the Medal of the German Chemical Society on 1939. That same year he accepted the Chair of Organic Chemistry at Harvard after spending nine years as a lecturer at Imperial College London. Described as an Americanophile, Linstead's enjoyed a passion for US history, with a particular interest studying the US Civil War. With research restricted during the War, he acted as liaison between the British and US Governments regarding the RDX programme, where the UK successfully negotiated manufacturing capacity in the US for the chemical synthesis of RDX explosives based on research carried out at the Woolwich Arsenal in London.

Now known to the British Government, he returned to the UK in 1942 , accepting the role of Deputy Director of Scientific Research (DDSR) in the Ministry of Supply (MoS). His involvement in compiling a register of German research establishments ahead of activating operation RANKIN Case C in the early months of 1944 lead him to be nominated Chairman of the Intelligence Priorities Committee (IPC) commissioned by the JIC. This committee evolved into the Anglo-US CIPC and later CIOS. Although deputy chairman to Brigadier General Thomas Betts, Betts only attended six CIOS meetings, leaving Linstead to chair the majority of the twenty-two CIOS meetings. Providing continuity, Linstead chaired seven of the initial eight meetings of BIOS before leaving the MoS. He returned to academia and Imperial College in 1949.[9] He was knighted in 1959.

Dr C H Noton
          Foreign Office, IPC, CIPC, CIOS and BIOS.

Dr Noton was a member of the Ministry for Economic Warfare and the Foreign Office, participating in the collection of intelligence listing research establishments in Germany alongside Linstead in March and April 1944. He was a founding member of the IPC, the CIPC and later CIOS. After the war, he was a key member of BIOS up to its termination in 1947. He acted a chairman of various working parties and sub-committees including trying to establish access to Soviet zone targets throughout 1945 and 1946. He had an unusual habit of writing in turquoise ink, making his documents instantly recognisable in the National Archives. It is often his Foreign Office files that have survived, providing an almost unbroken record of the committees that oversaw targeted intelligence capture. With such a full archive, it is regrettable that no record has been found providing his background, dates of birth and death, or even his Christian names.

---

[9] For further reading, please refer to Reginal Patrick Linstead, 1902-1966, <https://royalsocietypublishing.org/doi/10.1098/rsbm.1968.0014> [accessed 14 July 2020].

Appendix II

Committees & Units - a Selected Glossary

Naval Intelligence Assault Unit – Evolution of Unit Title

Naval Intelligence Commando Unit

> Title used in Fleming proposal document   20 March 1942

Advance Intelligence Unit

> Title used by Rear-Admiral Godfrey   13 April 1942

Intelligence Assault Unit (IAU)

> Title used by Rear-Admiral Godfrey   2 June 1942
>
> Title confirmed by Combined Operations   31 July 1942

Special Engineers Unit (SEU)

> Operational cover name
>
> proposed by IAU Commander R Ryder   October 1942

Special Engineering Unit (SEU)   4 November 1942

> Operational cover name
>
> Title retained by army '34 Troop' in Italy   1943-1945

30 Commando

> Operational cover name   4 November 1942
>
> No official naming document   November 1942
>
> Title retained by army '34 Troop' in Italy   1943-1945

Troop titles

> 33 Troop Navy   1943-1945
>
> 34 Troop Army   1943-1945
>
> 35 Troop Air Force (Not Formed)   n/a
>
> 36 Troop Technical   1943-1945

30 Assault Unit (30AU)

> Combined Operations memorandum   1 January 1944
>
> New name adopted in correspondence   7 January 1944
>
> Applied to navy and Royal Marine Troops

30 Advanced Unit (30AU)

> Combined Operations memorandum   October 1944

FIU   **Forward Intelligence Unit.**
The US FIU operated alongside 30AU from February 1945, with both units subordinate to the Naval Intelligence Sub-Division (NISD) of SHAEF G2. FIU and 30AU under the command of the Allied Naval Commander-in-Chief, Expeditionary Force (ANCXF). The capture of the German Naval Archive stored at Tambach Castle in 1945 was a joint operation by 30AU and FIU.

FSS   **Field Security Sections**
Formed July 1940 from earlier Field Service Police (FSP)
Subdivision of the army's Intelligence Corps
Erroneously referred to as FSP for much of the war, FSS held responsibility for setting up divisional or corps field commands and associated security, the capture and interrogation of enemy agents and the support of resistance operatives or Allied sympathisers. FSS did not hold security clearance or have particular knowledge of cryptographic intelligence. Although numbered up to 760 FSS, a register of all FSS suggests there were two hundred and ninety-two FSS based in Europe, one hundred and thirty formed for service in India and Burma and a further twenty-five Field Service Reserve Detachments (FSRD) held I reserve in Europe.[1]

RAF Regt   **Royal Air Force Regiment**
Formed February 1942
Created to provide airfield security and defence, the RAF Regiment was subdivided into Field Squadrons of approximately one hundred and sixty all ranks. As well as providing anti-aircraft defence, each Squadron included an armoured car detachment that enabled limited armoured offensive operations to be undertaken. Three squadrons were held permanently in the Mediterranean by their commander Major-General Liardet, Commandant-General of the RAF Regiment, for deployment in S Force duties.

GC&CS   **Government Code and Cypher School**
1919 to present
The British governments code breaking centre based in Bletchley Park in Buckinghamshire. Often referred to as BP or Station X, the operation was hidden behind a veil of secrecy with only a select few were 'indoctrinated' into the site's function. All three services were represented at the site, with enemy signals decrypted and translated throughout the war. By the summer of 1945, the new title of Government Communications Headquarters (GCHQ) starts to appear on internal documents, the title by which the organisation is known today.

---

[1] Clayton, Forearmed, pp. 264-273.

ISTD	**Inter Service Topographical Department**

1940 to 1945

NID 6, subordinate to Naval Intelligence

Title Evolution:

> Section VI of Naval Intelligence Division   (NID 6)
>> Original title when formed 27 May 1940
>
> Topographical Clearing House   (TCH)
>> Title changed when move from Admiralty to Hertford
>> College, Oxford, October 1940
>
> Inter-Service Topographical Section   (ISTS)
>> New title with expansion to serve all services, August 1941
>
> Inter-Service Topographical Department   (ISTD)
>> Final name-change in October 1941, used till wars end.

In reaction to the paucity of cartographic intelligence available, ISTD was conceived to collate cartographic and topographical intelligence in advance of any campaign around the globe. On the insistence of the department's founder, DNI Rear-Admiral John Godfrey, staff also collected any intelligence on any location anticipating it could be useful. The resulting Contacts Register provided detailed information for target researchers from 1944, covering industry, research facilities, employers and employees etc.

ISIS	**Inter-Service Information Service**

1940 to 1945

NID 6, subordinate to Naval Intelligence

Title Evolution:

> Section V of Naval Intelligence Division   (NID 6)
>> Original title when formed 1940
>
> Inter-Service Information Service   (ISIS)
>> Final name-change in 1941, used till wars end.

Tasked with creating geographical handbooks detailing locations where the British services could be deployed. Run by the eminent Oxford professor and explorer Kenneth Mason, his handbooks were noted for their accuracy and reliability.

Targeted Intelligence Capture and Prioritisation

IPC   **Intelligence Priorities Committee**
14 May 1944 to June 1944.
Subordinate to British JIC.
Published preliminary Black List in anticipation of RANKIN in May 1944.
Replaced by CIPC.

CIPC   **Combined Intelligence Priorities Committee**
June 1944 to August 1944.
With US staff joining IPC, title changed to reflect 'combined' status.
Subordinate to British JIC (anomalous considering US membership).
Published expanded first edition of military target Black List August 1944.
Replaced by CIOS.

CIOS   **Combined Intelligence Priorities Committee**
August 1944 to 13 July 1945.
Published expanded second edition of military target Black List February 1945. Smaller updates thereafter.
Remit expanded to include the allocation and despatch of investigators to Europe. Subordinate to SHAEF, British element replaced by BIOS, US element replaced by JIOA.

CIOS GLP   **Combined Intelligence Priorities Committee - Grey List Panel**
31 December 1944 to 28 May 1945.
Anglo-US working parties compiling industrial and commercial Grey List of targets.
Amalgamated with CIOS in May 1945.
Subordinate to CIOS and subsumed by CIOS June 1945

IS(O)   **Intelligence Section (Operations)**
Subordinate to the JIC
Initially formed to relieve pressure on ISTD but evolved into organisation providing administrative support to numerous committees, including CIOS and IOSS.

IOSS   **Intelligence Objectives Sub-Section**
June 1944
'Rebranding' of AFHQ Advance G2 department that had collated intelligence target information in Italy and Mediterranean. Worked initially in parallel and subsequently with CIOS as target areas merged in Austria.

BIOS   **British Intelligence Objectives Committee**
August 1945 to June 1947
Subordinate to the Board of Trade (BOT).
After the termination of the Anglo-US CIOS in July 1945, British coordination of targets and the despatch of investigators to Germany was coordinated by BIOS. The BIOS secretariat edited and issued final reports. Dissemination of captured German know-how was achieved via reports and latterly regional exhibitions

TIIC   **Technical Industrial Intelligence Committee**
December 1994 to 13 July 1945.
Washington based committee, set up in December 1944 to receive proposed intelligence targets from US Government departments and feed into the Grey List. Many TIIC operatives were UK based as part of CIOS GLP working parties. TIIC would approve commercial, economic and industrial targets in Germany for investigation by CIOS. Subsumed by JIOA in July 1945.

JIOA   **Joint Intelligence Objectives Agency**
July 1945 to 1962
Subordinate to the Joint Intelligence Committee in Washington, itself subordinate to the Joint Chiefs of Staff of the US forces.
JIOA absorbed TIIC after CIOS was terminated, with outstanding US CIOS reports completed by JIOA staff. JIOA organised the relocating of many Nazi scientists and technicians to the USA under operations OVERCAST and PAPERCLIP.

TIS   **Technical Information Section**
April 1946 to November 1947
TIS was the repository for all interim and final CIOS, BIOS, FIAT and JIOA reports. Tasked with handling technical enquiries from members of the public on behalf of BIOS, TIS also provided technical information for investigators leaving for Europe.

FDU   **Foreign Document Unit**
Repository based in Berkley Square, London for captured documents, drawings, blueprints and technical literature. English summaries were preared by FDU staff.

TIDU   **Technical Intelligence and Document Unit**
An amalgamation of the TIS and FDU to create the TIDU - the national repository for captured German documents, technical literature and Reports. Accessible to the public through the reading rooms at Cadogan Square in London

Commands

JIC   **Joint Inteligence Committee**
Created in 1937
A permanent committee comprising the Directors of Intelligence from the army, air force and Admiralty, with government representation from the Ministry of Economic Warfare (MEW) and chaired by the Foreign Office. Their role was to oversee all matters of intelligence and issue appreciations of projected events. The members would meet regularly with the head of GC&CS who would appraise the JIC of the latest issues and successes. Regional JIC were created in Cairo, AFHQ (Algiers), SHAEF and post-war with the Control Commission in Germany

AFHQ   **Allied Forces Headquarters**
14 August 1942 to September 1947
Anglo-US command formed to coordinate joint operations in north Africa, Tunisia and the Mediterranean.
Commanded by General Dwight D Eisenhower to 16 Jan 1944
Commanded by General Henry Maitland Wilson to December 1944
Commanded by General Harold Alexander to May 1945
Commanded by Lieutenant-General W Duthie Morgan to September 1947

COSSAC   **Chief of Staff to the Supreme Allied Commander** (UK and US)
March 1943 to 16 January 1944
Anglo-US body formed to prepare for a return to Europe and the ultimate defeat of Germany.
Commanded by Major-General Frederick Morgan (UK)
Subordinate to the Anglo-US Combined Chiefs of Staff, and beyond them - to the British Prime Minister and US President.

SHAEF   **Supreme Headquarters Allied Expeditionary Force** (UK and US)
17 January 1944 to 13 July 1945
Anglo-US body formed to carry out the return to Europe and the ultimate defeat of Germany.
Supreme Allied Commander: Dwight D Eisenhower (US)

CCG (Br) **Control Commission Germany (British Element)**
1945 to 1949
Concieved in 1944 to be the administrative hub in occupied Germany, with separate elements accommodating the four occupying powers. Responsible for the denazification, democratisation, demiliterisation and re-education of Germany.

Exploiting and Accessing Germany

S Force	**Security Intelligence Force** 1943 to 1945 Subordinate to AFHQ First formed to assist with the capture of Tunis and Bizerte, elements remained in theatre and participated in the liberation of Rome and other Italian cities. Core staff and command structure retained under operational name of Intelligence Collection Unit (ICU) after the fall of Rome.
T Force	**Target Force** March 1945 to late 1947 HQ Staff formed around the Gas and Chemical Weapons (G&CW) unit within Twenty-First Army Group HQ in late October 1944. To mask the unit's 'Target' role, the cover title of G(T)&CW was maintained. The force became active after the Rhine crossings in late March 1945 with the allocation of the Fifth Battalion, the King's Liverpool Rifles and the First Battalion, Buckinghamshire Regiment of the Ox and Bucks light infantry.
FIAT	**Field Intelligence Agency, Technical** May 1945 to July 1945 Military formation formed as an Anglo-US enterprise to coordinate and facilitate intelligence target investigation. Subordinate to SHAEF After the termination of SHAEF on 13 July 1945, FIAT split into…
FIAT(US)	**Field Intelligence Agency, Technical – United States Element** July 1945 to June 1947 US staffed agency that facilitated access to intelligence targets in the US Zone of occupation in Germany.
FIAT(Br)	**Field Intelligence Agency, Technical – British Element** July 1945 to June 1947 British staffed agency that facilitated access to intelligence targets in the British Zone of occupation in Germany. Staff absorbed by T Forces in late 1947
EPES	**Enemy Personnel Exploitation Service (FIAT)** May 1945 to 1947. Body set up initially as part of SHAEF G2 and tasked with the detention and management of interrogations of military and industrial 'targets' at the main detention centre DUSTBIN. With the termination of SHAEF in July 1945, became subserviant to FIAT. Remained a largely British operation, even after the split of FIAT into British and US elements

Appendix III

The Enigma Tagesschlüssel [Daily Key]

The German Enigma machine was a complex device which, by electrical and mechanical means, substituted a letter typed by an operator with a random letter other than itself. This result would not repeat regardless of how many times said letter was pressed. Twenty-six letters were inputted using a conventional QWERTZ keyboard and as each letter was depressed a random substituted letter would appear on a QWERTZ lamp board. Using a three-wheel Enigma machine as an example, the device incorporated three adjustable features whose settings were changed each day by both the sender and receiver of signals communications. These were changed at midnight Berlin time, although the change time was revised to noon Berlin time later in the war.[2] An Enigma machine was needed to encrypt an outgoing message, while a second machine decrypted the received message. The actual messages were sent using Morse code.[3] The two machines were configured daily by a signals officer in precisely the same way using daily setting charts known as *Sonder-Maschienenschlüssel* [special machine keys] that specified the variable settings for each day of the month. The daily settings or *tagesschlüssel* comprised three data sets: the *Walzenlage* [roller position]; *Ringstellung* [ring position] and the *Steckerverbindungen* [Plug Connections]. A fourth data table was also included on the *Sonder-Maschinschlüssel*, titled *Kenngruppen* [Key Groups] which was a daily code that was sent unencrypted to ensure the sending and receiving machines were synchronised but did not involve changing physical settings on the Enigma machines.

Regarding terminology. The term 'Wheels' has been used throughout this thesis, rather than 'rotors' or *Walzen* [rollers in German]. This is because documents created by staff at GC&CS, and quoted within this dissertation, refer to 'wheels'.

Sonder- Maschienenschlüssel   (Special machine keys)
The *Sonder-Maschienenschlüssel* document would be issued for each month and comprised five data columns:

Datum   (Date)
The first column would provide the day of the month, usually with the dates in descending order and the start of the month printed at the bottom of the page. This allowed the officer, tasked with resetting the Enigma machine each day to tear off that day's *Tagesschlüssel*, adjust the Enigma machine, then destroy the 'strip' of paper.

---

[2] Kahn, *Seizing the Enigma*, p. 227.

[3] Morse code was the standard international method to transmit individual letters via wireless. The twenty-six characters of the alphabet were replaced by a standardised sequence of long or short transmitted 'dots or dashes'.

Walzenlage (literally Roller Position)

Initially only three wheels were provided with each Enigma machine, but in 1939 two more were added increasing the available wheels to five. The wheels were usually numbered using roman numerals I, II, III, IV and V. Later in the war, the navy added three additional wheels making a total of eight, thus VI, VII and VIII were also supplied. Three of these wheels were mounted on a spindle that would be installed in the machine between a fixed input wheel and a fixed reflector wheel. When the machine was configured, the spindle complete with the three wheels would be removed and new wheels fitted, or their order changed. The *Walzenlage* might be specified as IV II III on one day, then V IV III the day after.

Ringstellung (Ring position)

Examining each rotating wheel reveals a movable ring with twenty-six numbered positions corresponding to the letters of the alphabet. Numbers appeared on army and air force enigma machines, while naval enigma wheels often displayed twenty-six letters. The position of this ring, complete with a turnover notch, could be changed relative to the internal wiring. Later naval rotors VI, VII and VIII had two notches. Holding each wheel, the movable ring would be rotated to the position specified for that day on the *Sonder-Maschienschlüssel*, the desired position denoted by a simple 'dot'. The ring would then be locked in place by a spring loaded pin (army and air force Enigma), or a pair of catches or 'arcs' (naval Enigma). The wheels would be refitted to the spindle in the order specified by the *Walzenlage* and inserted back into the machine. The cover would then be closed, and the three wheels rotated so that the numbers or letters specified for that day by the Ringstellung were visible through the viewing windows. This start position was known as the *Grundstellung* or initial position of the wheels and would have to be reset before the encryption or decryption of each new message. As an example, the *Ringstellung* might be noted as 13 11 06, while the following day might use 23 09 20.

Steckerverbindungen (Plug Connections)

On the front of the Enigma machine was a *steckerbrett* [plug board] with twenty-six sockets distributed using the layout of a QWERTZ keyboard. Supplied with every Enigma machine were at least ten double ended electrical cables that allowed ten pairs of the available twenty six input characters to be inter connected and effectively swapped. These ten 'pairings' would be specified for a given day on the Sonder-Maschienschlüssel document, for example: HR AT IW SK UY DF GV LJ BO MX. Again, these pairings would be changed daily.

Steckerverbindungen - Umkehrwalze D (Plug Connections – Reversing Roller D)

In 1944, a new rewireable reflector wheel was introduced by the Luftwaffe known as the Umkehrwalze D or 'Uncle D' to the cryptanalysts at BP. The daily settings for this wheel were included as four additional columns in the *Steckerverbindungen* block on the *Maschienschlüssel* document, formatted thus LT EQ HS UW. (For more information on the connected functions of the reflector wheel and the plug board, see section on ''Electrical' below)

Kenngruppen   (Key Groups)

The fourth data table on a typical *Maschienschlüssel* would show groups of three letters, for example JKM, UDL and NAM. The operator would combine these with two random letters and send them unencrypted as a five character block at the start of each new message. This would confirm to the receiver of the message that the correct *tagesschlüssel* was being used and decryption could proceed.[4]

Operating the Enigma Machine.

Mechanical

The operator would press any of the twenty six QWERTZ input keys as they would with a conventional typewriter, the force of which would advance the first wheel by one position. To achieve a full rotation, twenty-six consecutive inputs were required. If the wheel ring had been set to position one, when the twenty-sixth input key was pressed, an actuator pall would engage the notch mentioned earlier, forcing the second wheel to advance by one position at the same time as the first wheel. Once the second wheel made a full rotation, the third wheel would advance by one position. For the navy's additional wheels VI, VII and VIII with two notches, these wheels would advance after half a rotation. This concludes the mechanical element of the encryption.

Electrical

With the input character pressed and the movement of the mechanical wheel achieved, an electrical circuit was completed by the input key switch that passed through the 'Steckerbrett' or plug board, mounted on the front of the coding machine, swapping ten of the characters. The circuit then connected to the three wheels, that were wired internally so that the 'input' side would be different on the 'output' side. Spring loaded pins carried the circuit through the first, second and then third rotors, hitting a non-rotating fourth 'mirror' wheel or reflector that reversed the circuit back through the three rotors, albeit via a different route, then back through the plug board swapping ten characters again, back to the input key to conclude at the QWERTZ lamp board - where a single character would illuminate. This illuminated character would be manually recorded by a colleague of the Signals operator for later transmission using Morse.

This circuit scrambling through the randomizing plug board, followed by the two way pass through the three advancing rotors and return through the plug board ensured that however many timed the same input key was pressed, a different output letter would be illuminated on the lamp board.

---

[4] For further detail regarding the *Tagesschlüssel* and *Kenngruppen*, please refer to Enigma Message Procedures <https://www.ciphermachinesandcryptology.com/en/enigmaproc.htm> [accessed 8 March 2024].

Appendix IV

Enigma – Important Early Capture of Naval Keys   September 1939 to June 1941

Six successful Enigma pinches up to the summer of June 1941.
Information gained from these captures ensured that M3 Enigma SIGINT code named
PORPOISE by GC&CS was decrypted until the end of the War.[1]

Schiff 26 (Polares)
(Armed Trawler)
26 April 1940 - Captured off Narvik.
Ship 26 attempted to pass itself of as a Dutch fishing vessel named Polares.
The documents seized enabled Alan Turin to decrypt Naval Enigma for the first time for a
period from April 1940, but also revealed how the German operators changed the wheel
settings every two days, thus if one day could be decrypted, a second day would be easier
to decode as well.[2]

U-13
(Type II B U-Boat)
31 May 1940 - Sunk by depth charge from HMS Weston, roughly twelve miles south-east
of Lowestoft.
26 Survivors, no casualties.[3]
Diving operations were carried out in in June in the hope of recovering cypher books.
None found, but useful handbooks recovered and passed to the GC&CS Elucidation
Department, assisting Naval Section's attempts at interpreting technical jargon and
abbreviations.

Lofoton Raid & Krebs (operation CLAYMORE)
(Armed Trawler)
4 March 1941
Ship captured at anchor, thus no casualties.
Raid on the Norwegian islands with the hope of capturing an Enigma machine and its
settings. It is not clear if the machine was captured, but the code books recovered initially
allowed communications for February, March and May to be read. From the transcripts
that were decrypted, it was realised that weather ships would also carry Enigma machines
and associated code books. These captures indirectly indicated targets for the future
pinches.[4]

---

[1] TNA HW 50/71, Naval E Keys, list of six important Enigma pinches. Note contemporary spelling of
Meunchen taken from this document.

[2] For further reading, please refer to Hugh Sebag-Montefiore, *Enigma: Battle for the Code* (London:
Weidenfeld & Nicolson, 2000; repr. 2011), pp. 83-86.

[3] History of U-13, uboat.net, <https://uboat.net/boats/u13.htm> [accessed 17 March 2024].

[4] F. H. Hinsley, *British Intelligence in the Second World War*, 5 vols (London: Her Majesty's Stationary
Office, 1981), I, p. 337. Histories of Lofoton, Meunchen.

Muenchen (München)
(Armed Trawler – used as weather reporting ship)
7 May 1941
Eight trawlers had been armed and converted to weather reporting ships by the German navy, with four on patrol at any given time.[5] Each carried an Enigma encryption machine and Wetterkurzschlussel (weather cypher).
The attack by HMS Somali and HMS Edinburgh caused the crew to abandon ship.
As the captain departed, he threw the Enigma machine overboard but left the weather cypher and other code books on his desk. These were recovered by the British when they searched the ship, before scuttling and sinking the vessel.

U-110
(Type IX B U-Boat)
9 May 1941 - Damaged by depth charge from destroyers HMS Bulldog, HMS Broadway and corvette HMS Aubretia east of Cape Farewell, Greenland.
Cryptographic items removed, before the U-Boat was allowed to sink on 10 May to hide the ship's capture and subsequent search.
32 survivors, 15 killed,[6]
The haul from U-110 duplicated items recovered from Muenchen but included 'Special Offizier Keys' and U-Boat Kurzsignalheft (U-Boat short signal booklet) used to encrypt the Kurzsignale (Short Signal). This was a special cypher used by U-Boat officers to report enemy patrols and convoy sightings.

Lauenburg
(Armed Trawler – used as weather reporting ship)
28 June 1941
Crew abandoned ship, to lifeboat.
Attacked by the destroyer HMS Tartar, forcing the crew to abandon ship.
Members of the crew of HMS Tartar boarded and recovered Enigma material before returning to their own ship. The Lauenburg was then sunk by gunfire, with the sinking reported 'en clair' without mentioning the boarding party, ensuring the German authorities would be unaware that Enigma items had been removed.
This second weather ship was selected for capture by Hinsley at GC&CS.

After the successful capture of the two weather ships and the code books from U-110, in June 1941, it was decided by GC&CS, that no further operations were to be undertaken to capture Naval Enigma. As the cryptanalysts had now mastered the M3 PORPOISE, they feared any future action risked raising the German authority's suspicions who might react by changing the M3 protocol, compromising the decryption of all future SIGINT.[7]

---

[5] Hinsley, *British Intelligence in the Second World War*, II, p. 565-568. Detailed history of weather ships.

[6] History of U-110, uboat.net, <https://uboat.net/boats/u110.htm> [accessed 17 March 2024].

[7] Hinsley, *British Intelligence in the Second World War*, I, p. 338.

Appendix V

Enigma – Phased Introduction of Four Wheel Machine

February 1942 to January 1945

Charting the gradual replacing of three wheel M3 Enigma encryption with four wheel M4 Enigma following the initial introduction of M4 SHARK on 1 February 1942.[1]

       Code name in bold   refers to the code name applied by GC&CS.
       Code name in parenthesis   refers to the code name used by the German navy.

Three wheel Naval Enigma Cyphers

DOLPHIN   three wheel.
(HEIMISH [*sic*] till 1 January 1943, HYDRA from 1 January 1943 onwards).
Original M3 Main surface vessel key used in Home Waters and the Baltic from September 1939 and continued to be used throughout the war.

PORPOISE   three wheel.
(SUED)
Used by all German naval units in the Mediterranean and Black Sea, except U-Boats
First used April 1941.
Read by GC&CS August 1942 onwards.

Four Wheel Naval Enigma Cyphers, Including Dates of Introduction

SHARK   four wheel.
(TRITON)
Home Waters U-Boat Key - split from DOLPHIN 01 February 1942.
First read 6 December 1942, read regularly from summer 1943.
First four wheel key to be used.

NARWHAL   four wheel.
(NIOBE)
Split from Home Waters DOLPHIN September 1944.
Read by GC&CS.

HACKLE   four wheel.
(GEFION)
Split from Home Waters DOLPHIN December 1944.
Used by Dutch Coastal Battery Service.
Read completely by GC&CS.

---

[1] TNA HW 50/70, GC&CS List of German Naval Enigma Machine Settings.

PLAICE   four wheel.
(BALTIC)
Split from Home Waters DOLPHIN M3 January 1944, M4 November 1944.
Read completely by GC&CS.

SUCKER   four wheel.
(German name not known).
Split from Home Waters DOLPHIN October 1944.
Used by Channel and Atlantic fortresses.
Read completely by GC&CS.

PIKE   four wheel.
(AUSSEITEIMISCH [*sic*])
Split from Home Waters DOLPHIN 14 February 1944.
Used by U-Boats in Far-East till 8 May 1945
Never read by GC&CS.

TURTLE   four wheel.
(MEDUSA)
Used by U-Boats in the Mediterranean, introduced between 23 April and 5 June 1943
Read using old PORPOISE keys. Abandoned by the German navy December 1944.

BLOATER   four wheel.
(WOTAN)
4 wheel introduced October 1944, replacing PORPOISE
Read by GC&CS using old PORPOISE Keys.

CATFISH   four wheel.
(ATHENA)
4 wheel introduced October 1944, replacing PORPOISE.
Used by naval stations and warships in the Aegean.
Read by GC&CS using old PORPOISE Keys.

TRUMPETER   four wheel.
(URANUS)
4 wheel introduced November 1944.
Used by High Command Mediterranean and in Black Sea.
Decrypted occasionally by GC&CS but generally ignored.

SEAHORSE   four wheel
(?)
4 wheel introduced January 1945.
Berlin to Tokyo German Naval Attaché

Appendix VI

Black List - CIPC Target Categories (and Later CIOS)   4 August 1944

Section Number	Designation	Working Party
1	Radar	A
2a, 2b, 2c, 2e(i)	Artillery and Armament Research, other than Explosives	B
2e(ii)	Explosives	D
3a	Bombs and Fuses	B (April J)
3c	Bomb Sights	F (April J)
4	Rockets and Rocket Fuels	B
5	Jet Propulsion including Jet Propelled Aircraft	F
6	Directed or Controlled Missiles	A (April J)
7	Signals Communications – Wireless Telegraphy and Telephony	E
8	Chemical Weapons *(Was to be investigated by War Office)*	WO (April L)
9	Physical and Optical Instruments and Devices	C
10a	Special Physical Methods *(Heavy Water, Tube Alloys)*	*Deleted*
10b	Special Methods B.W. *(Biological Weapons)*	CIOS Committee
11	Torpedoes	Admiralty
12	Submarines	Admiralty
13	Boom Defences	Admiralty
14	Mine Sweeping	Admiralty
15	German Sea Mines including Depth Charges	Admiralty
16	Land Mines *(Was to be investigated by War Office)*	WO (April B)
17	Flame and Incendiaries	B
18	Armoured Fighting Vehicles (AFVs)	H
19	Vehicles - including Half-Tracks and Anti-Mine Protection	I
20	Engineer Equipment	*Deleted*
21	Metallurgy	D
22	Miscellaneous Chemical, Materials including Rubber and Plastics	D
23	Airborne Equipment	*Deleted*
24	Medical, Pharma, Antibiotics, DDT anti Malaria Drugs	D
25	Aircraft	F
26	Aircraft Engines	F
27	Instruments and Equipment	F
28	HQ Documents and Personnel, Research Centres,	G
30	Fuels and Lubricants	(April K)

Item 10b was being issued separately on a restricted distribution.[1] Working groups revised in April 1945 as shown in parenthesis and Section 30, 'Fuels and Lubricants' added.[2]

---

[1] TNA FO 1050/1417, Combined Intelligence Priorities Committee (CIPC), Black List, 4 August 1944. Introductory notes introducing the 28 sections, followed by targets grouped by section number. Approximately 370 pages. This list included the original IPC working party descriptions.

[2] FO 935/23, CIOS lists of Working Parties and Members.

Appendix VII

CIOS Black List - Composition of Working Parties   25 April 1945

Anglo-US departments represented on the CIOS working parties register published at the seventeenth CIOS meeting held on 25 April 1945
.[1]

This departmental key should be read in conjunction with the following four tables.

The percentage value shown below indicates the proportion of the total positions.

    For example:

Out of the 107 total positions that made up the Black List working parties, B 9 Ministry of Supply provided twenty individuals or 18.7% of British positions.

British Representation - by Department

B 1	Admiralty	12	11.3%
B 2	War Office	18	17.0%
B 3	Air Ministry	15	14.2%
B 4	Foreign Office	1	0.9%
B 5	Economic and Industrial Planning Staff (EIPS)	1	0.9%
B 6	Ministry of Aircraft Production (MAP)	21	19.8%
B 7	Ministry of Economic Warfare (MEW)	15	14.2%
B 8	Ministry of Fuel & Power	1	0.9%
B 9	Ministry of Supply (MoS)	20	18.9%
B 10	National Institute for Medical Research	1	0.9%
B 11	Radio Board (Sir Robert Watson-Watt)	1	0.9%
	British Positions - Total	106	
	British Military Working Party Staff	52	49.1%
	British Civilian Working Party Staff	54	50.9%

US Representation - by Department

A 1	US Navy	18	18.0%
A 2	US Army	12	12.0%
A 3	US Ordnance	17	17.0%
A 4	Petroleum Attachés Office	1	1.0%
A 5	US Signal Corps	2	2.0%
A 6	US Economic Warfare Department (US EWD)	7	7.0%
A 7	US Strategic Air Forces (USSTAF)	18	18.0%
A 8	Office of Scientific Research and Development (OSRD)	21	21.0%
A 9	Office of Strategic Services (OSS)	2	2.0%
A 10	US Embassy	1	1.0%
A 11	US Medical Liaison Officer	1	1.0%
	US Positions - Total	100	
	US Military Working Party Staff	75	75.0%
	US Civilian Working Party Staff	25	25.0%

---

[1] TNA FO 935/23, CIOS List of Working Party Members, list undated but issued after 10 April 1945 and before seventeenth CIOS meeting held on 25 April 1945.

Appendix VII　　　　**CIOS Black List - Composition of Working Parties**　　　**British Representation – Part One**

Section No	Designation	UK	US	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
		106	100	12	18	15	1	1	21	15	1	20	1	1
Working Group A		11	9	2	2	1			3	1		1		1
1	Radar													
Working Group B		13	18	1	3	1			4	1		3		
2a 2b 2c 2e(i)	Artillery and Armament Research, other than Explosives													
4	Rockets and Rocket Fuels													
16	Land Mines													
17	Flame and Incendiaries													
Working Group C		8	7	2	1	1			2	1		1		
9	Physical and Optical Instruments and Devices													
Working Group D		18	16	1	1	2			2	6		5	1	
2e(ii)	Explosives													
21	Metallurgy													
22	Misc. Chemical, materials including Rubber and Plastics													
24	Medical, Pharma, Antibiotics, DDT anti Malaria Drugs													
Working Group E		10	5	3	1	1			3	1		1		
7	Signals Comms – Wireless Telegraphy and Telephony													
Working Group F		11	13	1	1	3			6					
5	Jet Propulsion including Jet Propelled Aircraft													
25	Aircraft													
26	Aircraft Engines													
27	Instruments and Equipment													
Working Group G		7	10		3	1	1	1				1		
28	HQ Documents and Personnel, Research Centres													

Appendix VII   **CIOS Black List - Composition of Working Parties**   **British Representation – Part Two**

Section No	Designation	UK	US	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
		106	100	12	18	15	1	1	21	15	1	20	1	1
Working Group H		3	2		1					1		1		
18	Armoured Fighting Vehicles													
Working Group I		7	2		2					2		3		
19	Vehicles – incl. Half-Tracks and Anti-Mine Protection													
Working Group J		6	9	1	1	1			1	1		1		
3a	Bombs and Fuses													
3c	Bomb Sights													
6	Directed or Controlled Missiles													
Working Group K		8	6	1	1	3				1	1	1		
30 *(new)*	Fuels and Lubricants													
Working Group L		4	3		1	1						2		
9	Chemical Weapons													
Admiralty Sections (in cooperation with US naval authorities)		?	?											
11	Torpedoes													
12	Submarines													
13	Boom Defences													
14	Mine Sweeping													
15	German Sea Mines including Depth Charges													
Deleted Sections		n/a	n/a											
10a	Special Physical Methods (Heavy Water, Tube Alloys)													
10b	Special Methods B.W. (Biological Weapons)													
20	Engineer Equipment													
23	Airborne Equipment													

The five sections allocated to the British Admiralty – to be investigated in conjunction with US naval authorities according to minutes of second CIPC meeting.[2]

ALSOS would be investigating Section 10a – 'Special Physical Methods' (Heavy Water, Tube Alloys). Their primary investigations would research progress with the design and development of a nuclear weapon. ALSOS would also investigate Germany's research into 10b – 'Special Methods B.W.' or Biological Weapons.[3]

---

[2] TNA FO 935/20, Minutes of second CIPC Meeting 22 June 1944, p. 5, point 5 Composition of Working Parties, note (ii),

[3] L. Brophy, W. Miles and R. Cochrane, *The Chemical Warfare Service: From Laboratory to Field* (Washington: Centre of Military History, 1988), p. 114. A report issued by ALSOS in September 1945 revealed that Germany had worked on defensive measures to combat biological weapons use on the eastern front but had not produced weapons themselves.

Appendix VII CIOS Black List - Composition of Working Parties US Representation – Part One

Section No	Designation	UK	US	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
		106	100	12	18	15	1	1	21	15	1	20	1	1
Working Group A		11	9	1	2	2	2			1		1		
1	Radar													
Working Group B		13	18	5	2	2	4				1	4		
2a 2b 2c 2e(i)	Artillery and Armament Research, other than Explosives													
4	Rockets and Rocket Fuels													
16	Land Mines													
17	Flame and Incendiaries													
Working Group C		8	7	1	1	3	1					1		
9	Physical and Optical Instruments and Devices													
Working Group D		18	16	2	1	1	5	1			1	4		1
2e(ii)	Explosives													
21	Metallurgy													
22	Misc. Chemical, materials including Rubber and Plastics													
24	Medical, Pharma, Antibiotics, DDT anti Malaria Drugs													
Working Group E		10	5	1	2	1	1							
7	Signals Comms – Wireless Telegraphy and Telephony													
Working Group F		11	13	3		3	4				1	2		
5	Jet Propulsion including Jet Propelled Aircraft													
25	Aircraft													
26	Aircraft Engines													
27	Instruments and Equipment													
Working Group G		7	10	1	1	2	1	1	1		2	1		
28	HQ Documents and Personnel, Research Centres													

Appendix VII   **CIOS Black List - Composition of Working Parties**   **US Representation – Part Two**

Section No	Designation	UK	US	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
		106	100	12	18	15	1	1	21	15	1	20	1	1
Working Group H		3	2		1						1			
18	Armoured Fighting Vehicles													
Working Group I		7	2							1	1			
19	Vehicles – incl. Half-Tracks and Anti-Mine Protection													
Working Group J		6	9	2		3	1	1				2		
3a	Bombs and Fuses													
3c	Bomb Sights													
6	Directed or Controlled Missiles													
Working Group K		8	6	2			1	1				1	1	
30 *(new)*	Fuels and Lubricants													
Working Group L		4	3		2		1							
9	Chemical Weapons													
Admiralty Sections (in cooperation with US naval authorities)		?	?											
11	Torpedoes													
12	Submarines													
13	Boom Defences													
14	Mine Sweeping													
15	German Sea Mines including Depth Charges													
Deleted Sections		n/a	n/a											
10a	Special Physical Methods (Heavy Water, Tube Alloys)													
10b	Special Methods B.W. (Biological Weapons)													
20	Engineer Equipment													
23	Airborne Equipment													

The five sections allocated to the British Admiralty – to be investigated in conjunction with US naval authorities according to minutes of second CIPC meeting.[1]

ALSOS would be investigating Section 10a – 'Special Physical Methods' (Heavy Water, Tube Alloys). Their primary investigations would research progress with the design and development of a nuclear weapon. ALSOS would also investigate Germany's research into 10b – 'Special Methods B.W.' or Biological Weapons.[2]

---

[1] TNA FO 935/20, Minutes of second CIPC Meeting 22 June 1944, p. 5, point 5 Composition of Working Parties, note (ii),

[2] L. Brophy, W. Miles and R. Cochrane, *The Chemical Warfare Service: From Laboratory to Field* (Washington: Centre of Military History, 1988), p. 114. A report issued by ALSOS in September 1945 revealed that Germany had worked on defensive measures to combat biological weapons use on the eastern front but had not produced weapons themselves.

Appendix VIII

Grey List – GLP Target Categories   19 January 1945

Section Number	Designation	Sub Working Party	Working Party
1	Solid Fuels	A1	A
2	Liquid Fuels and Lubricants	A1	
3	Explosives	A1	
4	Miscellaneous Chemicals	A1	
5	Rubber	A2	
6	Plastics	A2	
7	Textiles & Leather	A2	
8	Agriculture	A3	
9	Food	A3	
10	Building Materials	A4	
11	Industrial Minerals	A4	
12	Metals and Alloys	A4	
13	Tools	B1	B
14	Mechanical Industrial Equipment	B1	
15	Electrical Industrial Equipment	B1	
16	Armaments	B1	
17	Railway Equipment	B2	
18	Marine Equipment	B2	
19	Automotive Equipment	B3	
20	Aeronautical Equipment	B3	
21	Communications Equipment	B4	
22	Scientific and Technical Equipment	B4	
23	Household and Office Equipment	C1	C
24	Personal Equipment	C1	
25	Housing and City Planning	C2	
26	Medicine and Sanitation	C2	
27	Utilities (Electricity, Gas, Water, Sewer, Urban Transport)	D	D
28	Communications		
29	Transportation		
30	Business Institutions	E	E
31	Governmental and Party Organisations	E	
32	Education, Religious Affairs, Fine Arts and Monuments	E	

Note designations are different to Black List categories.[1]

---

[1] TNA FO 935/27, Grey List Panel, Target Categories for the Grey List, CIOS (GLP) – 1, 19 January 1945

Appendix IX

Grey List Panel (GLP) – Composition of Working Parties   27 April 1945

Anglo-US departments represented on the Grey List Panel working parties register published by CIOS on 10 April 1945
These table incorporate two additional US staff members added to cover three positions 27 April 1945.[1]

This departmental key should be read in conjunction with the following four tables.

Percentage value shown below provides indicates the proportion of the national whole.
> *For example:*
> Out of the 78 total positions that made up the Grey List working parties, B 10, Ministry of Supply provided fifteen individuals who represented 19.2% of British positions.

British - Representation by Department

B 1	Control Commission for Germany (British Element)	43	55.1%
B 2	Board of Trade	1	1.3%
B 3	Building Research Station	1	1.3%
B 4	British Shipbuilding Research Association	1	1.3%
B 5	Department of Scientific & Industrial Research	5	6.4%
B 6	General Post Office	1	1.3%
B 7	Ministry of Agriculture	1	1.3%
B 8	Ministry of Food	1	1.3%
B 9	Ministry of Fuel & Power	4	5.1%
B 10	Ministry of Supply	15	19.2%
B 11	Ministry of War Transport	3	3.8%
B 12	Rubber Control	1	1.3%
B 13	Wellcome Research Institute	1	1.3%
	British Positions - Total	78	
	British Military Working Party Staff	19	24.4%
	British Civilian Working Party Staff	59	75.6%

US - Representation by Department

A 1	Technical Industrial Intelligence Committee	36	46.2%
A 2	Army Service Forces	3	3.8%
A 3	Mission for Economic Affairs	2	2.6%
A 4	US Chemical Warfare	1	1.3%
A 5	US Engineers	9	11.5%
A 6	US Group Control Council	5	6.4%
A 7	US Quartermasters Corps	4	5.1%
A 8	US Medical Corps	1	1.3%
A 9	US Navy	5	6.4%
A 10	US Ordnance	6	7.7%
A 11	US Signal Corps	2	2.6%
A 12	US State Department	1	1.3%
A 13	US Transportation Corps	1	1.3%
A 14	US Strategic Air Forces	2	2.6%
	US Positions	78	
	US Military Working Party Staff	37	47.7%
	US Civilian Working Party Staff	41	52.6%

---

[1] TNA FO 935/28, CIOS / SHAEF, CIOS/106/10/C, 10 April 1945 and supplement 27 April 1945, Directory of Grey List Panel Working Parties and Sub Working Parties.

Appendix IX   Grey List Panel (GLP) – Composition of Working Parties: British Representation – Part One

	UK	US	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B 13
Representation by Department	78	78	43	1	1	1	5	1	1	1	4	15	3	1	1
Supervisor Working Parties	1		1												
Deputy Supervisor Working Parties		1													
Working Party A	1	1	1												
Sub Working Party A1	1	1					1								
1 Solid Fuels	2	3									2				
2 Liquid Fuels & Lubricants	2	2									1	1			
3 Explosives	2	2	1									1			
4 Miscellaneous Chemicals	2	3	1									1			
Sub Working Party A-2	1	1	1												
5 Rubber	2	2										1		1	
6 Plastics	2	2	1									1			
7 Textiles & Leather	2	2	1									1			
Sub Working Party A-3	1	1	1												
8 Agriculture and Food	2	2							1	1					
9 Forest Products	2	2	1									1			
Sub Working Party A-4	1	1	1												
10 Building Materials	2	2	1		1										
11 Industrial Minerals	2	3					1					1			
12 Metals & Alloys	2	3					1					1			

Appendix IX   Grey List Panel (GLP) – Composition of Working Parties: British Representation – Part Two

	UK	US	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B 13	
Working Party B	1	1	1													
Sub Working Party B1	1	1	1													
13 Tools - Hand & Machine	2	2	1									1				
14 Mechanical Industrial Equipment	2	2	1									1				
15 Electrical Industrial Equipment	2	2	1									1				
16 Armaments	2	2	1									1				
Sub Working Party B-2	1	1	1													
17 Railway Equipment	2	2	1										1			
18 Marine Equipment	2	2	1			1										
Sub Working Party B-3	1	1	1													
19 Automotive Equipment	2	2					1					1				
20 Aeronautical Equipment	2	2	2													
Sub Working Party B-4	1	1	1													
21 Communications Equipment	2	2	1									1				
22 Scientific & Technical Equipment	2	2	1				1									
Working Party C	1	1	1													
Sub Working Party C1	1		1													
23 Household & Office Equipment	1	1	1													
24 Personal Equipment	2	1	1	1												
Sub Working Party C2	1	1	1													
25 Housing & City Planning	1	2	1													
26 Medicine & Sanitation	2	2	1											1		
Working Party D	1	1											1			
27 Utilities (Elect, Gas, Water, Sewer, Transport)	2	2	1								1					
28 Communications	2	2	1					1								
29 Transportation	2	1	1										1			
Working Party E	1		1													
30 Business Institutions	2	2	2													
31 Government Part Organisations	2	2	2													
32 Education, Religious Affairs, Fine Arts, Monuments	2	1	2													

Appendix IX   Grey List Panel (GLP) – Composition of Working Parties: US Representation – Part One

	UK	US	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14
Representation by Department	78	78	36	3	2	1	9	5	4	1	5	6	2	1	1	2
Supervisor Working Parties	1		1#													
Deputy Supervisor Working Parties		1														
Working Party A	1	1	1													
Sub Working Party A1	1	1	1													
1 Solid Fuels	2	3	1				2									
2 Liquid Fuels & Lubricants	2	2	1								1					
3 Explosives	2	2	1									1				
4 Miscellaneous Chemicals	2	3	1			1										
Sub Working Party A-2	1	1	1													
5 Rubber	2	2	1									1				
6 Plastics	2	2	1									1				
7 Textiles & Leather	2	2			1				1							
Sub Working Party A-3	1	1	1													
8 Agriculture and Food	2	2	1						1							
9 Forest Products	2	2	1				1									
Sub Working Party A-4	1	1	1													
10 Building Materials	2	2	1#				1									
11 Industrial Minerals	2	3	2				1									
12 Metals & Alloys	2	3	2									1				

staff member added 27 April 1945

Appendix IX   Grey List Panel (GLP) – Composition of Working Parties: US Representation – Part Two

		UK	US	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14
Working Party B		1	1	1													
Sub Working Party B1		1	1	1													
13	Tools - Hand & Machine	2	2	1					1								
14	Mechanical Industrial Equipment	2	2					1				1					
15	Electrical Industrial Equipment	2	2					1	1								
16	Armaments	2	2									1	1				
Sub Working Party B-2		1	1	1													
17	Railway Equipment	2	2			1										1	
18	Marine Equipment	2	2	1								1					
Sub Working Party B-3		1	1	1													
19	Automotive Equipment	2	2	1									1				
20	Aeronautical Equipment	2	2	1													1
Sub Working Party B-4		1	1	1													
21	Communications Equipment	2	2	1										1			
22	Scientific & Technical Equipment	2	2	1													1
Working Party C		1	1	1	1												
Sub Working Party C1		1								1							
23	Household & Office Equipment	1	1							1							
24	Personal Equipment	2	1														
Sub Working Party C2		1	1		1												
25	Housing & City Planning	1	2	1#				1			1	1					
26	Medicine & Sanitation	2	2														
Working Party D		1	1	1													
27	Utilities (Elect, Gas, Water, Sewer, Transport)	2	2	1				1									
28	Communications	2	2	1										1			
29	Transportation	2	1		1												
Working Party E		1															
30	Business Institutions	2	2	1					1								
31	Government Part Organisations	2	2						1						1		
32	Education, Religious Affairs, Fine Arts, Monuments	2	1						1								

staff member added 27 April 1945

Appendix X

Classification of Secret Documents

The classification of official documents was agreed during the 186th meeting of the Chiefs of Staff Committee held on 22 June 1942. The directive was promulgated by the JIC on 4 August 1942 under JIC (42) 295.
Of the following four definitions, only SECRET, CONFIDENTIAL and RESTRICTED were applied to CIOS and later BIOS reports:

The British JIC hoped that the US would also adopt the term MOST SECRET, which would have resulted in UK and US document classification aligning.
This was not to be, with the US retaining their title TOP SECRET in place of the British MOST SECRET. The other three categories were the same for both countries.

MOST SECRET
   Plans of future operations.
   Papers detailing troop movements, convoys, their escorts and ships.
   Force strengths, rates of production, stocks of munitions and raw materials.
   Political papers discussing negotiations of alliances.
   Secret service methodology, secret agent's details or counter espionage.
   Secret weapons and munitions, scientific and technical developments.
   Cryptology and documents relating to cyphers.

SECRET
   Documents not warranting the exceptional precautions applied to 'Most Secret' documents, yet 'for security reasons they must only be disclosed to persons whose duties make it essential they should have knowledge of them'.

CONFIDENTIAL
   Documents that if in the wrong hands might cause 'administrative embarrassment or difficulty or would be helpful to the enemy, without being gravely dangerous to the national interest'.

RESTRICTED
   Documents that should not be published or communicated to anyone except for official purposes.[1]

---

[1] TNA CAB 81/109, Classification of Secret Documents, JIC (42) 295 (Final), 4 August 1942.

Appendix XI

CAFT - Consolidated Advance Field Teams   27 February 1945

The regrouping of Black List sections into seven 'Consolidated Advance Field Teams' or CAFTs was intended only for meeting the immediate problems of a German Collapse.[2]

Item Number	Designation

CAFT Group 1

1	Radar
7	Signals Communications – Wireless Telegraphy and Telephony
9	Physical and Optical Instruments and Devices

CAFT Group 2

2a, 2b, 2c, 2e(i)	Artillery and Armament Research, other than Explosives
2e(ii)	Explosives
3a	Bombs and Fuses
3c	Bomb Sights
4	Rockets and Rocket Fuels
6	Directed or Controlled Missiles
16	Land Mines
17	Flame and Incendiaries
21	Metallurgy

CAFT Group 3

8	Chemical Weapons
22	Miscellaneous Chemical, Materials including Rubber and Plastics
24	Medical, Pharma, Antibiotics, DDT anti Malaria Drugs
30	Fuels & Lubricants

CAFT Group 4   **(Air Force Group)**

5	Jet Propulsion including Jet Propelled Aircraft
25	Aircraft
26	Aircraft Engines
27	Instruments and Equipment

---

[2] TNA FO 935/22, Combined Intelligence Objectives Sub-Committee, G2 SHAEF, Preliminary Outline of CIOS Plan for Rapid Appraisal and Assessment of Targets Under Conditions of German Collapse, CIOS/118/8/S, 26 February 1945, point 2, Outline Plan, p. 2.

Item Number	Designation

CAFT Group 5

18	Armoured Fighting Vehicles - AFV
19	Vehicles - including Half-Tracks and Anti-Mine Protection

CAFT Group 6   **(Naval Group)**

11	Torpedoes
12	Submarines
13	Boom Defences
14	Mine Sweeping
15	German Sea Mines including Depth Charges

CAFT Group 7

28	HQ Documents and Personnel, Research Centres

The following Section Numbers and subjects were deleted from the original IPC Black List Categories and subsequent CIPC Black List published 4 August 1944.

10a	Special Physical Methods	(Heavy Water, Tube Alloys)
10b	Special Methods B.W.	(Biological Weapons)
20	Engineer Equipment	

Item 10b is being issued separately on a restricted distribution

Appendix XII

CAFT - Combined Black and Grey List Target Groups   12 May 1945

With the decision to amalgamate the outstanding items on the military Black List introduced in May 1944, with the commercial, industrial and economic targets of the Grey List compiled since January 1945, a new list of Target Groups was published on 12 May 1945.[1] Additional notes in italics added by this author.

Target Groups

Due to the amalgamation of the Black and Grey Lists and the revision of the target list categories (dated 12 May 1945), the CIOS targets are regrouped by item numbers and subjects as follows:-

Item Number	Designation

Group 1

1	Radar
7	Signals Communications – Wireless Telegraphy and Telephony
9	Physical and Optical Instruments and Devices

Group 2

2	Artillery and weapons.
3	Bombs and Fuses (Sights not included).
4	Rockets and Rocket Fuels.
6	Directed or Controlled Missiles.
16	Land Mines.
17	Flame and Incendiaries.
21	Metallurgy.
23*	Airborne Equipment (for ground troops).

Group 3

8	Chemical Warfare.
22	Miscellaneous Chemicals. *(Materials including Rubber and Plastics)*
24	Medical. *(Pharma, Antibiotics, DDT anti Malaria Drugs)*
30	Fuels & Lubricants.

---

[1] TNA FO 935/23, Combine Intelligence Objectives Sub-Committee, Target Groups, 12 May 1945.

Item Number	Designation	

Group 4   *(Air Force Group)*

5	Jet Propulsion.	*(including Jet Propelled Aircraft)*
25	Aircraft.	
26	Aircraft Engines.	
27	Instruments and Equipment.	
3	Bomb Sights.	

Group 5

18	Armoured Fighting Vehicles.	
19	Vehicles.	*(including Half-Tracks and Anti-Mine Protection)*

Group 6   *(Naval Group)*

11	Torpedoes.
12	Submarines.
13	Boom Defences.
14	Mine Sweeping.
15	German Sea Mines.
29*	Naval Construction.

Group 7

28	HQ Documents and Personnel, Research Centres.

Group 8

20*	Engineer Equipment.
31*	Machinery & Mechanical Equipment.
32*	Railway Equipment.
33*	Utilities.

*These items have been added

The above groupings will govern the Group Chairmen and CAFT leaders. In some groups it may be advisable to form sub-groups at the discretion of the Group Chairmen.

Appendix XIII

FIAT - Anglo-US Staff Comparison   June 1945

Comparison Between TO of FIAT(US) and WE of FIAT(Br)[1]

	U.S.	British
Brigadier or Service or civilian equivalent	2	2
Colonels or civilian equivalent	9	3
Lt-Colonels or civilian equivalent	16	14
Majors or civilian equivalent	21	36
Captains or civilian equivalent	25	21
Lieutenants or civilian equivalent	9	30
Other Ranks	260	134
Clerical Civilian personnel	Nil	38
Total	342	278

In Addition to the above, the US component of FIAT is assisted by a number of civilian or Service Agencies such as TIIC (Technical Industrial Intelligence Committee), Army Ground Forces, Navtechmiscu, etc., who are not shown in TO and amount to well over 200 bodies.

Notes added by author

TO   Table of Organisation

WE   War Establishment

TIIC   Technical Industrial Intelligence Committee
US Washington based advisory committee with operatives forming half of the working parties subordinate to the CIOS GLP.

---

[1] TNA FO 1049/139, June 1945.

Appendix XIV

CIOS, BIOS, FIAT and JIOA Reports

Distribution to Libraries and Learned Institutions

Source Document[1]

		Print Quantity
Public Libraries – details below	(BIOS to distribute)	120
Copyright Libraries & Learned Institutions	(BIOS to distribute)	6
Oxford , Bodleian	1	
Cambridge University	1	
Dublin, Trinity College	1	
National Library of Scotland	1	
National Library of Wales	1	
British Museum	1	
Technical Press	(BOT to distribute)	25
University and Professional Institutions	(DSIR to Distribute)[2]	100
Unions	(BOT to distribute)	3
FBI (Federation of British Industries)	1	
TUC (Trade Union Congress)	1	
NUM (National Union of Manufacturers)	1	
Patent Office	(BOT to distribute)	10
Sponsoring Departments	(BOT to distribute)	100
including Trade Associations		
BIOS reserve, to meet other requirements,		145
including extra needs of Trade Associations for their members		
Total to be printed		509

---

[1] TNA BT 211/13, Note for Meeting at BIOS on Friday, 26th October 1945 Synchronisation of Distribution of CIOS and BIOS Reports. Written by L. J. VOS, Board of Trade 26 October 1945.

[2] TNA FO 1082/1, Control Commission for Germany, Glossary of Abbreviations, p. 31, Foreign and Commonwealth Office, 1984. DSIR - Department of Scientific and Industrial Research.

Public Libraries.

The original forty four libraries participating in the publicity of final reports[3]
1.　　　　　　Aberdeen Central Public Library
2.　　　　　　Belfast Central Public Library
3.　　　　　　Birkenhead Central Public Library
4.　　　　　　Birmingham Reference Library (not Commercial Library)
5.　　　　　　Bolton Central Library
6.　　　　　　Bradford Commercial Reference Library
7.　　　　　　Bristol Central Library
8.　　　　　　Cambridge Central Public Library
9.　　　　　　Cardiff Central Library
10.　　　　　　Coventry, Earlsdon Library
11.　　　　　　Derby Central Public Library
12.　　　　　　Dundee Central Public Library
13.　　　　　　Edinburgh Public Library
14.　　　　　　Glasgow Commercial Library
15.　　　　　　Halifax Public Library
16.　　　　　　Huddersfield Public Library
17.　　　　　　Hull Central Public Library
18.　　　　　　Ipswich Central Public Library
19.　　　　　　Leeds Commercial and Technical Library
20.　　　　　　Leicester Central Library
21.　　　　　　Liverpool Reference Library
22.　　　　　　London - Corporation of London Guildhall Library
23.　　　　　　London - South Kensington, Science Museum Library
24.　　　　　　London - Southwark Public Library
25.　　　　　　London - Westminster Public Library
26.　　　　　　London - Croydon Central Library
27.　　　　　　London - Hendon Public Library
28.　　　　　　London - Middlesex Central Public Library
29.　　　　　　London - Tottenham Central Library
30.　　　　　　Luton Central Library
31.　　　　　　Manchester Central Library
32.　　　　　　Middlesbrough Central Library
33.　　　　　　Newcastle-on-Tyne Public Library
34.　　　　　　Norwich Central Public Library
35.　　　　　　Nottingham Public Library
36.　　　　　　Oxford Central Public Library
37.　　　　　　Plymouth Public Library
38.　　　　　　Portsmouth Central Public Library
39.　　　　　　Preston, The Harris Public Library
40.　　　　　　Reading Central Public Library
41.　　　　　　Sheffield Central Library
42.　　　　　　Southampton Central Public Library
43.　　　　　　Stoke-on-Trent Public Library
44.　　　　　　Swansea Central Public Library

The list was compiled by the Board of Trade as a checklist when writing to public libraries on 16 October 1945. They were requesting that selected regional libraries participate in a scheme to publicise BIOS services and making reports accessible to the general public, by holding copies of reports in their reference facilities.

---

[3] TNA BT 211/11, List of libraries to which BIOS reports of industrial information obtained from Germany will be supplied, October 1945.

Libraries Added After Publication of the Distribution List[4]

Richmond Public Library, Surrey
York Public Library
Grimsby Public Library
Newport Central Public Library
Ilford Central Library
Sunderland Central Library
Chesterfield Public Library
London - Patent Office Library
London - Edmonton Central Library
London – Central Library, Stratford

Hall notes that by the Spring of 1946, sixty six libraries held collections of CIOS, BIOS, FIAT and JIOA reports.[5]

---

[4] TNA BT 211/163, Libraries added by 19 February 1946

[5] Charlie Hall, *British Exploitation of German Science and Technology, 1943-1949* (London: Routledge, 2019), p. 88.

Appendix XV

Australian Scientific and Technical Mission

Alphabetical Subject Index of CIOS, BIOS, FIAT and JIOA Final Reports

Item 1 - Report Subjects

3812 subjects indexed up to April 1946

	Total	%	CIOS	%	BIOS	%	FIAT	%	JIOA	%
Total	3812		3550	93.1	261	6.8	1	0.03	0	0
Open	3204	84.1	3033	79.6	170	4.5	1	0.03	0	0
Restricted	426	11.2	392	10.3	34	0.9	0	0	0	0
Confidential	113	3.0	105	2.8	8	0.2	0	0	0	0
Secret	69	1.8	20	0.5	49	1.3	0	0	0	0

Item 2 - Report Subjects

3905 subjects indexed after April 1946 to 13 June 1946 (Addendum No 1)

	Total	%	CIOS	%	BIOS	%	FIAT	%	JIOA	%
Total	3905		892	22.8	1607	41.2	1253	32.1	153	3.9
Open	3207	77.5	683	17.5	1252	32.1	965	24.7	127	3.3
Restricted	649	16.6	135	3.5	244	62	270	6.9	0	0
Confidential	92	2.4	38	1.0	28	28	0	0	26	0.7
Secret	137	3.5	36	0.9	83	83	18	0.5	0	0

Item 3 - Report Subjects

2293 subjects indexed after 14 June to 25 October 1946 (Addendum No 2)

	Total	%	CIOS	%	BIOS	%	FIAT	%	JIOA	%
Total	2293		106	4.6	1229	53.6	822	35.8	136	5.9
Open	2118	92.4	95	4.1	1133	49.4	807	35.2	83	3.6
Restricted	85	3.7	9	0.4	72	3.1	4	0.2	0	0
Confidential	77	3.4	0	0	13	0.6	11	0.5	53	2.3
Secret	13	0.6	2	0.1	11	0.5	0	0	0	0

Item 4 - Report Subjects

10010 subjects indexed to 25 October 1946 (Original + Addendum No 1 + Addendum No 2) [1]

	Total	%	CIOS	%	BIOS	%	FIAT	%	JIOA	%
Total	10010		4548	45.4	3097	30.9	2076	20.7	289	2.9
Open	8343	83.4	3811	83.8	2555	82.5	1773	84.5	210	72.7
Restricted	1160	11.6	536	11.8	350	11.3	274	13.2	0	0
Confidential	282	2.8	143	3.1	49	1.6	11	0.5	79	27.3
Secret	219	2.2	58	1.3	143	4.6	18	0.9	0	0

---

[1] TNA FO 1005/1602, CIOS BIOS FIAT JIOA Report Subject Index. The precise cut-off date of the original batch of report subjects is not specified, but the cover retains the number 04-46 suggesting an April 1946 date.

Appendix XVI

Trade Associations   1945-1946

British trade associations had worked closely with government departments from 1945, proposing intelligence targets in Europe and nominating appropriate investigators. The reports these investigation teams produced under the CIOS and BIOS titles, were distributed to industries affiliated to the participating trade association of Chambers of Commerce. To ensure all British Industry had access to the CIOS and BIOS reports, copies were placed in participating libraries and accession lists published in daily newspapers and trade journals. Trade associations and Chambers of Commerce were invited to attend regional exhibitions laid on by BIOS and the Board of Trade giving rise to the following list of attendees.[1037]

1.	Chamber of Commerce	London
2.	Chamber of Commerce	Glasgow
3.	Chamber of Commerce	Manchester
4.	Chamber of Commerce	Birmingham
5.	Mining Association of Great Britain	
6.	British Gas Council	
7.	Institute of Petroleum	
8.	Association of Tar Distillers	
9.	British Electrical Development Association	
10.	Coke Oven Managers Association	
11.	Low Temperature Coal Distillers Association	
12.	Institute of Fuel	
13.	Council if Underground Mining Machinery Manufacturers	
14.	National Benzole [*sic*] Association	
15.	British Toy Manufacturers	
16.	Paper Makers Association	
17.	National Hosiery Manufacturers Association	
18.	British Chemical Plant Manufacturers	
19.	Society of Motor Manufacturers and Trades	
20.	Bicycle and Motor Cycle Industrial and Export Group	
21.	Radio Industry Council	
22.	Scientific Instruments Manufacturers Association	
23.	British Internal Combustion Engine Manufacturers	
24.	National Leather Goods and Saddlery Manufacturers	
25.	British Federation of Master Printers	
26.	British Plastics Federation	
27.	Wool Textile Delegation	
28.	Sheffield Cutlery Manufacturers	
29.	Engineering Industrial Association	
30.	Timber Development Association	
31.	Association of British Manufacturers of Printing Machinery	
32.	Steel Plant Works Association	
33.	Glass Manufacture Association	
34.	National Bedding Association	
35.	British Pottery Manufacturers Federation	
36.	British Iron Founders Association	
37.	Federation of British Rubber and Allied Manufacturer Association	

[1037] TNA BT 211/26, Trade Associations and Chambers of Commerce, October 1946.

38.	Federation of British Hand Tool Manufacturers
39.	Ball and Roller Bearing Association
40.	Association of Dental Manufacturers and Trades of United Kingdom
41.	Society of British Aircraft Constructors
42.	Society of British Plant Manufacturers
43.	British Cotton Industry Research Association
44.	British Electrical and Allied Manufacturers Association
45.	Federation of Civil Engineering Contractors
46.	Federation of Associations of Specialists and Sub-Contractors
47.	Nation Council of Building Material Producers
48.	Association of Consulting Engineers
49.	Institute of Structural Engineers
50.	The Building Research Station
51.	Road Research Laboratory
52.	National Physical Laboratory
53.	British Engineering Association
54.	Peat Marwick Mitchell & Co *(Accounting Concern – now KPMG)*
55.	Association of British Chemical Manufacturers
56.	Textile Machinery and Accessories Export Group
57.	Stationary Manufacturers Sundries Association
58.	Piano Manufacturers Export Group
59.	British Boot, Shoe and Allied Trades Research Association
60.	British Food Manufacturing Industries Research Association
61.	British Launderers Research Association
62.	British Leather Manufacturers Research Association
63.	Research Association of British Paint and Varnish Manufacturers
64.	British Paper and Board Industrial Research Association
65.	Printing and Allied Trades Research Association
66.	Research Association of British Rubber Manufacturers
67.	British Welding Research Association
68.	United Farmers Association
69.	Federation of Curriers and Light Leather Dressers
70.	Association of British Plywood Manufacturers
71.	Master Process Engravers
72.	Society of Dyers and Colourists
73.	British Non Ferrous Metals Association
74.	Surgical Instruments Manufacturers Association
75.	Gauge and Toolmakers Association
76.	Machine Tool Trades Association
77.	British Furniture Manufacturers Association
78.	National Federation of Umbrella Manufacturers
79.	Wholesale Drug Trade Association
80.	Fountain Pen Makers Association
81.	Electric Light Fittings Association
82.	Federation of Hardware Factories
83.	Amalgamated Union of Upholsterers
84.	Pin and Allied Trades Association
85.	Agricultural Engineers Association
86.	Engineering Industries Association
87.	Association of British Chemical Manufacturers
88.	Association of Roofing Felt Manufacturers
89.	Timber Trade Federation
90.	Plane Factory Manufacturers Association