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MI9's escape and evasion mapping programme 1939-1945

BOND, Barbara A.

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MI9's ESCAPE AND EVASION MAPPING PROGRAMME 1939 – 1945

B.A.BOND

DOCTOR OF PHILOSOPHY

2014

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MI9's ESCAPE AND EVASION MAPPING PROGRAMME 1939 – 1945

by

BARBARA ANN BOND

A thesis submitted to Plymouth University
in partial fulfilment for the degree of

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Barbara Ann Bond

MI9's escape and evasion mapping programme 1939 – 1945.

Abstract

This thesis examines the programme of mapping produced on silk, and other fabric, by MI9 to facilitate the escape and evasion of British military personnel during World War II. It considers the creation of MI9 in December 1939, the rationale for the new military intelligence branch and the context of the history of military mapping on silk. The map production programme is described, together with its progress and the challenges faced. The various groups of maps are identified and described, together with the source maps on which they were based. This description is developed in nine appendices produced as an integral part of the research to provide a comprehensive carto-bibliography of the 234 individual maps which have been identified. Location details of extant copies in British map collections are also provided.

The ingenious methods of smuggling the maps into the camps, with other escape aids, in apparently innocuous leisure items are described. The maps were then copied and reproduced to support the escapes. Coded correspondence with the camps is discussed, and a successful deciphering of some of that correspondence is provided. The implications for the escape and evasion programme were considerable, but so too were the implications of the passage of intelligence from the camps to aid the war effort, a factor apparently largely overlooked in previous studies of the wartime role of the intelligence branches. Three case studies are provided to demonstrate the role and importance of the contribution made by the maps to the escape and evasion programme. The conclusion assesses the significance of this little known episode in British historical cartography of the twentieth century which essentially provides the latest chapter in the story of military mapping on silk, and other fabric, through the ages.

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AUTHOR'S DECLARATION

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

Work submitted for this research degree at Plymouth University has not formed part of any other degree either at Plymouth University or at another establishment.

Word count of the body of the thesis (excluding appendices and bibliography) 62,349.

Signed.....

Date 28th October 2014

Introduction

‘It is the intelligent use of geographical knowledge that outwits the enemy and wins wars.’ (W.G.V.Balchin).¹

The principal aim of this thesis is to reconstruct, document and analyse the programme of escape and evasion mapping on which MI9, a newly established branch of British intelligence, embarked in World War II. Such an exercise has never previously been attempted. The thesis charts for the first time the origins, scope, nature, character and impact of MI9’s escape and evasion mapping programme in the period 1939-1945. It traces the development of the mapping programme in the face of the many challenges faced and describes the ways in which MI9 sought to overcome those challenges with the considerable assistance of both individuals and commercial companies. In a detailed carto-bibliography, the individual maps are identified and described; production details are provided and location information on those extant copies which have been identified is provided. Through a number of case studies, the extent to which the mapping programme was the key to the success of the whole of MI9’s escape programme is assessed.

The new intelligence branch was born in December 1939 and was charged with escape and evasion activities to support those who, it was anticipated, would either be shot down in enemy-held territory or would be captured. Its gestation had been lengthy. From the view certainly held prior to World War I that there was something ignominious about capture, the military philosophy had evolved sufficiently in the inter-war period for escape activity to be regarded as a priority in the greater scheme of warfare. And so MI9 was born, arguably not soon enough as, less than six months after its creation, thousands of British Service personnel found themselves captured on the beaches at Dunkirk. The newly formed military intelligence branch tried to tackle the

¹ Balchin, W.G.V. ‘United Kingdom Geographers in the Second World War: a Report.’ *The Geographical Journal*, Volume 153, Number 2 (July 1987), p.160.

aftermath of the disaster which befell the Expeditionary Force in May 1940, but it took time and resources to mount the sort of organisation which was needed. By May 1940, it was also the case that the nation had acquired a Prime Minister who had had personal experience of escaping from captivity in a war situation and was, undoubtedly, a natural ambassador for the changed philosophy.²

The story of the mapping programme which became such an important part of MI9's escape programme has been difficult to piece together. No single, comprehensive record of the production programme has ever been found and no record set of the maps has yet been deposited in The National Archives by the Ministry of Defence. Extant copies of the maps have been found in many collections, both public and private, throughout the country. There is, however, very little mention of the maps in the published literature and some of the possibly relevant MI9 files in The National Archives are still closed. Reconstructing the story has proved to be like the reassembly of a jigsaw puzzle where some pieces are still missing, possibly lost for all time. Nevertheless, careful enquiry has yielded enough evidence to enable the narrative to be recovered. What emerges is a story of quite amazing inspiration and ingenuity in a country at war, fighting for the survival of its core democratic values and standards.

A presentation of the factual history of the mapping programme cannot, however, stand alone. It has had to be set in the climate of the times. The young men, and especially the officers, most of whom had been educated in the British public school system during the inter-war period, had been raised on a culture of escape stories from the Great War. They had read many of the books which had been written by the great

² Winston Churchill was a war correspondent for the *Morning Post* during the Boer War. He was captured in November 1899 and escaped on 12th December. Travelling on foot and by train, he successfully made it across the border to Mozambique and freedom.

escapers from the First War, people like Durnford, Evans and others.³ They had also been made more aware of the relevance of geography in their curriculum, of map reading and navigational skills. Their education had also sought to instil the standard British public school behaviour of team, country and King before self. They were avid readers of *Boys Own* and many had belonged to Baden-Powell's Boy Scout movement. All these traits combined to produce an expectant and openly receptive audience for the training and philosophy which MI9 set out to instil, principally that of 'escape-mindedness'.⁴

The intelligence world of the time also needs to be considered. MI9 was a new player in a world where others had already carved out for themselves a sizable role and niche. It will be shown that the part played by MI6, more commonly referred to as SIS, proved to be unhelpful and unsupportive to the newly created Branch. The key staff recruited to MI9, especially the individual who was ultimately responsible for the mapping programme, had some of the skills they needed, but arguably absolutely no cartographic awareness. Research has revealed that the dark fog which often surrounded the world of security and espionage meant that key contacts were not made at critical times and there was often a lack of awareness of where the experience and expertise which they so badly needed actually lay.

Whilst the research has concentrated primarily on the mapping programme, considerable work has been undertaken to unravel in full the details of MI9's escape programme. Producing the maps was one thing, getting them to the prisoners of war was quite another. Just how they were smuggled into the camps, how MI9

³ Durnford, H.G. *The Tunnellers of Holzminden*. Cambridge University Press. 1st edition 1920. 2nd edition 1930; Evans, A.J. *The Escaping Club*. The Bodley Head. London. 1921.

⁴ This was the phrase coined by the Head of MI9 to describe the philosophy of escape. It is described in Chapter 1.

communicated with the camps, and how the whole escape programme took shape has been part of the unfolding investigation. The art of smuggling proscribed items inside hollowed out containers was used extensively by MI9 who persuaded the manufacturers of board games and other leisure aids to assist them in their endeavours. The ‘industry’ created to support MI9’s activity will be explored and documented. Coded communication with the camps proved to be the vital link in the chain and deciphering a number of extant coded letters provided the proof of the importance of that system of communication. The prisoners of war themselves also rose to the challenge. Having been trained that it was their duty to attempt to escape, they set up escape committees in many of the camps, certainly in the oflags. The many hours of the potentially excruciating boredom of captivity were funnelled into escape activity. Escapes were managed as military operations in both the planning and execution. Men used their talents and, in many cases, their professional expertise, to copy maps, to produce compasses and clothing, and to forge papers and passes to aid the escapers on their journey to freedom. Lessons were learned from both the successes and failures, and key experiences were either brought back to the camps by the failed escapers or relayed back to the camps by the successful escapers, for use in future attempts.

Literature Review

Exploring the published literature on MI9’s escape and evasion mapping programme 1939-1945 has proved to be a considerable challenge as there is a very real paucity of published sources on the subject. Whilst there is a vast array of published sources relating to the activity of escape and evasion, very little of it mentions maps and, even those that do, make only passing mention of the subject. There may well be good reason for this and that aspect will be addressed later in this section. Meantime, a review of the limited literature available helps to introduce key personalities and

concepts, and allows us to situate what follows in the context of the wider historiography of wartime intelligence and escape activity.

Some of the primary sources providing any information about the mapping programme are also published sources and proved to be of such crucial importance that they are considered in this review. The key one amongst these is undoubtedly that written by Christopher William Clayton Hutton.⁵ Hutton had been appointed to the post of MI9's Technical Officer with the rank of lieutenant, tasked with the invention and design of escape aids. In his engaging and often amusing narrative, he reveals just what an ingenious and innovative individual he was. Some of Hutton's inter-war employment experience was in journalism and later in publicity for the film industry. He was fascinated by show business, particularly magicians. Whilst working in his uncle's timber business in Park Saw Mills, Birmingham prior to WWI, he had challenged Harry Houdini to escape from a packing case constructed on the stage of the Birmingham Empire Theatre. It was this experience which was seen to qualify him for the post he was given as the escape boffin in MI9.

Hutton's book was originally published on 27th June 1960 and articles noting the publication appeared that day in both the *Daily Telegraph* and the *Morning Post*. Whilst Hutton's book is very informative and appears to cover the full range of the work in which he was involved, it is also clear that much detail is omitted. The reason for this slowly becomes clear in the later pages of the book. He describes how he approached the War Office in 1950, almost a decade earlier, for permission to lecture and write a book about his experiences, at the same time providing proof that there was already information about the escape aids in the public domain. Indeed, some of the surplus maps had been sold off soon after the war, an undertaking which had been

⁵ Hutton, Christopher Clayton. *Official Secret*. The New English Library Ltd. London 1962.

openly described and discussed in the press at the time.⁶ He completed a first draft of the book under the title *A Journey Has Been Arranged* and invited Air Marshall Sir Basil Embry to read and comment on it. Sir Basil offered to write the preface and in it he indicated not just his personal indebtedness to Hutton, but he also commented ‘Some people may think he is eccentric; I think he is a genius.’⁷ That completed draft was sent to the publisher, before being sent to the War Office for permission to publish.

There had been a strange twist to the story in the mid-1950s with the publication of Charles Connell’s book *The Hidden Catch*.⁸ It was submitted by the publisher, Elek Books, to the Air Ministry for clearance to publish on 11th August 1955. It is clear from the files that this was the same book in essence as that which had been stopped in 1951. It is very obviously Hutton’s story, although he is described throughout the book as Mr. X. Permission to publish was initially refused and Hutton was warned that to ignore the decision would make him liable to prosecution under the Official Secrets Act. However, the publisher agreed to make changes to the text made at the request of the Air Ministry, and this resulted in permission to publish. The book was published in 1955. For unexplained reasons, Hutton did not realise that one of the textual changes was to prove, in his opinion, to be defamatory of himself and resulted in him pursuing a claim for libel against his own publisher. The libel action was apparently settled out of court. During the discussions which took place at the time and which were documented in the files of the Office of the Treasury Solicitor, it became clear that Hutton had apparently been treated for mental illness during the war and had left MI9 before the

⁶ Article in *Yorkshire Post and Leeds Mercury*. 1st December 1945.

⁷ Hutton. *Official Secret*, p.141.

⁸ Connell, Charles. *The Hidden Catch*. Elek Books Limited. London. 1955

end of the war.⁹ The publisher eventually agreed to some revised wording and the book was published in 1955.

The fractious relationship between the faceless men in the War Office, Hutton and publishers both in the UK and the USA appeared to continue and the situation was not apparently resolved to Hutton's satisfaction until the eventual publication of *Official Secret* in 1960 which appears to be a condensed form of the original draft which Hutton had written some ten years previously. It is not clear just how much of Hutton's reticence to include much detail about the mapping programme in his own finally published book results from the security vetting process or from an understandable reluctance, in the light of his previous experience, to continue battling with the War Office Committee responsible for vetting publications. Some four years later in 1964, however, he did author a short article for the American journal *Popular Science* which served to highlight some of the detail of the escape gadgetry, compasses, clothing, currency, and included a section on the maps.¹⁰ It added nothing to the minimal detail about the maps which he had included in the final published version of his own book.

Airey Neave was destined to play a significant role in MI9, as an escaper of some renown and as an officer posted to the Branch after his repatriation to London. His role will be considered in detail later in the thesis, especially in Chapter 5. It is, however, appropriate to consider at this point, as primary sources, both of his published reminiscences of his wartime experiences. Neave's first book covered his experiences in the field on the frontline, his capture and initial, unsuccessful attempts at escape which earned him the unenviable distinction of incarceration in Oflag IVC, the

⁹ TNA: TS 28/581 Air Ministry minute 1/17380 dated 21/5/51.

¹⁰ Hutton, Christopher Clayton. 'Escape Secrets of World War II.' *Popular Science*. Volume 184, Number 1, pp.69-73 and p.200.

mediaeval castle built by the Elector of Saxony above the village of Colditz.¹¹ Despite describing the activities which characterised the work of the escape committee and the fact that those of a less technical bent ‘copied maps’, there is no indication in his book that any maps produced by MI9 were available in the camp.¹² Intriguingly, acknowledging that maps were needed as an invaluable tool to the successful escaper, he indicated that he ‘slowly traced in Indian ink the neighbourhood of the Swiss frontier from a stolen map’ but does not reveal the actual source or nature of the map.¹³ Together with his Dutch colleague, Toni Luteyn, Neave escaped from Colditz on 5th January 1942, the first British Officer to escape successfully from that infamous camp. The only other mention of their use of a map is that Luteyn was able to buy a map ‘of the surrounding country’ in Ulm on their way to escaping successfully across the Swiss border.¹⁴ It appears quite remarkable that such was apparently possible in a country at war where security issues were ever present.

In 1969, some ten years before Foot and Langley were allowed to publish the definitive history of MI9 based on authorised research (see following paragraph), Neave published his second book, the title of which reflected his own codename (*Saturday*) in MI9, which he joined after his successful repatriation to the UK.¹⁵ Neave acknowledged in the preface to his book that it was not possible at that stage to write an official history of MI9, that he was writing rather about his personal experiences working in MI9 and that his was the first to be written ‘from the inside’, a somewhat curious statement since Hutton’s own book had been published some nine years earlier. Neave mentioned in private correspondence the need to clear the content of the book

¹¹Neave, Airey. *They Have Their Exits*. Hodder & Stoughton. 1953. Subsequently published in paperback. Coronet Books. 1970.

¹² Neave. *They Have Their Exits*, p.64.

¹³ Neave. *They Have Their Exits*, p.74.

¹⁴ Neave. *They Have Their Exits*, p.102.

¹⁵ Neave, Airey. *Saturday at MI9*. Hodder & Stoughton. 1969.

prior to publication: in these circumstances, it seems inconceivable that he was unaware of Hutton's book or of the heated exchanges and protracted negotiations prior to its publication.¹⁶ However, there is no mention in Neave's book of Hutton or of any aspect of the escape aids programme on which he worked. Neave concentrated rather on the work done in support of the escape lines and their organisation. Whilst the book is of general interest and describes, albeit in a limited way, some of the educational and training aspects of MI9's work, it is largely not germane to the purpose of this research.

The single most comprehensive published secondary source which describes the whole story of the creation and operation of MI9 is undoubtedly Foot and Langley's *opus magnum* first published in 1979 and, in paperback edition, by Biteback as recently as 2011.¹⁷ Interestingly neither edition was published with footnotes. This omission apparently resulted from prohibitive costs, a fact noted in the book and subsequently confirmed verbally by Professor Foot.¹⁸ The authors did, however, have the foresight to deposit the final typescript of the book, including their comprehensive footnotes, in the Imperial War Museum collection, recognising its potential value for future researchers.¹⁹ Maps are certainly mentioned in the book, particularly in relation to Hutton's escape aids, and the authors highlight the extent to which he quickly realised that maps were an indispensable aid to successful escape. Brief mention is made of his early contact with commercial map publishers in London and Edinburgh to enlist their help and support, and with his search for noiseless paper. However, it is clear that their source for this information was Hutton's own book and not a primary source such as the War Office (WO) files relating to MI9's activity. Indeed, they highlight the fact that

¹⁶ Private papers of Airey Neave. Parliamentary Archives, AN 659.

¹⁷ Foot, M.R.D. & Langley, J.M. *MI9 Escape and Evasion 1939-1945*. Bodley Head. London. 1979.

¹⁸ Interview with Professor M.R.D. Foot at the Savile Club, London, on 31st January 2012.

¹⁹ Imperial War Museum, Miscellaneous Document 2744.

many WO files were withheld from them, estimating the number at some 250 in all, and emphasised the likelihood that there may well have been genuine operational reasons for not making such files publicly available until 2010 since there is no point in advertising clandestine methods that might be used to national advantage another time. The point was well made, certainly in relation to Hutton's escape devices, since fabric maps are known to have been produced in significant numbers in the 1950s and 1960s by both the UK and the US military mapping organisations. These do, however, fall outside the scope of this particular research topic.

None of the published sources which can be ascribed to Hutton for their information explores the mapping programme in any detail in spite of the fact that it was clearly an early priority for the newly established MI9. There are many other books which recount the detail of escape and evasion, though none appears to include detail of the maps.²⁰ The escapes described in the literature range from the truly ingenious and inspirational to the bizarre and sometimes opportunistic. However, even those which describe the escape route in minute detail fail to describe the maps used or their source. Most mention maps in passing and highlight the extent to which they figured on the 'must-have' list of most successful escapes. Time and again, escapers include mention of the provision of money and maps by the escape committees in the oflags and stalags as part of their aids to escape but offer little or no supporting detail. Why should that be? In discussion with Professor Foot in January 2012, over 65 years after the end of World War II, he was surprisingly still unwilling to explain how he had managed to

²⁰ Of the plethora of such books published, and sometimes republished, over the past 70 years, three examples will suffice.

Cooper, Alan W. *Free to Fight again-RAF Escapes and Evasions 1940-45*. William Kimber. 1988; Bickers, R. Townshend. *Home Run-Great RAF escapes of the Second World War*. Leo Cooper. 1992; Clutton-Brock, Oliver. *RAF Evaders: The Complete Story of RAF Escapees and Their Escape Lines, Western Europe, 1940-45*. Grub Street. 2009.

keep hidden the MI9 map of France and Spain with which he had been issued prior to being dropped as an SAS officer in occupied France in 1944. When prompted, he explained that all MI9's pre-operational briefings had always included the warning that the maps should never be discussed, and he insisted that he had always abided by that, although he did imply that he had succeeded in keeping his map from the Germans even when he had been captured, by hiding it inside the lining of his jacket. The map had remained in his possession and he produced it in the interview. In offering support for the pursuit of this research into the mapping programme, he highlighted the fact that, at the point he and Langley had been writing the history of MI9 with the support of Government, much about the mapping programme was un-publishable for 50 years. Certainly many relevant MI9 files in the Public Record Office, later The National Archives, were not open at that point and remained closed for many years thereafter.

Whilst MI9, and certainly Hutton, may well have believed that they were the first to realise the considerable value of producing military maps on silk, not least their flexibility and durability, such proves not to be the case: this is reflected in the literature. Yee's expert treatise highlights the fact that the oldest extant military map to be discovered was in fact drawn on silk in the second century BC.²¹ The map, which subsequently came to be known as the Garrison Map, was excavated in 1973 from a Han dynasty tomb in Mawangdui, Changsha, China. Yee highlights the fact that the map was thought to have military applications because of the inclusion of military related features highlighted by the use of colour. The flexibility and durability of silk as a medium for military maps had apparently long been recognised, a fact that was much

²¹ Yee, Cordell D. K. *Reinterpreting Traditional Chinese Geographical Maps*. History of Cartography 2.2, pp.35–70. Chicago University Press. 1994.

later reflected in the report of the War Office Committee tasked in the closing decade of the nineteenth century to consider the precise form of the military map of the UK.²²

Exploration of the literature also serves to highlight the extent to which advances in printing technology, especially on media such as silk, served MI9's map programme well. The relationship which the Ministry of Supply was able to establish with the silk manufacturers of Macclesfield appeared to ensure the continuing supply of raw silk from the Middle East, initially for parachute production and later for the production of the escape maps.²³ The expertise of the leading silk manufacturers was apparently readily shared with Government departments in the interests of the national war effort. It is reassuring to discover that such covert involvement of private sector companies not just in Macclesfield but throughout the UK was apparently never compromised and remained hidden from public awareness for many decades after the end of the war. Certainly in the field of specialised printing, the John Waddington Company, located in Leeds, Yorkshire, manufacturer of board games, was involved in printing maps for MI9. 'Some of these maps were printed on large silk squares for which special treatments were necessary to ensure that the material would not stretch nor the design be otherwise affected by extraordinary physical or climatic conditions'.²⁴

The foregoing sections of this review highlight the principal published sources available. During the 1980s and 1990s a number of relevant, illustrated articles appeared in professional publications and the national press. The most notable ones

²² *Report of the Committee on a Military Map of the United Kingdom together with the minutes of evidence and appendices.* War Office. London. 1892.

²³ Collins, Louanne & Stevenson, Moira. *The Macclesfield Silk Industry.* Nonsuch Publishing. 1995.

²⁴ Watson, Victor. *The Waddingtons Story.* Northern Heritage Publications. Yorkshire. 2008. p.11.

were those produced by Bond as a result of her early interest in the subject when working in the Ministry of Defence. The first of these appeared in 1983 and stirred some considerable interest in professional cartographic circles.²⁵ This was followed a year later by a much more detailed article resulting from a lecture invited by the British Cartographic Society.²⁶ These have been widely used, quoted and referenced in other articles on the subject. In 1988 Doll quoted in detail from Bond's published work, as did Hall writing over ten years later in 1999.²⁷ Additionally, there were some short articles in the press, often recounting the escape stories of (by now) elderly men, who had been prisoners of war.²⁸

As mentioned earlier, there is a plethora of literature which serves to set the general context of escape in World War II and the background against which MI9 was operating. Many tell the tales of heroic exploits and derring-do but sadly do not contribute to the story of the escape maps. Not even the engagingly titled *Silk and Barbed Wire* proved to be directly relevant since it is a collection of personal reminiscences of captured members of Bomber Command, who had fallen into enemy hands after parachuting from doomed aircraft: the 'silk' of the title related rather to their parachutes and not escape maps, which received no mention at all.²⁹ There is, however, one book which opened up an intriguing aspect of MI9's mapping programme and that is Green's fascinating insight into the codes operating between the potential escapers in

²⁵ Bond, Barbara A. 'Maps printed on silk.' *The Map Collector*, No. 22, March 1983, pp.10-13.

²⁶ Bond, Barbara A. 'Silk Maps: the story of MI9's excursion into the world of cartography 1939-1945.' *The Cartographic Journal*. Vol 21, No. 2, 1984, pp.141-143.

²⁷ Doll, John G. 'Cloth Maps of World War II.' *Western Association of Map Libraries (WAML) Information Bulletin* 20(1). November 1988; Hall, Debbie. *Wall tiles and free parking: escape and evasion maps of World War II*. The British Library. April 1999.

²⁸ Evans, Michael. 'POW tells of escape maps printed on secret press.' *The Times*. 23rd June 1997.

²⁹ Walley, Brian. *Silk and Barbed Wire*. Sage Pages. Warwick, Western Australia. 2000.

the camps and MI9 in London.³⁰ It was Foot and Langley who highlighted the existence of the coded contact and they used extracts from Green's book to illustrate the practice.

This review would be incomplete without at least a brief mention of a book published in 1921.³¹ A.J.Evans's book describes his personal experience of capture and subsequent escape during World War I, providing both an insight into the changing military philosophy with regard to prisoners of war and also the personal ingenuity and forward planning of professional soldiers, and their families, should they fall into enemy hands. It is a remarkable book in that it provides the background and explanation for the role which Evans subsequently played in World War II as a member of the staff of MI9, and their choice of escape routes, a role which will receive more detailed consideration later in this thesis (see Chapters 3 and 5).

Only recently has there appeared any kind of detailed review of the mapping of the First World War. Chasseaud's timely and masterly publication *Mapping the First World War* was published in November 2013.³² In it he plots the course of British military mapping through the passage of the war years and shows that maps went far beyond the simple visual image and, together with the increasing use of aerial photography, allowed for the development of sophisticated artillery target plans. They were designed for a clear military purpose. The only equivalent publication for World War II was the War Office's own authorised publication *Maps and Survey*.³³ However, published in 1952, it was clearly intended to serve as the official historical record for

³⁰ Green, J.M. *From Colditz in Code*. Robert Hale & Company. London. 1971.

³¹ Evans, A.J. *The Escaping Club*. The Bodley Head Ltd. 1921.

³² Chasseaud, Peter. *Mapping the First World War*. Collins in association with the Imperial War Museum. 2013.

³³ Clough, Brigadier A.B. *Maps and Survey*. The War Office. RESTRICTED. 1952.

internal departmental use since it was classified RESTRICTED. It was not declassified until some twenty years later and there are, therefore, very few copies in the public domain. It was one of a series of volumes, compiled by authority of the Army Council, the object of which was to preserve the experience gained during World War II in selected fields of military staff work and administration. It covers just about every aspect of the operational mapping produced by the Geographical Section General Staff (GSGS), with the single notable exception of MI9's escape and evasion mapping programme. It is not surprising to discover this omission since, as this research will reveal, MI9 did not involve the military mapping authority in their work until very late in the proceedings.

After an exhaustive trawl of the literature published since the end of World War II, it appears conclusive that there is very little mention of MI9's escape and evasion mapping programme and certainly, with the exception of Hutton's book, the short mentions that exist contribute very little to an in-depth study of the topic. There is one inevitable conclusion to be drawn and that is that it has been a prohibited area of research and publication. Certainly Foot confirmed that there was nothing further to be found because nothing detailed had been published and that was entirely in line with the prohibited disclosure of anything which might prejudice the future deployment operationally of the tools which had been created by Crockatt and his innovative team in MI9 charged with facilitating the escape of British and Allied prisoners of war. Amongst the escape tools they devised, the fabric maps, printed initially on silk and later on man-made fibre, clearly figured high on the list of proscribed topics for publication. The inevitable conclusion is that this research thesis will add considerably to the scholarship of British military and cartographic history of the twentieth century and serve to plug the considerable historiographic gap which presently exists.

Methodology and Structure

The first stage in this research programme was to identify the principal record repositories in which the maps were to be found. The nation's record set of these maps will eventually be deposited in The National Archives (TNA), but it is presently still held in the Defence Geographic Centre (DGC). Access was granted on the basis of a Freedom of Information request. This record set of the maps proved to be the most comprehensive set available anywhere, and yet is incomplete. This collection does, however, form the core of the subsequent compilation of the detailed carto-bibliography to be found in the nine appendices at the end of this thesis. It was always the intention to produce such a carto-bibliography as one significant output of the research, since nothing of that nature, scale and complexity has been produced to date. This initial compilation was then supplemented by visits to further, smaller, collections.

The next most significant collection in terms of its size is that to be found in the Royal Air Force Museum at Hendon. Thereafter, it was discovered that the British Library Map Library holds part of the Waddington Company archive. It was that company which was to play a very important part in the unfolding story of MI9's mapping programme since they were enlisted by MI9 as the first producers of the silk maps and the company also manufactured many of the items (board games) used to smuggle the maps into the prisoner of war camps. The story of their involvement will unfold in the later chapters of this thesis. Smaller, but no less important, collections of the maps were found in the National Library of Scotland, the Intelligence Corps Museum, the Macclesfield Silk Museum, the Cumberland Pencil Company Museum and in a number of private collections. Sadly the collection housed in the Imperial War Museum was not available for public access due to a lengthy re-cataloguing and

refurbishment programme. However, an online check of their holdings revealed no map which was not held elsewhere.

Primary unpublished sources used to reconstruct the detail of the map production programme were found largely in the War Office files held in The National Archives (TNA) and the Defence Geographic Centre (DGC) (yet to be deposited). An invaluable find proved to be the extant war-time print record of the maps housed as a card index in the India Office Library and Records. The story of how it came to be there, rather than in either TNA or DGC, will unfold in Chapter 1. Contemporary correspondence of two commercial companies who were to play a significant role in the mapping programme, namely John Bartholomew & Son of Edinburgh, and the already mentioned Waddington Company of Leeds were found in the National Library of Scotland and the British Library respectively. The role of Airey Neave as the first British officer to escape from Colditz took on particular significance as the research programme developed. Neave's personal papers are to be found in the Parliamentary Archives. Access to the personal memoirs of John Pryor, afforded by his son, a colleague at Plymouth University, provided the gateway to deciphering some of the coded correspondence between MI9 and the prisoner of war camps. Finally, the recollections of Professor Michael Foot, in an interview with the author shortly before his death in 2012, provided two priceless pieces of information, namely the existence and location of the unpublished footnotes of his co-authored history of MI9, and the significance of the coded correspondence traffic. Without his timely help, this thesis would have been the poorer.

The structure of the thesis which follows reflects very much the passage of the story of the mapping programme as it unfolded in the research. Chapter 1 shows that

MI9 was essentially a creation of World War II and it reflected a markedly changed military attitude to capture, escape and evasion. It was staffed with people who had been carefully selected by the Head of the fledgling organisation. The skills and experiences which they each brought to the task are described and acknowledged, and the development of the organisation itself is traced, together with the background of the development of the mapping programme. Some context on military mapping on silk is provided since such has had a long history and was most certainly not prompted simply by a twentieth century wartime scenario. Chapter 2 describes in detail the whole map production programme from the individual series, through the printing process to the sourcing of silk, and later, of man-made fibre. The covert nature of the programme and the compartmentalised way in which it was managed by MI9 resulted in their own unique, and arguably unnecessary, challenges. Having documented and analysed both the production programme and the maps themselves, the thesis continues in Chapter 3 by addressing the whole escape aids programme. The sheer ingenuity and originality of the smuggling programme which MI9 mounted in order to ensure that the maps reached their destinations is addressed. The whole of Chapter 4 is given over to a detailed discussion of the coded correspondence, augmented by the first deciphering of some of the original coded correspondence from a private family archive.

A number of cases studies were selected to try to prove the value of the maps produced. The first of these, considered in Chapter 5, was based on one of the most successful escape routes which MI9 planned from occupied Europe to the safe haven of the neutral country of Switzerland. The second and third studies are examined in Chapter 6. These are based respectively on escape via Sweden, an even more successful route to freedom, and the survival of two maps apparently drawn in prisoner of war camps which remain extant in one British map collection. Finally, the Conclusion seeks

to offer an objective assessment of the real success of the mapping programme in the light of the many obstacles and challenges which MI9 faced. Without question, the mapping programme proved to be the key to successful escape: without it many, perhaps most, of the thousands of men who successfully escaped and made it back to these shores before the end of the war would have failed in that endeavour.

Chapter 1

Historical Background and the Creation of MI9

‘Escaping and evading are ancient arts of war.’(Field-Marshal Sir Gerald Templar, KG).³⁴

Creation of MI9

Before considering the mapping programme in any detail, it is useful to consider the background to the creation of MI9, the task it was given, the way in which it was organised, the personalities recruited to staff the new unit and the all-pervading philosophy of its approach to escape and evasion. Each of these aspects contributed to the way in which the mapping programme was conceived, each influenced the way in which the programme developed and each played a significant part in the impact which the programme had throughout the war years. The historical background of military mapping produced on fabric, whether silk or linen, is also considered.

The Directorate of Military Intelligence (DMI) came into existence in 1939 when, with the Directorate of Military Operations, it superseded a previously combined Directorate of Military Operations and Intelligence (DMO&I). Five of the Military Intelligence sections, namely MI I to MI 5, continued their work within the new Directorate, dealing, as before, with organisation, geographic, topographic and security matters.³⁵ MI9 was created within the DMI on 23rd December 1939.³⁶ Its creation stemmed from the experience of many during World War I when military philosophy about prisoners of war had apparently undergone a sea-change. From regarding capture and captivity in enemy hands as a somewhat ignominious, even shameful and

³⁴ Foot & Langley. *MI9 Escape and Evasion 1939-1945*. Foreword.

³⁵ This description was taken from WO file reference 208 in the Discovery Catalogue of The National Archives.

³⁶ TNA: WO 165/39 contains a copy of the Conduct of Work No.48 which authorised the creation of MI9 and the transfer of Major N.R.Crockatt DSO MC, a retired officer from the Royal Scots Guards, from MIR to take charge.

disgraceful fate, the value which escaping prisoners of war might potentially contribute to the success of the war effort came gradually to be recognised.³⁷ Men who escaped or evaded capture and returned to Britain brought back vital intelligence; the considerable effort required to prevent escapes from the camps deflected the enemy's resources from front-line combat action; the boost to the morale of the Armed Services and, not least, their own families when evaders or former captives successfully returned to these shores was considerable.

In the late 1930s, as the prospect of war became increasingly likely, proposals for the creation of a section tasked to look after the interests of British prisoners of war came from many quarters, not least from Lieutenant Colonel, later to become Field Marshall Sir, Gerald Templar who had written to the Director of Military Intelligence earlier in 1939.³⁸ A number of conferences with those who had experience of being a prisoner of war during World War I had also been arranged by MI 1, seeking to benefit from their collective experiences.³⁹ The actual proposal to the Joint Intelligence Committee (JIC) came from Sir Campbell Stuart who chaired a War Office (WO) Committee looking at the coordination of political intelligence and military operations.⁴⁰ There had clearly been some robust discussions prior to that since Viscount Halifax, appointed Foreign Secretary by the Prime Minister, Neville Chamberlain, in February 1938, had indicated in a letter dated 5th December to Sir Campbell that his preference was for the section to be under Foreign Office control,

³⁷ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, pp.15, 16 and 30. In the prologue to their book, Foot & Langley reminded the reader that one of the constants through British military history had been the concept that there was something dishonourable about personal surrender and that capture and captivity were disgraceful. Certainly by the time of World War II these had come to be regarded rather as accidents of war and had lost the shameful overtones of earlier conflicts.

³⁸ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, p.32.

³⁹ TNA: WO file 208/324, Appendix A.

⁴⁰ TNA: WO 208/3450, enclosure 1A dated 22 December 1939.

with direct Treasury funding, presumably to ensure joint control and coordination with MI6, the Secret Intelligence Service (SIS).⁴¹ Notwithstanding this high level opposition, the creation of MI9 went ahead in the WO and it was made responsible to the Deputy Director for Military Intelligence (DDMI), initially working closely with the Admiralty and the Air Ministry. With hindsight, it is worth noting that later animosity and conflict between MI9 and SIS might well have had its roots in the initial difference of opinion as to where the newly formed section should sit in the governmental hierarchy.⁴² The extent to which this aspect may have impacted MI9's work will be considered in more depth in the Conclusion.

MI9's objectives and methods were described as:-

- i) To facilitate the escape of British prisoners of war, their repatriation to the United Kingdom (UK) and also to contain enemy manpower and resources in guarding the British prisoners of war and seeking to prevent their escape.
- ii) To facilitate the return to the UK of those who evaded capture in enemy occupied territory.
- iii) To collect and distribute information on escape and evasion, including research into, and the provision of, escape aids either prior to deployment or by covert despatch to prisoners of war.

⁴¹ TNA: WO 208//3450, enclosure 5A.

⁴² Langley J.M. *Fight Another Day*. Collins. London. 1974. The Introduction to the book was written by Airey Neave, DSO, MC, MP. In it he describes his wartime experience of working with Langley in MI9 and 'our battles with Uncle Claude': Claude Dansey was the Deputy Head of MI6 (SIS). The subject is mentioned by Langley at various points in the book and he explained at pp.136-137 that the reason for Dansey's interference was his dislike of SOE, since it was not responsible to MI6 and he did not want 'yet another independent organization' trying to go it alone.

- iv) To instruct service personnel in escape and evasion techniques through preliminary training, the provision of lecturers and Bulletins and to train selected individuals in the use of coded communication through letters.
- v) To maintain the morale of British prisoners of war by maintaining contact through correspondence and other means and to engage in the specific planning and execution of evasion and escape.
- vi) To collect information from British prisoners of war through maintaining contact with them during captivity and after successful repatriation and disseminate the intelligence obtained to all three Services and appropriate Government Departments.
- vii) To advise on counter-escape measures for German prisoners of war in Great Britain.
- viii) To deny related information to the enemy.⁴³

The responsibilities thus included a mixture of operations, intelligence, transport and supply. The newly formed section was initially located in Room 424 of the Metropole Hotel in Northumberland Avenue, London, close to the WO's Main Building. The newly appointed Head was Major, later promoted to Colonel and eventually to Brigadier, Norman Richard Crockatt, a retired infantry officer who had seen active service in World War I in the Royal Scots Guards.⁴⁴ Crockatt had left the Army in

⁴³ Appendix C of TNA: WO 165/39 lists the Objectives and Methods of MI9 in rather more detail than they are set out in the original Conduct of Work note Number 48 which was drawn up in DMI and issued to MI 5 and 6, as well as being circulated within DMI, on 23rd December 1939. A copy of this latter document is included in TNA: WO 208/3242, Appendix A, p.15.

⁴⁴ There appears to be no published biography of Crockatt. However, in the introduction to Langley's book, Airey Neave highlighted Crockatt's key role. Langley responded by writing to ask him if he planned a book on Crockatt and MI9. The telling exchange of correspondence in December 1974 is to be found in Neave's private papers

1927, worked in the City and was in his mid-forties at the outbreak of World War II. Whilst he had been decorated in World War I (DSO, MC), he had never been captured and, therefore, had no experience of being a prisoner of war. He proved, however, to be an admirable choice to ensure the fledgling section made good progress in its infancy and throughout the continuing war, being ‘clear-headed, quick witted, a good organiser, a good judge of men, and no respecter of red tape’, qualities which were to stand him in good stead for the work he tackled in the next six years.⁴⁵ He also proved able to recognise the importance of keeping his section small, concentrated in its activities and low profile amongst other intelligence sections, attributes which appeared to ensure that when the time came to expand its activities, it received little opposition from those competing for military priorities and budgets. Crockatt realised the value of having the experience of former prisoners of war, especially those who had successfully escaped, and appointed many with that experience to the small cadre of lecturing staff based in the Training School.⁴⁶ The initial budget given to Crockatt to run the entire section was £2000.⁴⁷ In present day terms, this equates to a sum of approximately £90,000.⁴⁸ He embarked on a recruitment campaign and, by the end of July 1940, the complement of officers in the whole of the MI9 organisation had risen to fifty. By that time, Crockatt was looking to move his organisation out of London and by September 1940, he had selected Wilton Park, near Beaconsfield as an appropriate location. After necessary

in the Parliamentary Archives under the file reference AN 659. It is clear that they initially planned to co-author a book under the title ‘*Crockatt of MI9*’. Neave subsequently withdrew from the undertaking because of the pressures of Parliamentary work and his ministerial office. Langley subsequently co-authored with Foot the book that came to be regarded as the definitive history of MI9 in which Crockatt’s critical role was highlighted.

⁴⁵ Foot & Langley. *MI9 Escape and Evasion 1939-1945*. p.34.

⁴⁶ TNA: WO 165/39, War Diary entry for January 1940.

⁴⁷ TNA: WO 165/39, War Diary entry for January 1940.

⁴⁸ www.moneysorter.co.uk 6th May 2013.

refurbishment and the installation of telephones, most of the MI9 staff moved there from 14th to 18th October and occupied Number 20 Camp at Wilton Park.⁴⁹

Organisation

The section was initially organised into two parts: MI9a was responsible for matters relating to enemy prisoners of war and MI9b was responsible for British prisoners of war. The former eventually became a separate department, MI 19.⁵⁰ On separation, the remaining MI9b was re-organised into separate sections with section D responsible for training, and specifically for the Training School which was established in Highgate School, from which staff and pupils had been evacuated. Intelligence School 9 (IS9) was created in January 1942. This led to additional sections being created, the staff complement being significantly increased, and much of the work of the former MI9b was assumed by these new sections. Section W was responsible for the interrogation of returning escapers and evaders, including the initial preparation of the questionnaires which the interviewees were required to complete. The principal aim of the questionnaires was to identify information for use in the lectures and the Bulletin (the lectures are discussed in a later section of this chapter and the Bulletin is discussed in Chapter 3). The section was also responsible for the preparation and distribution of reports and for writing the daily, later to become monthly, War Diary entry. Section X was responsible for the planning and organisation of escapes, including the selection, research, coordination and despatch of escape and evasion materials. Because of the small numbers of staff, the section was unable to spend much time on this activity until January 1942 when its establishment was boosted. At that point, they were also able to

⁴⁹ TNA: WO 165/39, War Diary entry for October 1940.

⁵⁰ TNA: WO 165/39; the War Diary entry for 28 March 1940 indicates that the re-organisation was done in order to facilitate the handling and distribution of the intelligence information emanating from the two groups.

increase the volume of information to Section Y for transmission to the camps. Section Y was responsible for codes and secret communication with the camps. Section Z was responsible for the production and supply of escape tools, including all related experimental work. It was primarily these last three sections whose activities will prove of most interest and on which this research will largely, but not exclusively, focus.⁵¹

Christopher William Clayton Hutton was appointed on 22nd February 1940 as the Intelligence Officer to lead section Z. He was the boffin, the inventor of gadgetry. It has already been explained that he revealed the extent of his remarkable ingenuity and innovation in the published narrative of his wartime experiences.⁵² His fascination for show business, particularly magicians, and his experience as a teenager of challenging Harry Houdini to escape from a packing case, were apparently regarded as sufficient qualifications for the post he was given as the escape aids expert in MI9. It was his innate interest in escapology and illusion which was to prove the source of his imagination and ingenuity.

The review of the available literature about escape in World War I on which Hutton embarked has already been described. Identifying a number of relevant books and purchasing second-hand copies, he enlisted the support of the Headmaster at Rugby School, his alma mater, who allowed the sixth form to carry out a review of the books: the review was completed in four days. The results of the review had led directly to Hutton's decision to make maps a priority. In the foreword to Foot and Langley's book,

⁵¹ TNA: WO 208/3242, enclosure I, pp.70,71,76 and 97-101.

⁵² Hutton, Christopher Clayton. *Official Secret*. This book, together with an earlier version published under the title '*The Hidden Catch*', is one of the few sources which provide information on Hutton. There are, however, two files in The National Archives from which information on his work in MI9 can also be gleaned. These are TS 28/581 and HS 9/771/4. The difficulties which Hutton encountered later in World War II and after the war, when he attempted to publish and lecture about his experiences, are discussed in the Conclusion.

Field Marshall Sir Gerald Templar described escaping and evading as ‘ancient arts of war’ and it would appear difficult, if not impossible, to escape from enemy occupied territory without a map.⁵³ It was this simple fact which appeared to be the catalyst for Hutton’s visit to the War Office Map Room. The staff there could not apparently help in meeting his initial request for a small scale map of Germany.

The section responsible for operational maps and geographic matters, namely MI4, was by that time located in Cheltenham. It had been removed from London in September 1939, apparently to make space to accommodate those branches whose presence in Whitehall was deemed to be essential and also to afford protection from possible air attacks to the sizable map collection which was also relocated to Cheltenham. Clough made clear in his 1952 published history of the military survey organisations during World War II that the absence of MI4 from London ‘had the serious effect of putting it out of daily touch with the General Staff at a critical period’.⁵⁴ MI4 remained physically distanced from all WO operations, intelligence and planning staff and also from the Air Ministry Map Section which had been moved to Harrow. It is, therefore, likely that the War Office Map Room visited by Hutton was simply a small reference collection and not the main operational map collection of MI4 which would certainly have held the maps he sought. Hutton’s lack of contact with the military map makers will be commented upon further in Chapter 2 and the Conclusion since it is likely to have been a factor which played out to the longer term detriment of the escape and evasion mapping programme.

It was during a visit to Geographia Limited in Fleet Street that he discovered the existence of ‘a famous Scottish firm’ which proved to be John Bartholomew & Sons of

⁵³ Foot & Langley. *MI9 Escape and Evasion 1939-1945*. Foreword, p.7.

⁵⁴ Clough. *Maps and Survey*, p.3.

Edinburgh. This renowned cartographic company had been established in 1826, although the family had experience of being apprentice engravers to the Lizars company from the later years of the eighteenth century, and it had acquired a world-wide reputation for its maps.⁵⁵ Hutton was also fortunate that the firm was headed at the time by John (known as Ian) Bartholomew who had had a distinguished military career in World War I, serving as an officer in the First Battalion, Gordon Highlanders, experiencing the worst of trench warfare and winning the Military Cross at Ypres in 1915. Ian Bartholomew was only too ready to hand over copies of his Company's maps, waiving all copyright and insisting 'it was a privilege to contribute to the war effort'.⁵⁶ This was to prove the critical ingredient to MI9's wartime escape and evasion mapping programme. It was this collection of small scale maps of Europe, the Middle East and Africa which provided the backbone of the escape and evasion mapping which MI9 subsequently produced.⁵⁷ (The maps are described in Chapter 2 and Appendix 1).

MI9's War Diary entry for 31st March 1940 reflects just how quickly Hutton got to grips with the task he faced: the entry indicates that available escape devices already included 'maps on fabrics and silk, maps concealed in games, pencils, articles of clothing'.⁵⁸ Hutton also tried to find a paper which was thin, resistant to the elements and soundless when hidden inside Service uniforms, which was what he was planning to do. After talking to contacts in the trade, he became convinced that such a paper did not exist and so turned his attention to fabric, and to silk in particular.⁵⁹

⁵⁵ Gardiner, Leslie. *Bartholomew, 150 years*. John Bartholomew & Son Ltd. Edinburgh. 1976. This history does mention in passing their holding of one silk map but it is clear that, at that time, the Company was not aware of its wartime involvement with MI9, a secret which the then Managing Director, Ian Bartholomew, apparently never mentioned to his sons.

⁵⁶ Hutton. *Official Secret*, p.21.

⁵⁷ I am indebted to the late John Christopher Bartholomew and his son, John Eric Bartholomew, for their interest, help and invitation to access the family archive.

⁵⁸ TNA: WO 165/39.

⁵⁹ Hutton. *Official Secret*, p.23.

Historical context of military maps on silk

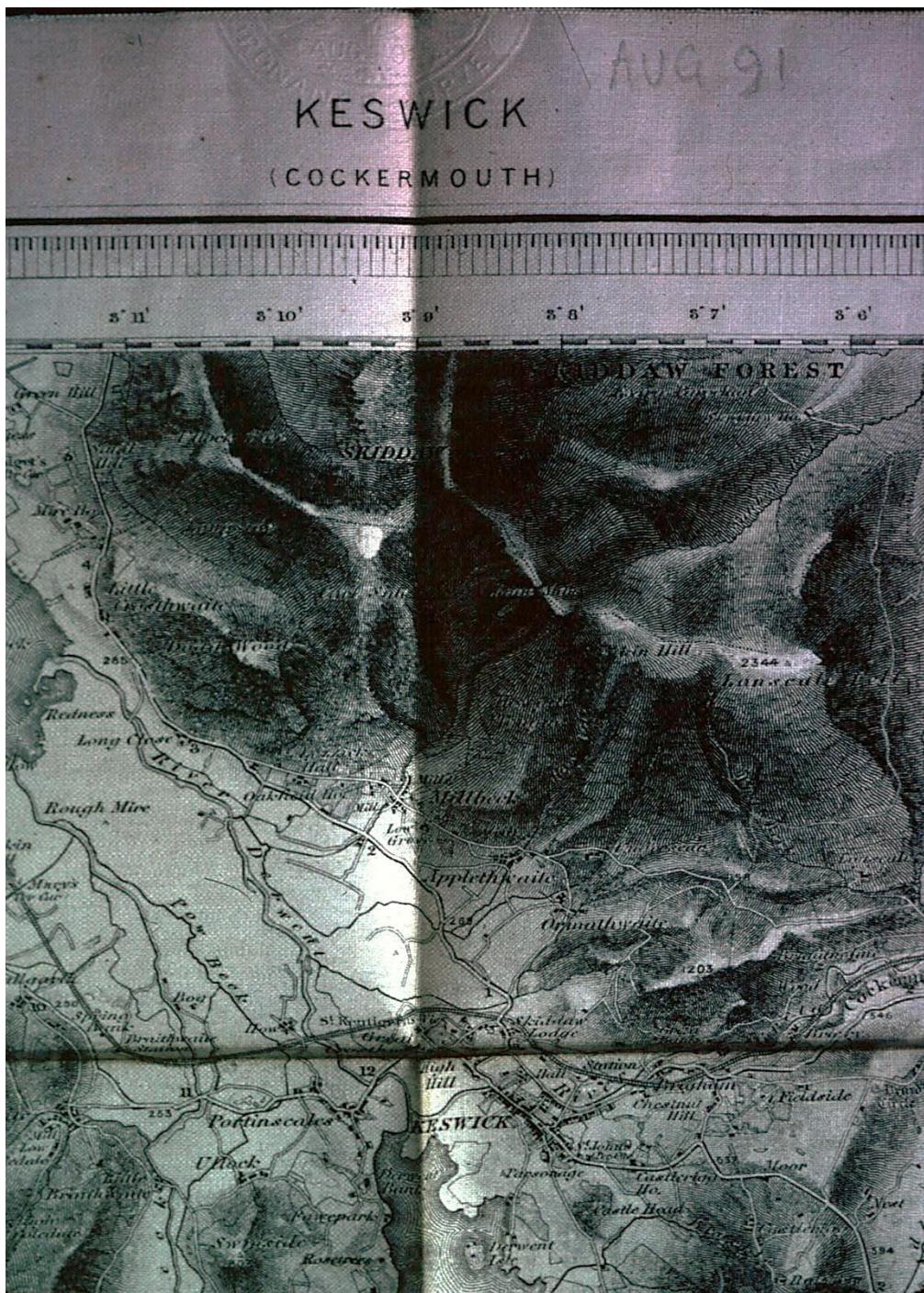
The flexibility and durability of fabric, both silk and linen, as a medium for military maps had clearly long been recognised, a fact that had been reflected in the UK Government's report of the War Office Committee tasked in the closing decade of the nineteenth century to consider the precise form of the military map of the UK.⁶⁰ The Committee made frequent mention in its Report, and throughout the minutes of evidence, to the superior durability of linen over paper as a material on which maps could be printed for use in the field. Almost certainly related to the Committee's work, although not acknowledged as such, the Ordnance Survey was simultaneously printing some of its one inch series of the Lake District on silk. Extant copies of two sheets, Ambleside and Keswick (see Illustration I), are known to exist in a private collection and they are dated 1891.⁶¹ Ordnance Survey was still, at that time, staffed at senior levels by sapper officers from the Corps of Royal Engineers, so it is more than likely that they would have been called on by the War Office to do prototype printing experiments for military purposes. It is, however, notable that no mention of this work appears in the definitive history of the Ordnance Survey which concentrates rather on the work of the Dorrington Committee which was taking place at the same time, charged with looking at the state of Ordnance Survey mapping after considerable public disquiet had been expressed.⁶²

⁶⁰ *Report of the Committee on a Military Map of the United Kingdom together with the minutes of evidence and appendices.* War Office. London. 1892.

⁶¹ The maps were in private collection when originally identified but have subsequently been deposited in the Bodleian Library.

⁶² Seymour, W.A. *A History of the Ordnance Survey.* Wm. Dawson & Sons Ltd. Folkestone. 1980.

Illustration I: Ordnance Survey 1 inch map of the Lake District (Keswick),



(Illustration provided by, and reproduced with the permission of, the owner).

Whilst it has no direct relevance to maps, it is appropriate to note the most recent and impressive historical example of the outstanding durability and virtual indestructability of silk. Amongst the many artefacts discovered and identified during the excavation of the Mary Rose, Henry VIII's battleship, was the silk lining of a cap

and some silk ribbons. They had survived relatively intact and were still identifiable as silk after over 400 years submerged under the waters of Portsmouth Harbour.

With hindsight, it becomes very clear that the knowledge and capability to print maps on silk existed in the UK at the time of World War II and that the military had for centuries recognised the value of fabric maps, whether silk or linen, in terms of their durability and flexibility. It is not unknown throughout history for knowledge to be acquired and technical strides to be made, only to be lost to posterity, and then re-discovered often centuries later. In this case, however, Hutton's search and ultimate decision to produce maps on silk might have been made more promptly and with far less effort and cost had he spoken to the military map-makers. Certainly both the Directorate of Military Survey (D.Survey) and the Ordnance Survey (OS) doubtless had the expertise but, for unknown reasons, they were apparently never consulted by Hutton who preferred rather to approach commercial printers, paper manufacturers and silk processors. This is a rather surprising discovery, bearing in mind the covert nature of MI9's activities and the secrecy which surrounded every aspect of their work, not least the mapping programme. It does, however, largely explain why MI9 paid little attention in their map production programme to the finer points of cartography and the standard techniques of identifying the maps they produced. Much more about this aspect of their work is covered in Chapter 2.

The key personalities

The extent to which Norman Crockatt, the newly appointed Head of MI9, had the personality, experience and skills which made him ideally suited to his wartime post has already been mentioned. One of his first actions in his fledgling Branch was to appoint Christopher William Clayton Hutton as the Technical Officer. Hutton had been born in

1893. He had served in the Yeomanry, the Yorkshire Regiment and as a pilot in the Royal Flying Corps during World War I.⁶³ Realising that another war with Germany was imminent, he tried to volunteer for the Royal Air Force and, subsequently, for the Army. When these approaches did not receive the encouragement he sought, he wrote a number of times to the War Office seeking an opening in an Intelligence Branch, an approach which eventually resulted in his appointment to the newly formed Military Intelligence section 9 (MI9) under Crockatt's leadership. 'Clutty', as he became known by all who worked with him, was regarded as both enthusiastic and original in his approach to the task to which he was appointed.

Both Crockatt and Hutton appeared to be ideally suited to their posts. It is worth saying a little more about the kind of people Crockatt included in his team since it provides an insight into what he regarded as the key skills and expertise which he needed to meet the challenges faced. He very quickly recognised the value of having those who had experienced the reality of escape and was also conscious of the need to have representatives of all three Services in his organisation. To this end, he appointed two Liaison Officers from the Royal Navy (RN) and the RAF. From the latter he appointed Squadron Leader A. J. Evans (1889-1960). Johnny Evans, as he was always called, was arguably an inspired choice. He had been an Intelligence Officer on the Western Front in World War 1 and had then been commissioned as a Major into the fledgling Royal Flying Corps (RFC).⁶⁴ Shot down behind German lines over the Somme in 1916 and captured, he was eventually sent to the prisoner of war camp at Clausthal in the Harz Mountains.

⁶³ TNA: AIR 76/247/127 contains Hutton's Officer Service Record from World War I.

⁶⁴ TNA: WO 165/39. The War Diary entry for January 1940 indicates that Evans had already been appointed as a lecturer; Foot & Langley. *MI9 Escape and Evasion 1939-1945*, p.37.

For Evans, remaining in captivity was apparently never an option. Whether this in any way reflected his upbringing and education at Winchester is unclear but it certainly did not reflect military training at the time. He escaped, only to be recaptured. On recapture he had been sent to the infamous Fort 9 at Ingolstadt, north of Nuremburg, the World War I equivalent of Colditz in World War II, since it was the camp to which all prisoners of war who had attempted to escape were sent and was located over one hundred miles from the Swiss frontier. Evans described in considerable detail both his failed escape and his eventual successful escape in a book published in August 1921, a book which was clearly very popular as it was printed no less than five times by the end of that year.⁶⁵ It took him and his companion almost three weeks to walk, largely at night, to the Swiss frontier which they crossed at Schaffhausen, west of Lake Constance. Evans described the attitude of the men in Fort 9 and the extent to which they spent their time in the all-consuming occupation of plotting to escape. It really was a veritable ‘Escaping Club’ where failed escapers were only too ready to share the knowledge of their experiences outside the camp with their fellow inmates. Evans described the receipt of clothes and food parcels from family and friends in which maps and compasses were also hidden. This was apparently accomplished by the prior personal arrangement of using a simple code in correspondence detailing the specific needs, maps, compasses, saws, civilian clothing and the like. The maps arrived in the camp secreted inside cakes baked by his mother or in bags of flour, and compasses arrived secreted inside bottles of prunes and jars of anchovy paste.⁶⁶ The maps were copied in the camp so others could also use them and were then sewn into the linings of jackets.

It is fascinating to consider the extent to which Evans brought these experiences to bear in his work for MI9 and understandable that his book was dedicated:

⁶⁵ Evans, A.J. *The Escaping Club*.

⁶⁶ Evans. *The Escaping Club*, pp.128-130.

To MY MOTHER who, by encouragement and direct assistance, was largely responsible for my escape from Germany, I dedicate this book which was written at her request.⁶⁷

He went further, however, spending time prior to the outbreak of World War II visiting the Schaffhausen area of the German-Swiss border, across which he had made his own successful bid for liberty in World War I, photographing the border area and making copious notes. It cannot be coincidence that the MI9 Bulletin contained two large scale maps of the Schaffhausen Salient, together with ground photographs of the local topography.⁶⁸ MI9's production programme also included sheet Y, a large scale map of the Schaffhausen Salient which also carried very detailed notes of the topography and landscape features to help escaping prisoners of war (refer to Appendix 1 for details of sheet Y and to Chapter 5, the Schaffhausen Salient and first case study on Airey Neave, for the significance which attached to the production of this map in the MI9 programme). Evans very rapidly became a most valuable member of the MI9 team, becoming one of their star performers as a lecturer at the Highgate School.

Lieutenant Colonel James Maydon Langley, referred to as 'Jimmy' by friends and colleagues, had been born in Wolverhampton in 1916, educated at Uppingham and Trinity Hall, Cambridge. As a young subaltern in the 2nd Battalion Coldstream Guards, he was badly injured in the head and arm and left behind at Dunkirk: on a stretcher he would have taken up space which four fitter men could have occupied. He was taken prisoner, hospitalised in Lille and had his injured left arm amputated by medical staff. He subsequently escaped, in October 1940, by climbing through a hospital window and managed to navigate himself, with a still suppurating wound and with help from French

⁶⁷ Evans. *The Escaping Club*.

⁶⁸ TNA: WO 208/3268. The maps and photographs are filed in the loose leaf binder, at the beginning of Chapter 15 Germany. The maps are marked Map No.4, Schaffhausen Salient (West)/A1 and Map No.5 Schaffhausen Salient (East)/A2. They are followed by copies of ground photographs of the area showing distinctive landmark features, for example the stream and footpath, the area where the German border guards patrol.

families who befriended him, to Marseilles from where he was repatriated, with help, through Spain to London.⁶⁹ According to Foot, Langley successfully navigated himself by using the maps of the various French departments which appeared in every public telephone kiosk in France.⁷⁰ The couple of times he travelled in the wrong direction resulted from the maps being oriented in a non-standard fashion i.e. with East at the top. So Langley too knew the value of maps as an escape tool. He arrived back in the UK in the spring of 1941 and initially joined SIS. He soon transferred to MI9 but remained on the payroll, and therefore technically under the command, of SIS. In practice he became the liaison point between the two organisations and was responsible for the work of the escape lines in NW Europe. He remained in post for the duration of the war, subsequently married Peggy van Lier, a young Belgian woman who had been a guide on the Comet line and, over thirty years later, co-authored with Foot the book which came to be regarded as the definitive history of MI9.

There were others in Crockatt's team, of which perhaps Airey Middleton Sheffield Neave is the most famous. As a young lieutenant, he had been a troop commander in the 1st Searchlight Regiment of the Royal Artillery, wounded and captured in Calais Hospital in May 1940 as the Germans over-ran northern France.⁷¹ Neave had joined MI9 after his successful escape from Colditz, with a Dutch Lieutenant Toni Luteyn, and repatriation back from Switzerland through Marseilles, the Pat line and Spain.⁷² After a short period of leave, he joined MI9 in May 1942 under the pseudonym (code-name) of Saturday. It is clear that his name had been on an MI9 list

⁶⁹ Langley. *Fight Another Day*. Chapter 1 provides some detail of his early life. Later chapters provide detail of his capture, hospitalisation and subsequent escape.

⁷⁰ Interview with Professor M.R.D.Foot at the Savile Club in London, 31st January 2012.

⁷¹ In addition to Neave's own two books of his wartime experiences, the Parliamentary Archives hold a cache of his private papers under file references AN 598-707.

⁷² TNA: WO 208/3288. Chapter II, section 21, subsection (c) and Chapter X contain details of Neave's own escape report, covering both the initial escape and the route to freedom.

of targeted officers who had been specifically helped to escape, and his experience was to prove invaluable. His escape and the extent to which it reflected the value of MI9's mapping programme are issues considered in detail in Chapter 5.

The Training School at Highgate

MI9D was, as previously indicated, the section responsible for training and briefing the Intelligence Officers who attended the courses at the IS9 School in Highgate and then returned to their individual units to cascade the training down through the operational crews. Certainly in the early years, these training courses concentrated on the RAF whose crews were constantly over-flying occupied Europe. The lecturers engaged were largely those who had personal experience of escape in World War I. Their remuneration was set at two guineas (£2 -2s- 0), which is the equivalent of £82-19 in present day terms, for each lecture they delivered and they were also provided with travel and overnight hotel expenses when they travelled to deliver lectures at operational units.⁷³ As early as January 1940, a conference was organised in Room 660 of the Metropole Building to hear a lecture delivered by the previously mentioned Squadron Leader Johnny Evans MC, formerly with the RFC and RAF.⁷⁴ By the end of February 1940, lecturers from the Highgate School had delivered their training lectures to seven Army Divisions, five RAF Groups and were undertaking a tour of the British Expeditionary Force (BEF).

The content of the general lecture given to officers and senior non-commissioned officers (NCOs) included emphasis on the undesirability of capture, instructions on evasion, conduct on capture and a demonstration of some of the aids to escape which

⁷³ www.moneysorter.co.uk 8th October 2013.

⁷⁴ TNA: WO 165/39, War Diary entry for January 1940.

were issued to units prior to deployment.⁷⁵ The lecture emphasised that the job was to fight and avoid capture. If captured, it was their first and principal duty to escape at the earliest opportunity. Later on in the war, with the increasing numbers of prisoners of war and the increasing organisation of Escape Committees in the camps, the lectures were updated to include mention of the Escape Committees, which were the responsibility of the Senior British Officer (SBO) in each of the camps. Those attending the training courses were told that money, maps, identity papers, provisions and many other escape aids would be made available through this source.⁷⁶ The officers and NCOs who attended the lectures were then responsible for cascading the briefing down through the ranks, but they were, initially at least, specifically directed not to mention the aids to escape as they were only available for issue in limited numbers. It was recommended that they deliver the lecture as an informal, SECRET talk and to audiences which should not exceed 200 at any one time. Later on, and certainly by early 1942, a supply of aids for demonstration purposes was provided to local commands. There was also a classified TOP SECRET lecture on codes which was delivered under the title of ‘Camp Conditions’ to very limited audiences, never more than 10 at a time, all of whom had been carefully selected. Those selected for this special briefing were required to practise the use of letter codes and their work was carefully checked before they were formally registered as authorised code users.⁷⁷ Codes are mentioned briefly in the following section of this chapter and more fully in Chapter 4.

The staff in the Highgate School steadily compiled a training manual which became known as the Bulletin. The nature of the Bulletin and its important role as a tool in educating potential prisoners of war about possible escape routes and the nature

⁷⁵ TNA: WO 208/3242, Section 7 Training, paragraph (a) General Lecture.

⁷⁶ TNA: WO 208/3242, Appendix A, p.26.

⁷⁷ TNA: WO 208/3242, section 7, pp.5-6.

of escape aids, including maps, which were being produced is discussed in detail in Chapter 3.

The pressures on the lecturing staff were considerable and continually increased as the war progressed. Initially both the Royal Navy and the Army had appeared uninterested in the training courses offered and, certainly in the first year or so of its existence, MI9 staff worked hard to stimulate interest and used many personal contacts to raise awareness of their work.⁷⁸ They appeared to overcome some initial opposition from the Royal Navy and some Army commands, and by May 1944 the record shows that very significant numbers in all three services had been briefed: 110,000 in the Royal Navy and the Royal Marines, 346,000 in the Army and 290,000 in the Royal Air Force, and a total of 3250 lectures had been delivered.⁷⁹

Codes

Section Y was responsible for codes. The development of letter codes as a means of communication with the camps was also regarded as a priority from the start and the role which coded communication played in the escape programme developed apace. This aspect is discussed in detail in Chapter 4.

Escape-mindedness

Escape-mindedness was the term which Norman Crockatt, the Head of MI9, coined to describe the philosophy which he sought to instil into the frontline forces which his staff regularly briefed and trained.⁸⁰ Inculcating and fostering this philosophy was the primary aim of the training and the rest of the MI9 team was working to ensure that the approach was supported in a very practical way. They stressed that, if captured, it was

⁷⁸ TNA: WO 208/3242, section 11, p.14.

⁷⁹ TNA: WO 208/3242, section 7, p.10.

⁸⁰ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, p.53.

an officer's duty to attempt to escape and, not only officers, it was a duty which extended to all ranks. When John Pryor came to write down his memoirs of the years he spent as a prisoner of war during World War II, many years after the end of the war, it is not surprising that he recalled that 'escaping was the duty of a PoW but with the whole of NW Europe under German control and with no maps or compass it seemed a pretty hopeless task'.⁸¹ The briefings and training which MI9 provided alerted them to every aspect of potential evasion and escape. The emphasis was on evading capture whenever possible or, if captured, to attempt to escape at the earliest opportunity and certainly before being imprisoned behind barbed wire in the many prisoner of war camps. It was standard practice for captured officers to be separated from the other ranks. Officers were, therefore, made responsible for ensuring that their men were appropriately briefed in captivity and the organisation of escape committees became one of their principal priorities. It is perhaps a reflection of the extent to which the philosophy permeated the camps that by the time the Allies were landing in occupied Europe and slowly advancing east, it was felt necessary to issue a 'stay-put' order to prisoners of war to ensure they did not get caught up in the frontline whilst trying to flee captivity. The order was sent by MI9 on 18th February 1944 in a coded message: it directed that 'on German surrender or collapse, all p/w all services including Dominion & Colonial & Indian must stay put & await orders'.⁸² Many families also wrote to their sons in the camps strongly discouraging them from any escape attempts, as a result of the Stalag Luft III Sagan experience when 50 of the men who had taken part in the 'Great Escape' in March 1944 had been executed on being recaptured.⁸³

⁸¹ I am indebted to the family of the late Commander John Pryor RN for allowing me unrestricted access to personal letters and papers in his private estate. These papers are now held in the Second World War Experience Centre under their reference SWWEC RN/Pryor J. The Centre now holds the title to the papers and has given permission for extracts to be quoted for research purposes.

⁸² TNA: WO 208/3501, enclosure 127.

⁸³ TNA: WO 208/3288, Chapter 2, pp.27-28.

The MI9 staff who subsequently wrote about their escapes, notably Neave and Langley, and even Evans who had escaped during World War I, all highlighted the importance of an escape philosophy. Neave described the way in which they had ‘to think of imprisonment as a new phase of living, not as the end of life’ and the extent to which the real purpose of the escaper was ‘to overcome by every means the towering obstacles in his way.’⁸⁴ It was a state of mind which MI9 encouraged. It was understandable that some might prefer the relative safety of the camp rather than life on the run. Even for these men there were jobs to be done to support the escapes of others. It was strength of mind and purpose which was needed rather than physical health and strength, a point epitomised by both Jimmy Langley escaping with a still suppurating amputation wound and Douglas Bader escaping with two artificial legs. Initiative, foresight, courage were needed and luck also came into it: as Evans stressed ‘however hard you try, however skilful you are, luck is an essential element in a successful escape’.⁸⁵ ‘Luck is the most essential part in an escape for every man out, there were at least ten better men who would have got clear but who did not have the good fortune they deserved.’⁸⁶ Teamwork is the one competence which comes through all the stories and plans relating to escape. This almost certainly reflected the public school philosophy where your efforts were for school, house and team rather than for self. As an Old Wykehamist, Evans personified this approach and it is not surprising to learn that between the wars he captained the Kent county cricket team. To some extent it could be argued that MI9 was pushing at an open door in seeking to inculcate Crockatt’s philosophy into a new generation of young men. Many of them had been educated at preparatory and public schools and apparently raised on a diet of escape classics of the

⁸⁴ Neave. *They Have Their Exits*, p.165.

⁸⁵ Evans. *The Escaping Club*. p.202.

⁸⁶ James, David. *Escaper’s Progress. The Remarkable Experiences of a Royal Naval Officer*. Pen & Sword Maritime. Barnsley. 2008. p.37.

last war. Some of them acknowledged this when they came to write their own accounts of their escape experience during World War II:

In my prep-school days at Summerfields, I had read all the escape classics of the last war – such books as *The Tunnellers of Holzminden*, *Within Four Walls, I Escape*, and *The Escapers' Club* – and as a proposition the business of escaping fascinated me.⁸⁷

It is clear from the post-war literature of escape that many of them spent every waking moment of captivity plotting their escape. Some identified the very human traits which they believed could most aid them. Gullibility (of the captor) and audacity (of the escaper) were high on the list, as was luck. There was a psychology attached to escaping. ‘I came to the conclusion that escaping was essentially a psychological problem, depending on the inobservance of mankind, coupled with a ready acceptance of the everyday at its face value.’⁸⁸

The Germans were apparently well aware of this philosophy and the extent to which it sustained British prisoners of war and constrained their own resources in guarding those captured and seeking to prevent their escape. Once the Allies had landed in mainland Europe and started to advance east, they captured not simply German troops but also a number of key German documents amongst which was a document identified as GR-107.⁸⁹ It must have made fascinating reading for MI9 as it revealed the extent to which the Germans were well aware of their work. It is a lengthy document and relates entirely to the escape methods employed by Allied Flying Personnel. It was dated 29th December 1944 and described the escape philosophy, the duty to escape, and the maps provided on silk and thin tissue. It goes so far as to list

⁸⁷ James. *Escaper's Progress*, p.30.

⁸⁸ James. *Escaper's Progress*, p.36.

⁸⁹ The captured document was translated by HQ 2677th Regiment OSS (PROV) Reports Office, APO 512, US Army and copied to both IS9 and OSS in London. A copy is held by the RAF Museum, Hendon under their reference B3227. Whilst the document provides confirmation of German awareness, this aspect is not a main focus of this thesis.

nine maps which they knew had been produced. Whilst it reflected the extent to which the Germans were aware of what they were up against, it also indicated that, if they were aware of only nine escape maps when MI9 had by that time produced over 200 individual items and in excess of two million copies, they had arguably only discovered the proverbial tip of the iceberg.

Conclusion

The creation of MI9 should arguably have taken place earlier in the timeframe as the new organisation was rapidly confronted by the withdrawal of British forces from Dunkirk and the reality of thousands of men who were captured and imprisoned by the Germans. These were the very men that MI9 had been created to assist. It is a credit to the organisation's resilience that they tackled their work with enthusiasm, though perhaps not always in the most efficient way, and did not appear to be overwhelmed by the size of the task which faced them. The absence of MI4 (the branch responsible for the production of military maps) from London arguably set them off down the route they took and the embryonic section had to face considerable hurdles to get their escape programme, and specifically their mapping programme, off the ground. The manner in which they tackled the considerable challenge posed by the size and nature of the map production programme which faced them, and the remarkable extent to which they were aided and supported by the commercial companies they approached to enlist their help and expertise in the war effort, is addressed in Chapter 2.

Chapter 2

The map production programme and the compilation of a carto-bibliography

‘Geography is about maps’. (Edmund Clerihew Bentley)⁹⁰

It was made clear in the previous chapter that the production of escape and evasion maps became a priority for MI9 from the beginning of its existence. Hutton’s driving role in this has already been described and the extent to which he felt he was carving a new path in printing maps on silk apparently led him to approach commercial companies rather than the military mappers. The importance of the maps was clearly key to the whole of MI9’s escape programme: without maps it was at best difficult and at worst impossible for the escaper or evader to find his way to freedom. Given their critical role in the war effort, it is now germane to reconstruct and explain the nature of the map production programme that was undertaken. It is also highly relevant to codify and catalogue the maps generated by that programme as a carto-bibliography, not only because of its use in revealing the unfolding work of making maps for escape and evasion purposes, but also because of its potential as a research resource for researchers and map librarians/archivists in the future. Consideration of the means employed to make the maps and the challenges faced and overcome are crucially relevant, and the final part of this chapter discusses both the companies and organisations involved, and the techniques and materials that were used.

The map production programme

A central task in the research has been to reconstruct the evolving programme of map production undertaken by MI9. In doing so, light can be shed on the imperatives that influenced the decisions that were taken as well as the constraints that imposed limits on what could be achieved and the quality and utility of the products. However, it should

⁹⁰ Bentley, E.C. *Biography for Beginners*. Reprinted by Dover Publications. New York. 2014.

be noted that the challenges posed in seeking to understand the production programme are formidable. It is likely that MI9 kept a card index of the individual maps in the programme in the same way as they are known to have kept a card index to maintain a record of other aspects of their work.⁹¹ Sadly, none of the card indexes appear to have survived and there is, therefore, no extant comprehensive record of MI9's escape and evasion map production programme available to the present-day researcher. The programme has had to be pieced together from, sometimes, fragmentary information. The single most comprehensive record is undoubtedly the D. Survey war-time print record which was created, managed and kept up-to-date by Survey 2, that part of D. Survey responsible for the management of all operational map production programmes. The card index was originally found as an un-catalogued item in the India Office Library and Records, housed in the British Library.⁹² How it came to be held there, rather than in The National Archives where one might reasonably anticipate finding it, is an apparent enigma, but it is clear that its survival owes much to the prescient awareness of two far-sighted individuals who recognised its importance and ensured it was given a safe haven.⁹³

The second source is a typed list held in one of the War Office (WO) files.⁹⁴ There is also a third source, namely the list deposited in the British Library by the

⁹¹ TNA: WO 165/39. The War Diary entry for February 1942 indicates that a card index for code users was maintained. The entry for May 1942 indicates a card index of attempted escapes was also being maintained. It is not unreasonable to assume that card indexes for other aspects of their work were maintained: this was, after all, the standard way of maintaining records in the pre-computer era.

⁹² I am grateful to the British Library for taking action to catalogue the item as Maps UG-9-152-H.

⁹³ They need to remain nameless to protect the confidence shown when they divulged its location. Its existence and location has now been drawn to the attention of The National Archives Map Room staff.

⁹⁴ WO file Svy 2/6330 Fabric Maps Pt I 10.8.44 to 30.9.46, enclosure 18. (This item was originally classified SECRET but was declassified on 8th Oct 1980). It is still held in the Defence Geographic Centre where it was reviewed under an FOI request, but it is destined for deposit in The National Archives.

archivist of the Waddington Company.⁹⁵ The contents of the three sources are similar but by no means identical. Some of the differences can be explained by apparent human error (misreading of sheet numbers and typographic errors, for example). However, the WO typed list contains other differences which are less understandable: for example, it states that 29 sheets of Norway GSGS 4090 were produced, whereas the print card index indicates 33 sheets, which proved to be correct since extant copies of all 33 sheets have been identified. Some of the differences between the D.Survey card index and the Waddington list relate to the print dates ascribed to the maps. This was potentially a significant research issue since it was important to construct a carto-bibliography which contained print volume figures which are as accurate as possible. Where the dates ascribed to print dates are only days apart, these have been regarded as the same task, with the Waddington date probably representing the placing of the order by the Ministry of Supply, on behalf of MI9, and the WO date probably representing the receipt of the stock from the Waddington company. Where the dates ascribed are months apart, these have been regarded as separate tasks and the print volumes are listed as separate tasks. Whilst every effort has been made to resolve the differences, this has not proved possible in all cases. Intriguingly, the typed WO list refers to the maps as ‘pictures’, the same word used by Waddington in their correspondence with the Ministry of Supply (see page 84 later in this chapter) and the word used on the Waddington file list. It is, therefore, likely that the typed WO list had its origins in either the Waddington Company or the Ministry of Supply.

Whilst the print records were originally classified SECRET, some of the detail of the programme was apparently regarded as so sensitive that it was not declared openly even on that classified record. For example, it took some time to confirm, through

⁹⁵ The file of correspondence is held in the British Library Map Library under the reference Maps C.49e.55.

sighting extant copies, that the description of one map as D - - - G was a large-scale plan of the port of Danzig and that Dutch Girl in four sheets referred to Arnhem. Other entries on the record remain a mystery: for example, Double Eagle, although it might reasonably be conjectured that it was a map of Germany and Austria. Indeed, one of the earliest maps produced by MI9 was a small-scale map of Germany, Austria and adjacent frontier areas: it carried the sheet number A, probably indicating that it was the first sheet to be produced. No direct evidence has yet been unearthed, however, to confirm that this is the map which the record describes as Double Eagle. A General Map of Ireland was produced in two sheets, printed back-to-back. This was almost certainly the map mentioned in the records as ‘Shamrock’, 500 copies being printed double-sided on fabric on 16th February 1942.⁹⁶ There was apparently some discussion about the position of internees in the Republic of Ireland since, under the Geneva Convention, internees were held until the end of the conflict. On 5th March 1943, in a MOST SECRET internal minute from MI9 to the Director of Intelligence, a discussion between Sir John Maffey, the British representative in Eire, and the Irish Government was reported. It concerned the possibility of faking the escape of British prisoners of war interned in the Curragh.⁹⁷ The deal fell through, apparently because the Irish Government wanted fighter aircraft in exchange. Whether the internees might be encouraged to escape anyway was a moot point since there was the distinct possibility of political embarrassment. The fact that the General Map of Ireland was produced at all appears to bear testimony to the fact that MI9 prepared for the possibility of escape and it was certainly recorded in the War Diary that nine RAF officers escaped from the Curragh Camp in Eire on 25th June 1941. Three were recaptured and six reached

⁹⁶ British Library Maps C.49e.55, enclosure 60.

⁹⁷ TNA: AIR 20/9165, enclosure 9A. This file was opened in redacted form on 20th August 2013 as a result of an FIO request by the author.

England. MI 9 apparently wrote a special SECRET report on the escape, but this has not been identified.⁹⁸

Where copies of individual sheets (either singly or in combination) remain extant, it has proved possible to identify the particular print medium, i.e. tissue (a very fine paper), silk or man-made fibre (MMF). This information has been incorporated into the carto-bibliographies which have been compiled and appears in the column headed: print medium. The entry (paper or fabric) reflects the entry on one or other (or all) of the three extant print record sources. In some cases it has proved possible to identify the print medium rather more precisely. The Waddington list, for example, indicates that some of the maps were printed on Mulberry Leaf (ML) paper or Mulberry Leaf Substitute (MLS).

MI9 may have been the initiators of the escape and evasion mapping programme but they were apparently not well versed in cartographic techniques, processes and procedures. Very many of the maps lack even basic identification. Many carry no title, series identification, date or edition number, and some carry no scale indicator. Even when cartographic referencing information is shown, it can prove to be very misleading. The most obvious examples of this are the sheets of GSGS Series 3982. The original operational map series designated with this GSGS number was the Europe (Air) series at a scale of 1:250,000 which existed prior to the outbreak of the War. These were reproduced as escape and evasion maps, largely on silk and tissue, at a scale of 1:500,000. In reducing the scale, MI9 did not in any way alter the detail shown on the original map (even the series number) with the exception of the scale factor, so that on the resultant sheet, the font size of place and feature names appears to be very small, although the detail is still legible. The date on most of the sheets was in fact often the

⁹⁸ TNA: WO 165/39, the War Diary entry for June 1941.

date of the original operational paper map and not the date of the escape and evasion map production. This is notably the case where compilation and imprint dates shown on the escape and evasion maps pre-date the start of the escape and evasion map production programme. This is also confirmed by the imprint numbers shown in the marginalia, often indicating print volumes well in excess of those produced as escape and evasion versions. The one exception to this was where boundaries are shown ‘at 1943’, for example in [Series 43]. Indeed, when D. Survey eventually assumed responsibility for escape and evasion map production in 1944, they proposed changes to the printing colours of boundaries and country names. In a letter dated 28th November 1944, MI9 came back strongly opposed to change, insisting that their policy of ‘present frontiers in red and pre-Munich frontiers in mauve’ be adhered to, not least because it had always been specified as such in their training courses and lectures.⁹⁹

MI9’s lack of knowledge of map production processes and procedures manifested itself in many other ways. It is a cardinal cartographic rule that different versions of the same map are identified differently, usually by a change in the edition number or, at the very least, in the production/print date. Both MI9 and the companies they initially used to print the maps were oblivious to such practices. As a result, the escape and evasion maps carried no edition numbers or production dates, and some maps apparently identified as being the same were in fact different. To give a few examples: there were at least two versions of sheet C (refer to Appendix 1) with one version extending one degree longitudinally further east than the other version. There were also at least three versions of the Danzig port plan (refer to Appendix 1). Whilst all three versions provided large-scale coverage of the Port of Danzig, one carried the sheet number A4, whereas the second version carried no sheet number and the third carried the sheet number A3. The three versions varied also marginally in scale and in geographical

⁹⁹ WO file Svy 2/6330 Fabric Maps Pt I 10.8.44 to 30.9.46, enclosure 26.

extent. They also carried different intelligence annotations, the sheet marked A4 carrying far more intelligence information than the other two versions, in the form of annotations directing escapers, for example, where to find Swedish ships, where the arc lights were located and how far the beam of light extended. In the case of sheets J3 and J4 (refer to Appendix 1), the geographical areas of coverage of the two sheets were sometimes reversed and the scale was varied, sometimes being produced at 1:1,378,000 and at other times reduced to 1:1,500,000. These are the principal variations identified to date: there may well be others yet to be discovered. It is important to describe them at some length since they are only really identifiable when extant copies of the maps can be compared. The differences do, however, highlight the extent to which individual sheet identification of MI9's escape and evasion maps needs always to be treated with caution.

Carto-bibliography

The lack of standard cartographic information provided a challenge in the compilation of a map inventory or carto-bibliography. It is also worth reflecting at this point on the current (2013) state of carto-bibliographic practice. Anglo-American Cataloguing Rules Edition 2 (AACR2) are in the process of being superseded by Resource Description and Access (RDA) but this is in the very early stages of implementation in the USA and is even further behind in the UK.¹⁰⁰ More importantly, it does not, as yet, contain guidance for maps, although some map librarians in North America are reportedly working on what will eventually be the new version of *Cartographic Materials: a Manual of Interpretation for AACR2*. In an attempt to ensure that the form of the carto-bibliography being compiled by the author as a result of the current research proves to

¹⁰⁰ I am indebted to April Carlucci of the British Library Map Library for providing this information in response to my enquiry. The source of her information was the British and Irish Committee on Map Information and Cataloguing Systems, usually referred to as BRICMICS.

be of value to professional map librarians and archivists, the instructions in the Manual have been adhered to in so far as is possible and, additionally, advice has been sought from map librarians/archivists in both The National Archives and the British Library. It has been important to ensure that the data fields described are capable of being captured into an automated map catalogue system in the future.

The solution to the challenges posed by MI9's lack of adherence to usual cartographic identification procedures has been to utilise the standard cartographic technique of showing in square brackets [] any information which does not appear on the printed maps and which helps to identify the maps. The series number and series title, for example [Series 43] and Series GSGS 3982 [Fabric], have been rendered in this form to aid identification.

Where the base map used for escape and evasion map production carried no sheet number, MI9 devised an arbitrary sheet numbering system. In the case of their early attempts based on the maps of John Bartholomew & Company of Edinburgh, the sheets carried an upper case Roman alphabet letter, often in conjunction with an Arabic number, for example C, H2. MI9 appeared to cause significant production problems when they decided (for unknown reasons) to cut and panel sheets of one existing operational series to produce an escape and evasion series. [Series 43] is a good example of this practice. It is clear that this escape and evasion series was produced by panelling together sheets or sections of sheets from the International Map of the World (IMW) series. There are examples of coverage diagrams in the extant files of the composition of sheets by this method.¹⁰¹ There are also indications that the practice caused considerable angst to the regular military map makers when they eventually

¹⁰¹ WO file Svy 2/6330 Fabric Maps Pt I 10.8.44 to 30.9.46. Undated, individual compilation diagrams for sheets 44/N and 44/O were discovered in the file. Each sheet comprised parts of 9 separate IMW maps.

became involved in the escape and evasion production programme. On 3rd December 1944, Lieutenant Colonel W. D. C. Wiggins wrote to MI9:

Your proposed sheet lines do not (I have noticed this on previous layouts of yours) take into consideration existing map series sheet lines, printing sizes or fabric sizes...Production is much simpler if we stick to graticule sheet lines as opposed to your, rather vague, rectangulare.¹⁰²

He might also have added that the practice must have greatly increased the production costs. The point appears to have been disregarded by MI9 who continued with arbitrary sheet lines and numbering systems, exemplified by [Series 43], [Series 44] and [Series FGS].

The carto-bibliography has been compiled as a set of nine appendices, each one relating to an identifiable series or group of MI9 maps. It has been produced in such a way that it can be regarded both as an integral part of the present research exercise and also as a stand-alone reference for future researchers and map librarians/archivists. It is the result of many hours spent in record repositories all over the country. In all, extant copies of the maps were discovered in some eight public collections and three private collections. The details of these are contained in the individual introductions to the appendices which are designed to ensure the future value of the carto-bibliography as a stand-alone reference work.

Maps based on Bartholomew originals and other escape and evasion maps with similar sheet numbers

As Christopher Clayton Hutton indicated, MI9 initially appeared to work in isolation from the military map-makers and chose rather to approach commercial map publishing

¹⁰² WO file Svy 2/6330 Fabric Maps Pt I 10.8.44 to 30.9.46, enclosure 30.

firms directly for help.¹⁰³ As previously described, Hutton had contacted the firm of John Bartholomew in Edinburgh at the suggestion of Geographia in London. It was (John) Ian Bartholomew, the Managing Director, himself who gave Hutton his first lesson in map-making. Hutton himself indicated that ‘thanks to the assiduities of the managing director and his staff...I learned all there was to know about maps’.¹⁰⁴ Hutton was given copies of many of Bartholomew’s own maps of Europe, Africa and the Middle East which formed the basis of MI9’s initial escape and evasion map production programme, and the waiving of all copyright charges for the duration of the War was a considerable financial gesture from Bartholomew since MI9 went on to produce in excess of 300,000 copies of the maps (refer to Appendix 1 for details of the print runs).

The maps are readily identifiable as being based on Bartholomew maps since they are identical, in specification, colour and font style, to the company’s maps of the time. They are generally small scale (1:1,000,000 or smaller), produced in 3 colours (red, black, grey/green) and without elevation detail. A few of the maps carry confirmation of their source since they clearly show the Bartholomew job order number relating to the original paper map along the neat edge of the silk map. The alpha-numeric code A40 which appears in the NW corner of some copies of sheet F (refer to Appendix 1) was very much a Bartholomew practice. The company introduced this code in the early part of the twentieth century, mostly on their half inch mapping. The formula is a letter (either A or B) followed by a two digit number:

A = January-June and B = July-December.

¹⁰³ Hutton. *Official Secret*, p.21.

¹⁰⁴ Connell, Charles. *The Hidden Catch*, p.19.

The number is the year of printing, so A40 indicates that the original paper version of this map was printed between January and June 1940.¹⁰⁵

The existence of a direct link between MI9 and the Bartholomew company is reflected also in the existence in contemporary company files of a memorandum dated 3rd August 1940 from Ian Bartholomew to the company's London office, on the subject of Captain Clayton Hutton and indicating that a letter had been received from him thanking them for the prompt attention in sending the plates they had requested.¹⁰⁶ The letter itself is not in the file. The memorandum is not only confirmation of the link but also indicates that Bartholomew not only handed over printed paper copies of the maps but also provided plates for the on-going reproduction. Further confirmation is contained in the first version of Hutton's memoirs to be published (under a pseudonym) by the inclusion of black and white photographs of two silk maps which can be readily identified as sheets A and C in the MI9 inventory (refer to Appendix 1 for details).¹⁰⁷ Final confirmation was revealed by the existence of a printed copy in a contemporary Air Ministry file of a map which was identifiable as sheet A/Germany carrying a clear imprint of the Bartholomew Company name.¹⁰⁸ (This map's particular significance is discussed at Chapter 6).

As already indicated, MI9 added to the maps what passed for a rather crude sheet identification system in the form of an upper case alphabet letter, often in conjunction with an Arabic number (for example C, H2, K3). However, even this practice was not consistent as the same numbering system was also applied to some sheets which were clearly not based on the Bartholomew small scale maps. The large scale sheet of the

¹⁰⁵ I am indebted to Karla Baker , who is responsible for cataloguing the Bartholomew Company records in the National Library of Scotland Map Room, for this information.

¹⁰⁶ Bartholomew Archive/Acc.10222/Business Record/823. The memorandum is in the correspondence sequence at page 192 of the letter book.

¹⁰⁷ Connell. *The Hidden Catch*, pp.16-17.

¹⁰⁸ TNA: AIR 14/353.

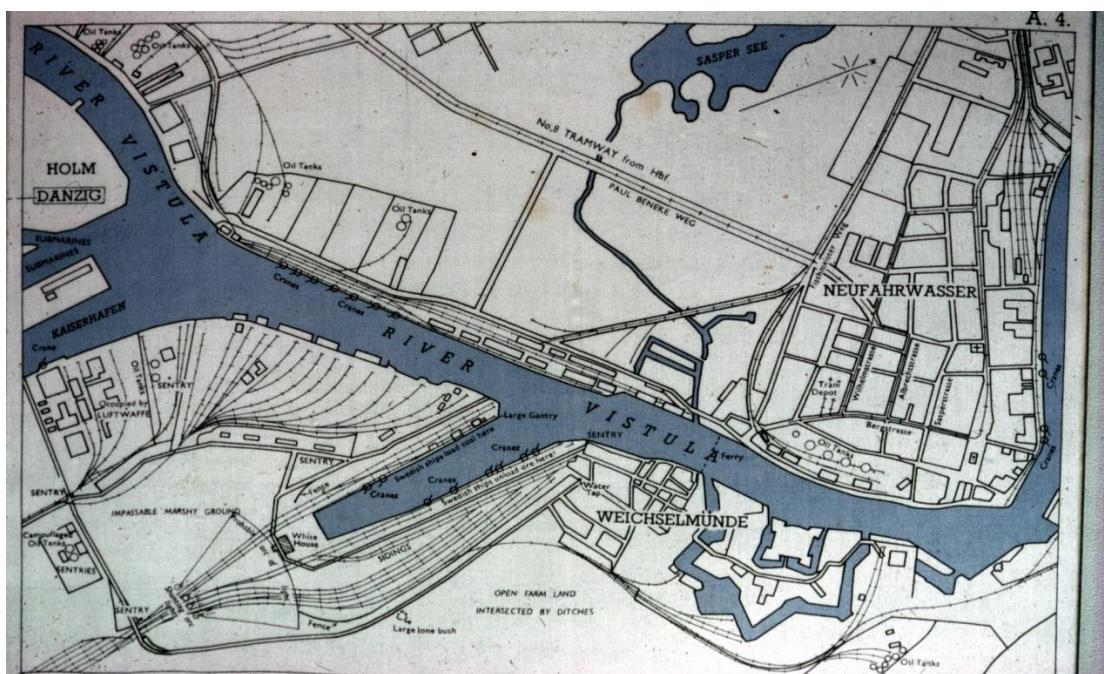
port of Danzig (A4) at approximately 1: 16,000, the large scale map of Schaffhausen (A6) and the medium scale sheets of Italy (J5 and J6 at 1:275,000, J7 and J8 at 1:110,000) are six such examples. Sheet A4 Danzig appears to be an amalgam of the detail from a British Admiralty chart with additional ground intelligence added in the form of intelligence annotations. (This particular map will be discussed in more detail in Chapter 6). Sheet A6 of Schaffhausen is based on large scale, native German and Swiss topographic maps of the border area and sheets J5, J6, J7 and J8 appear to be based on large scale, native Italian topographic maps. For the purposes of constructing the carto-bibliography, however, they have been identified as one series based on the similarity of the sheet numbering system. Certainly it appears that the first small scale map of the area was identified with a single alphabet letter, such as A, and that any subsequent map produced which was located in the same geographic area was numbered A1, A2 etc in sequence. To prove that this was, indeed, the approach adopted would assume that, since sheets J5 to J8 all provided large scale coverage of the Italian area, sheet J should be a small scale sheet of Italy. This cannot, however, be proved conclusively, since no extant copy of sheet J has yet been found and no mention of it appears in the record.

Those sheets where extant copies have been located in British record repositories are shown at Appendix 1 and the various states in which the sheets were produced, either singly or in combination, are also detailed at Appendix 1. A typical example of a map based directly on a Bartholomew map (sheet C) is shown at Illustration II and an example of a sheet utilising the same numbering system but clearly not based on a Bartholomew map (sheet A4) is shown at Illustration III.

Illustration II: part of sheet C



Illustration III: sheet A4 [Danzig]



(Both illustrations are reproduced with the permission of the owners)

Fifteen sheets which are believed to have been produced but for which no extant copies have been identified to date in British record repositories are listed at Appendix 2. This latter group is either noted on the print records or represents gaps in the assumed consecutive numbering sequence or, in one case, has been spotted by a colleague at a map fair but no details were recorded.

A total of 58 sheets have been identified in this initial group of the escape and evasion maps, of which some 40 are clearly based on Bartholomew maps, some of the latter carrying the original Bartholomew job order number which has allowed them to be compared directly with the lithographic paper copy held in the company's print archive now housed in the National Library of Scotland's map collection in Edinburgh.¹⁰⁹ By autumn 1942, there was an increasing awareness that the small scale maps being issued to aircrew were regarded by them as too small scale. The need for better maps at larger scales gained momentum and 'a new series gained approval'.¹¹⁰ It is not clear what this new series was, but it is likely to have been the fabric versions of GSGS 3982 (see the following section), as they started to be produced at that time, their earliest print dates being the late summer and autumn of 1942 (refer to Appendix 3). At this stage valuable information about the Swiss frontier was also being incorporated into a map of the frontier area produced at 1:100,000 scale.¹¹¹

Europe Air 1:500,000 Series GSGS 3982 [Fabric]

Despite the evidence indicating that MI9 engaged initially with commercial companies to develop and progress the escape and evasion mapping programme, there was clearly contact with the operational map-makers at some stage since any map series carrying a

¹⁰⁹ Special funding recently has allowed the National Library of Scotland to make the archive available for research in a much more accessible way than when it was first deposited some 30 years ago. Items in the archive are now being individually catalogued, but work has not yet started on the items printed during World War II.

¹¹⁰ TNA: WO 208/3242, p.77.

¹¹¹ TNA: AIR 20/6085, enclosure 9, p.4.

GSGS series number is immediately identifiable as an operational series. This group of escape and evasion maps was produced by x2 reduction of the original operational Europe (Air) series, from 1:250,000 scale to 1:500,000 scale. They could only have been produced from the original reproduction material which would have been held by D. Survey since, apart from their scale and print medium, they are identical in all respects to the original lithographic paper maps. As a result of the scale reduction, the escape and evasion maps are one quarter the size of the original operational lithographic maps printed on paper. These maps were variously referred to as ‘miniatures’ or ‘handkerchief’ maps.¹¹² The sheets are printed in six colours and individual sheet coverage is two degrees longitudinally ($^{\circ}\text{E}$) and one degree latitudinally ($^{\circ}\text{N}$). All geographical values of the extent and coverage of individual sheets have been derived from an index of the original series acquired from the Defence Geographic Centre (DGC): this index has also been used as the basis of the cover diagram shown as Illustration IV. Where extant copies of the maps have been discovered, these have been used to confirm sheet-lines. The sheet numbers and titles have been extracted initially from the print record and spellings, including the use of diacritic marks, have been confirmed against extant sheets and/or the map index. The sheets are printed in six colours. Illustration V shows part of sheet L32/2 Konstanz in this series, a map which will assume particular significance later in the thesis at Chapter 6. Escape and evasion versions of some 74 sheets were produced (refer to Appendix 3 for the detailed record). Over 35,000 copies were printed between 10th July 1942, when production apparently commenced, and an unrecorded day in July/August 1944, when the decision was taken to cease production. One can therefore conjecture that MI9’s contact with D. Survey, either directly or using the Ministry of Supply as an intermediary, had started at least by

¹¹² Whilst possibly apocryphal, since no confirmation of this description has been found in the records, it carries the ring of authenticity because of the small size of the maps and their reduced scale.

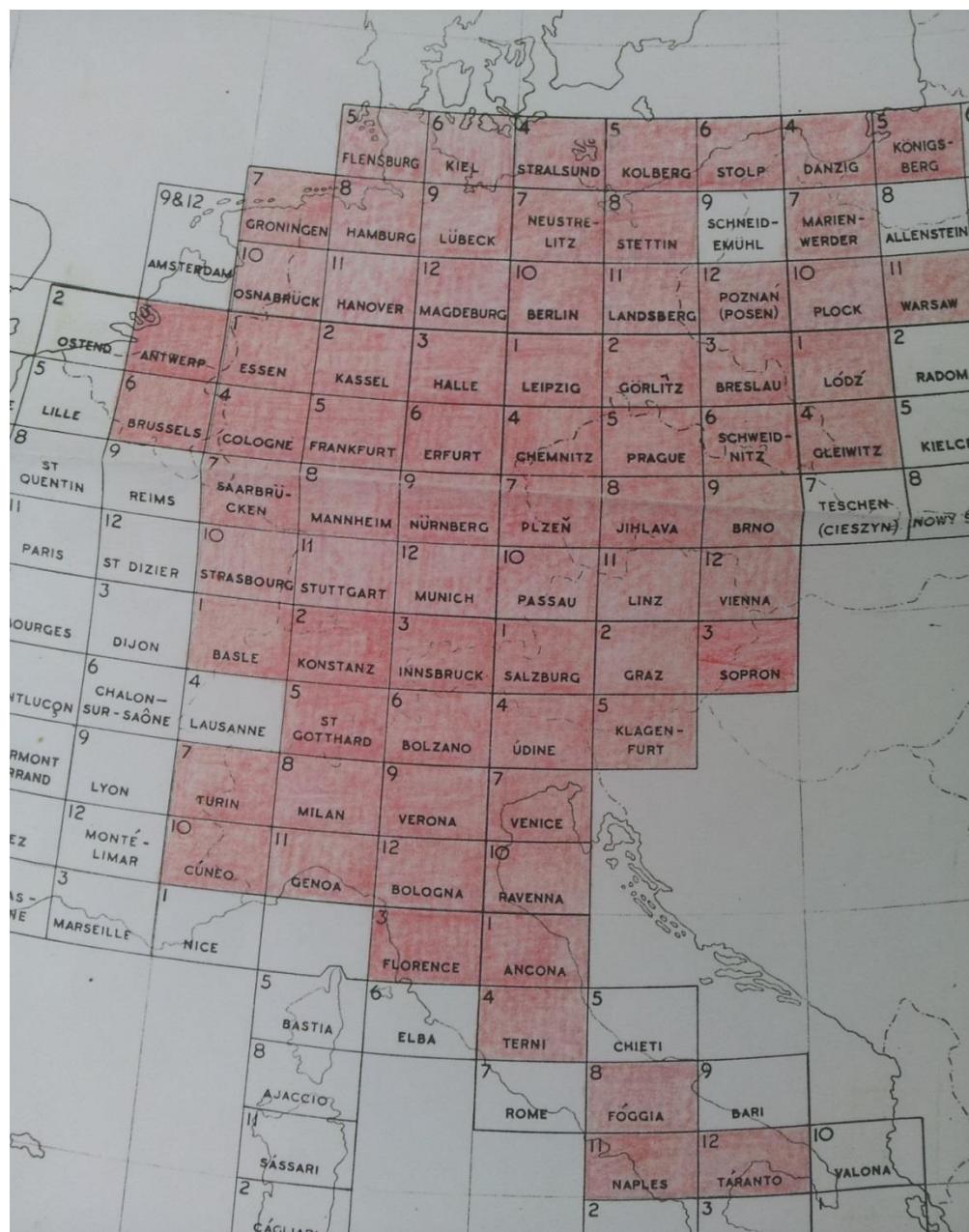
mid-1942. Despite the significant number of copies produced, relatively few extant sheets have been discovered. This may reflect the fact that many of the print runs were very small, 45 and 100 being common (refer to Appendix 3).

The sheets in this series were produced sometimes singly and sometimes in combination, although it has not proved possible to identify from the records the various combinations which were produced. They were produced on fabric or paper, the latter being variously described in the print record as 'RL', an acknowledged abbreviation for rag lithographic paper, 'thin BANK paper', ML (Mulberry Leaf) or MLS (Mulberry Leaf Substitute). One interesting group of a block of four of these sheets was produced under the code-word 'Dutch Girl'. They are centred on Arnhem and are of non-standard geographical extent, location and scale, being one inch to 6.56 miles or approximately 1:420,000; as a result they are referred to in the record as Sections 1,2,3,4.¹¹³ The details are shown at Appendix 3. The record shows that some 4,400 copies of these four sheets were produced in June 1942 and were described by Christopher Clayton Hutton in earlier correspondence with Victor Watson of the Waddington Company as 'a very, very urgent requirement'.¹¹⁴ The purpose of producing these sheets at that stage is not clear, although it might have related to the combined operations which took place at that time and are known to have involved

¹¹³ The D.Survey print record held in the British Library indicates that 4 sheets of Dutch Girl were produced as Sections 1,2,3,4.

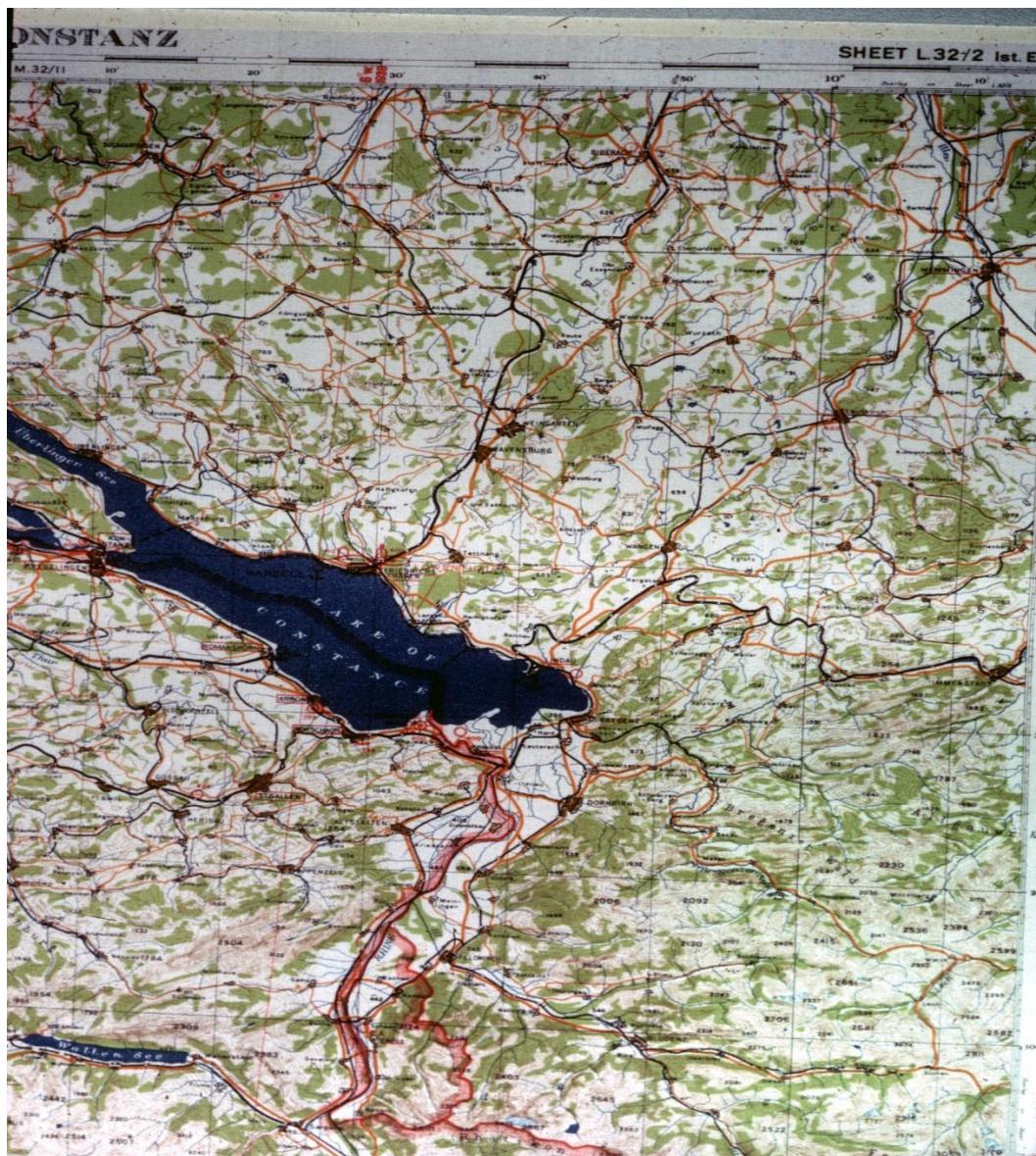
¹¹⁴ The correspondence file accompanying the Waddington Company deposit in the British Library Map Room is held under the reference Maps C.49e.55. This letter is at enclosure 77.

Illustration IV: cover diagram of GSGS 3982 [Fabric]



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Illustration V: GSGS 3982 [Fabric] 1:500,000 part of sheet L32/2 Konstanz



(Illustration provided by, and reproduced with the permission of, the owner.)

Section X of MI9 and SOE.¹¹⁵ In all probability, the subsequent printing of the same sheets, which took place in the period prior to August 1944, was in timely support of the Battle of Arnhem, otherwise referred to as Operation Market Garden, which took place in September 1944.

¹¹⁵ TNA: WO 208/3242, Section III/Section X, paragraph 3/Combined Operations. The joint working on combined operations is mentioned but no detail is offered.

Norway 1:100,000 Series GSGS 4090 [Fabric]

Once again MI9 must have acquired access to the reproduction material of yet another operational map series produced by D. Survey. Thirty-three sheets of this pre-war GSGS series of Norway at 1:100,000 scale were printed on silk apparently for escape and evasion purposes in 1942. The sheets are located in a block to the north of Oslo and adjacent to the Swedish border. Thirty-one sheets are monochrome, based on the 1940 state of the original GSGS 4090 sheets, and two sheets (26B and 26D) are printed in four colours (black, red, brown, blue) and are based on the 1942 revision of the GSGS 4090 sheets. The original lithographic paper maps were based directly on original native Norwegian maps, some of which dated back to the early years of the twentieth century. The original Norwegian maps were based on the Oslo meridian. The GSGS series maps, therefore, carry a conversion note to the effect that the Oslo meridian is 10° 43' 23" E of Greenwich.

It is believed that the purpose of this particular group of escape and evasion maps was specifically to help Allied airmen, who were shot down and bailed out, to evade capture and reach neutral Sweden. It is also known that crews flying damaged aircraft which they knew were unlikely to return home, were briefed to try, if they could, to put them down in southern Sweden.¹¹⁶ It is possible, therefore, that the maps were issued during pre-flight briefings only to those members of RAF crews destined to over-fly Norway or adjacent parts of Denmark and Germany. It is, however, also possible that the maps related to combined operations discussed by SOE and MI9's Section X, scheduled for summer and autumn 1942.¹¹⁷ Section X had only been established in January 1942, specifically responsible for planning escapes but also apparently for

¹¹⁶ TNA: WO 208/3307. This file contains reports from many evaders most of whom were RAF pilots. A number of them mention this briefing in their reports.

¹¹⁷ TNA WO 208/3242, Section III, p.76.

providing support for other intelligence-mounted operations. The operation mounted in Norway was described as ‘mysterious’ in SOE terms, referred to only by its code name (Grouse) and scheduled to take place sometime after the end of September 1942.¹¹⁸ It related to the heavy-water plant, the Norsk Hydro facility at Rjukan, on which SOE had mounted a huge intelligence-gathering operation as a precursor to blowing up the plant. It was known that this plant was producing heavy-water which the Germans were planning to use in the manufacture of atomic weapons: this was undoubtedly the reason that it was such a strategic sabotage target for SOE. It cannot be coincidence that the coverage provided by this group of silk maps included sheet E35 West, the Rjukan sheet, providing detailed coverage of the plant’s geographic location and adjacent area, a location which had been chosen by the Norwegians during their pre-war construction of the plant because of its isolation ‘between Vermok and Rjukan, in the precipice and glacier-bound wilderness of Hardanger Vidda’.¹¹⁹ Extant copies of all sheets have been located. A detailed list of those sheets in this series known to have been produced as escape and evasion maps on silk is at Appendix 4 and Illustration VI is sheet F31 West in this series, printed on silk.

[Series 43]

The use of standard operational mapping continued into 1943. This particular escape and evasion series had no title or individual sheet names. All sheets had the prefix 43 which, it is believed, refers to the year in which production commenced, namely 1943. The escape and evasion series has, therefore, been identified as [Series 43]. A detailed list of the sheets, which are all small scale (1:1,000,000) with some large scale insets is provided at Appendix 5. There are ten basic sheets, produced largely in combinations,

¹¹⁸ Marks, Leo. *Between Silk and Cyanide. A Code Maker’s War 1941-45*. The History Press. Stroud. 2013. p.40.

¹¹⁹ Marks. *Between Silk and Cyanide*, p.44.

Illustration VI: GSGS 4090 [Fabric] 1:100,000 sheet F31 West



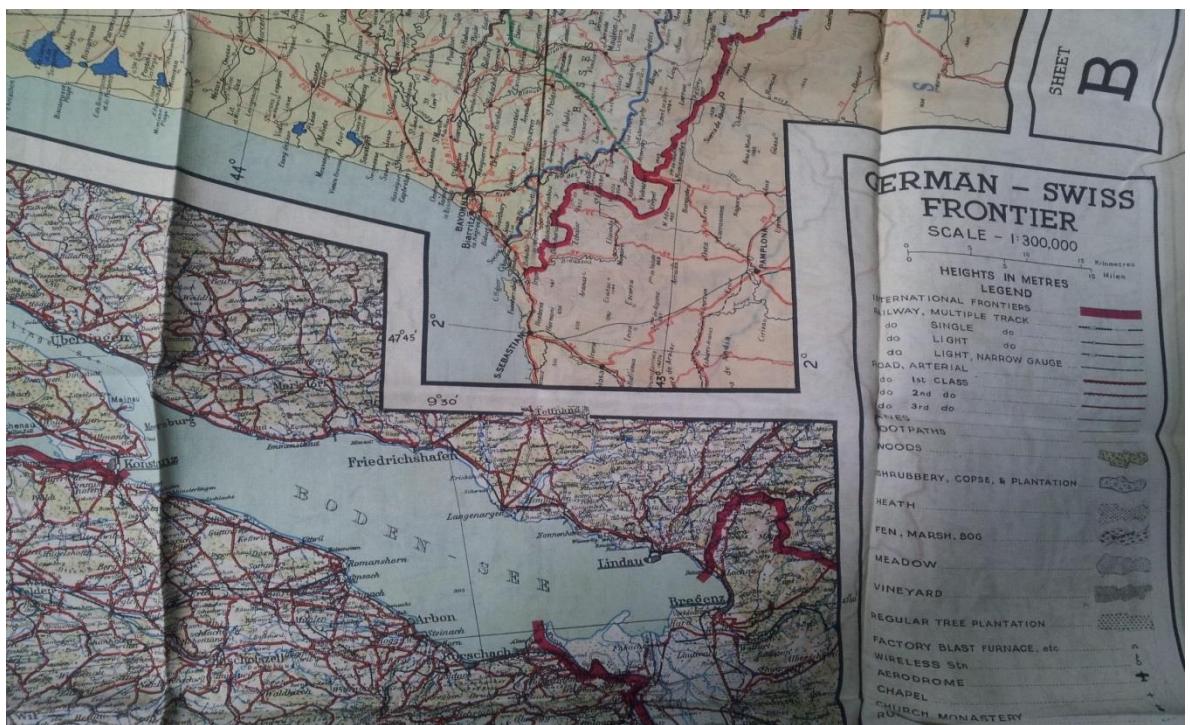
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with only one sheet apparently printed single-sided. The coverage extends from 12°E to 36°E (Portugal to Turkey) and from 36°N to 52°N (central Spain to Denmark).

It is notable that the records indicate that over one million copies of these sheets were produced. It is possible that, as with [Series 44], they were produced for operational use in the field as well as for escape and evasion purposes (see the following section on [Series 44] for details of the proposed operational use of E&E maps). Approximately 75% of the large print volume was of three particular combinations, namely 43A/B, 43C/D and 43KEast/West. The sheets specifically provide cover of Western Europe, including Denmark, Holland, Belgium, France, Spain, Portugal, Germany, Switzerland and northern Italy, and appear to have been printed in 1943 and 1944, prior to the D-Day landings. This comprehensive spatial coverage in itself adds strength to the theory that they were produced in such large numbers for operational reasons as well as for escape and evasion purposes.

The sheets are multi-coloured and are layered, demonstrating a high level of technical competence in printing so many colours on fabric and maintaining the colour register. They are all printed on man-made fibre (MMF): none appears to have been printed on silk. All are irregular in size and coverage, and appear to have been produced by panelling together sections of the International Map of the World (IMW) sheets which would again imply access to the reproduction material held by D. Survey. Extant copies of all sheets have been located. Illustration VII is an example of the series, showing also a larger scale inset of a cross-border area.

Illustration VII: [Series 43] 1:1,000,000 sheet B showing part of the large scale inset at 1:300,000 of the German-Swiss border



(Illustration provided by, and reproduced with the permission of, the owner.)

The IMW series had been originally proposed as a new world series by the German geographer, Albrecht Penck, in 1891, drawing together all the nationally held mapping of the colonial exploration by individual nation states during the 19th century into a collaborative international series to face the challenges of the new century and for the good of all humanity. The series had been progressed in its coverage significantly during World War I, largely through the combined efforts of the Royal Geographical Society (RGS) and the War Office. By the end of that war, some 90 IMW sheets had been produced by the cartographers of the RGS, providing coverage of the whole of Europe, the Middle East and North Africa.¹²⁰ It was this same series which provided the source of this escape and evasion series and were apparently also deemed reliable enough for operational use during the next war.

¹²⁰ Heffernan, Michael, 'The Politics of the Map in the Early Twentieth Century', *Cartography and Geographical Information Science*, Vol.29 No.3, 2002, pp.208-226.

[Series 44]

Identical to [Series 43] in terms of its specification was [Series 44]. Similarly, this escape and evasion series had no title or individual sheet names. All sheets had the prefix 44 which, it is believed, referred to the year of production, namely 1944. The escape and evasion series has, therefore, been identified as [Series 44]. A detailed list of the sheets, which are all small scale (1:1,000,000 or 1:1,250,000) and of the Far Eastern theatre of war, appears at Appendix 6. This makes them the only series of escape and evasion maps to provide coverage outside the European theatre of war and adjacent areas in Africa and the Middle East. Indeed, it is likely that the series was produced as an operational rather than an escape and evasion series. There is certainly evidence in the correspondence files of the time which seems to point to this being the intention. In a letter dated November 1944 to the Director of Military Survey, Lieutenant Colonel W.D.C.Wiggins, the Survey Division of Headquarters Strategic Allied Command (SAC) South East Asia (SEA) set out preliminary enquiries prior to making a formal request.¹²¹ They wanted reassurance that if they requested silk maps for use by assault troops operating in jungle and mangrove conditions, such could be provided in sufficient numbers. Wiggins replied on 15th November 1944 indicating that they would be better served by using US wet-strength paper or Rag Lithographic paper sprayed with cellulose varnish since these would be ‘durable, waterproof and oilproof’.¹²²

The series comprised 18 basic sheets, produced in nine set combinations providing coverage of most of Indonesia, the Malay peninsula, Thailand, Burma, French Indo-China, the south and east central provinces of China. Again, the sheets were all printed on man-made fibre (MMF): none appeared to have been printed on silk. The

¹²¹ WO File Svy2/6330 , enclosure 29A.

¹²² WO File Svy 2/6330, enclosure 29.

sheets were all irregular in size and coverage, and are known to have been produced by panelling together sections of the IMW (International Map of the World) sheets. Diagrams showing the panelling of the IMW sheets to construct sheets 44N and 44O in this series appear in the files.¹²³ Each sheet comprised sections of nine IMW sheets, which must have caused considerable production challenges. Extant copies of all sheets have been located.

[Series FGS]

This group of escape and evasion maps was also the smallest group. Five sheets have been identified in this series, produced as nine different combinations or single-sided. They are listed at Appendix 7 and are all small scale, either 1:1,000,000 or 1:1,250,000 scale, covering the area of northern Europe and Scandinavia from Denmark and northern Germany to the northern extent of the Scandinavian archipelago, and eastward to the Finnish/Russian border. The sheets were of irregular shape and disposition, and again appear to have been produced by panelling from the IMW sheets since they were identical in specification to [Series 43] and [Series 44] above. The significance of FGS in the sheet numbers has not been identified, unless it was Finland, Germany, Scandinavia. Extant copies of all sheets have been located.

Miscellaneous maps

The penultimate group was a collection of miscellaneous maps produced by MI9 apparently as briefing or reference maps. They were all small scale and often based on existing maps produced for briefing and reference purposes by the Assistant Directorate of Intelligence (Logistics) since some of them carried the ADI(L) map reference. They are listed in detail at Appendix 8. Some of the maps carry similar sheet numbers to

¹²³ WO File Svy 2/6330, un-numbered enclosures.

those described in a previous paragraph and listed at Appendix 1, for example 9J3 and J3, yet another example of the confusion in MI9's cartographic procedures.

MI9 Bulletin maps

A small group of maps was produced for inclusion in the MI9 Bulletin: these are shown at Appendix 9.¹²⁴ In some cases evidence has been found that the maps were produced also on fabric for escape and evasion purposes. In other cases no copies on fabric have been identified. In at least one case, a map carries the same sheet number as an item in Appendix 1, namely A2, but is clearly a quite different map. This appears to be yet another example of confusion in MI9's identification of their maps.

The production of the maps

It is clear that, certainly in the early part of the War, MI9 had little, if anything, to do with MI4 and the military map-makers of the time, specifically D. Survey which was the military mapping organisation responsible for the production of all operational mapping for both the Army and the Royal Air Force. Indeed, responsibility for the escape and evasion map production only passed to D. Survey, at that time located in Bushey Park, Middlesex, on 10th August 1944.

The pre-war removal of MI4 from London and its re-location in Cheltenham had caused increasing difficulties and concerns, since they were separated from the Operations, Intelligence and Planning Staffs at the War Office in Whitehall and also from the Air Ministry Map Section located at Harrow. Recognition of the need for daily contact with the General Staff in Whitehall and the need for bigger and better accommodation than was available at Cheltenham prompted the decision to move back to London, despite the possible disruption of operational mapping work at a critical

¹²⁴ TNA: WO 208/3268 is a record copy, No.703, of the MI9 Bulletin.

stage in the war. MI4 had been re-designated Geographical Section General Staff (GSGS) and was moved to Eastcote in outer London and to the nearby factory site at Hanwell where the building was known as ‘Hygrade’. At the same time the cross service importance of GSGS was recognised and it was upgraded from Branch to Directorate level with the creation of the Directorate of Military Survey under Brigadier Martin Hotine. It was doubtless this move back to London which allowed MI9 greater access to existing operational mapping and to the production of escape and evasion maps based on existing GSGS series such as GSGS 3982.¹²⁵

Prior to August 1944, the MI9 War Diaries indicate that production was managed on MI9’s behalf by the Ministry of Supply working closely with commercial companies. As already noted, the company which appears to have played a significant part in the production was the John Waddington Company Limited, Dewsbury Road, Leeds, Yorkshire. Certainly, the remaining post-war stock of the maps, when located in a D. Survey map depot over thirty years later, was found to be interleaved with the printed card from Waddington games.¹²⁶ Whilst the published history of the Company made only passing mention of the important, covert, war-time role they played, the correspondence files of the time illustrated the almost daily contact which took place between Norman Watson, the Managing Director and E. D. Alston of Section CT6(c) in the Ministry of Supply located in Room 307 at 4 South Parade, Leeds 1, the acknowledged intermediary with the War Office section responsible for the requirement, i.e. MI9.¹²⁷ There was certainly some direct, but very limited, contact between the Waddington Company and MI9, the large proportion of the contact being

¹²⁵ Clough, *Maps and Survey*, p.6. Clough does not provide the date of the move back to London, although he implies it took place mid-late 1942.

¹²⁶ 8 Map and Air Chart Depot (8MACD) was the chief distribution point for operational mapping and air charting to the Army and the Royal Air Force.

¹²⁷ Watson, Victor. *The Waddingtons Story*. Northern Heritage Publications. 2008, p.34.

with Alston as the intermediary. Whilst one recognises the security aspect of this separation and the need to keep the programme and its purpose a tightly controlled secret, there is no doubt that the lack of direct contact, compounded by the lack of cartographic awareness by all the parties involved, created its own additional, and arguably unnecessary, challenges.

Waddington was apparently chosen as the company had already proved its ability to print on silk. The Company was founded in Leeds in 1905; it specialised in theatrical printing and later established a printing outlier in London. Their expertise eventually led to them being invited to produce the programmes for the Royal Gala (later Command) performance on silk for members of the Royal Family during the 1930s.¹²⁸ Christopher J. L. Bowes was the Finance Director of the company until his retirement on health grounds in 1985. By the time he was depositing, in national record repositories and collections, maps and correspondence files left after the company had been sold in 1999, he was describing himself as the company archivist. In the deposit he made to the British Library Map Library, his covering letter, dated 27th August 1999, posed the question about the company's wartime involvement with MI9: Why Waddingtons?¹²⁹ He went on to offer the following commentary that initially the company had not been 'very good' at printing the maps on silk and they had had to develop new techniques, adding that it might have been preferable for the work to have gone to commercial map publishers such as Bartholomew, Philips or even the Ordnance Survey who he suspected would have been better placed to do the experimenting. The point was well made. There is considerable difference between the printing in which Waddington was involved, i.e. board games, posters, programmes, etc., and that of

¹²⁸ The historical detail was provided by Christopher Bowes in his letter dated 27th August 1999 to the British Library covering the deposit of parts of the Waddington Company Archive.

¹²⁹ Folder of correspondence held under British Library reference Maps C.49e. 55.

printing maps, even if they were afforded access to the original reproduction material of the maps. The challenge would have been exacerbated by the fact that the requirement was for the maps to be printed on silk. Bowes conjectured that there was some ‘hidden politics’ involved. He may, of course, have been right, but it is also worth making the point that the character and approach of Christopher Clayton Hutton should also be considered. There is no doubt that Hutton was convinced, wrongly, that his idea of maps on silk was original and unique. He also appears to be a man left very much to his own devices and not used to taking advice or guidance from anyone. He is variously described by his contemporaries as ‘eccentric’, ‘genius’ and by Foot and Langley as ‘wayward and original’.¹³⁰ It is clear that he was certainly single-minded in his approach, cartographically ignorant and convinced that, because he knew and understood the objective of the exercise, he was correct in the approach he adopted. This point has to some extent been made in the previous chapter and will be considered again when the success of the programme is assessed in the Conclusion.

The first recorded orders for the printing of the maps by Waddington are dated 6th January 1942.¹³¹ The following month the company purchased four sewing machines in order to machine-sew the edges of the silk maps.¹³² However, Bowes mentioned that Hutton produced a booklet on 14th February 1942 in which he stated that, by that date, 209,000 maps had been distributed to units of all three Services, comprising 56 different maps on single-sided and double-sided silk or paper. Bowes regarded this as a rather odd statistic which could only be explained if, prior to that time, either other companies were involved in the printing or orders had been placed verbally with Waddington. There is, however, ample evidence that MI9, through Alston in the Ministry of Supply, was in regular contact with the company certainly

¹³⁰ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, p.37.

¹³¹ British Library Maps C.49e.55, Volume 1, enclosure 25.

¹³² British Library Maps C.49e.55, Volume 1, enclosure 28.

from May 1941, and very possibly prior to that, and that considerable experimentation was taking place. On 12th May 1941 Alston wrote to Victor Watson commenting that the inks being used were apparently too old and ‘did not work’.¹³³ On 29th May he wrote again asking for the silk ‘to be mounted’ for printing. Any fabric on which an image was to be printed needed to be held taut during the printing process to prevent movement and the possibility of a resulting blurred image. Certainly the usual method of printing on silk and the one utilised by the Macclesfield textile companies was to stretch the silk across a wooden frame.¹³⁴

By September of that year there is evidence that Waddington was involved in secreting maps inside board games during the manufacturing process. This aspect of MI9’s work is addressed in detail in Chapter 3. There is no doubt that the company was involved in printing the maps as well as hiding them inside board games in preparation for despatch to the prisoner of war camps. There are many examples in the file of Watson quoting map production costs to Alston and indicating that, for a range of reasons, the costs involved were up to 75% above their usual production costs. On 6th January 1942, for example, he quoted for the cost of the ‘completed reproduction of Double Eagle, progressing with Emerald, costs for necessary photographic work, in preparing original, cutting material to size, preparing for lithographing (*sic*), hemming on all four edges, backing sheets for mounting the fabric’.¹³⁵ There is evidence also that the Kodak company was involved in the production of the plates, although no detail was offered.¹³⁶ There are numerous items of correspondence between the two individuals detailing the number of copies required and the titles or sheet numbers of the items but, at no stage are they described as maps: they are rather referred to as posters or pictures.

¹³³ British Library Maps C.49e. 55, Volume 1, enclosure 17.

¹³⁴ Information taken from the note accompanying an exhibit in the Macclesfield Silk Museum which demonstrated how this was accomplished.

¹³⁵ British Library Maps C.49e. 55, Volume 1, enclosure 26.

¹³⁶ British Library Maps C.49e. 55, Volume 1, enclosures 23 and 24.

However, in all cases the sheet numbers and titles can be identified as items in the MI9 escape and evasion map production programme. A comprehensive three-page list of sheets in GSGS 3982 was produced around mid-February 1942.¹³⁷ A list of nine maps produced on 26th February 1942 is also identifiable as having the form of sheet numbers which allowed them to be identified as Bartholomew based maps, for example Caspian Sea T2/T4 and Kenya Q.¹³⁸ Apparently the maps were often despatched by rail to London Kings Cross Station addressed to Major C. C. Hutton and marked ‘to be called for’.¹³⁹

Sourcing of silk and paper

Henry Town of Allied Paper Merchants, located at 81 Albion Street in Leeds, was involved in experiments trying to increase the strength of the paper being used without increasing its thickness. At the same time the Ministry of Supply was tasking Waddington to carry out trials on Bemberg yarn (rayon), a man-made replacement fabric for silk and often referred to as Bemberg silk.¹⁴⁰ The sourcing of silk was a continuing issue for the Ministry of Supply, their priority always being parachute manufacture rather than map production, and it is clear that there was a continuing search for a suitable fabric to replace silk. It is also clear that academics were involved in various trials, a certain Professor Briscoe being mentioned by Alston in the Ministry of Supply in a letter he wrote to Watson on 7th April 1943, commenting on the ‘Collodio – Albumen process.’¹⁴¹ It is likely that the academics were based at the nearby University of Leeds which has long had a highly renowned textiles faculty.

¹³⁷ British Library Maps C.49e. 55, Volume 1, enclosures 41, 42 and 43.

¹³⁸ British Library Maps C.49e. 55, Volume 1, enclosure 61.

¹³⁹ British Library Maps C.49e. 55, Volume 1, enclosure 77.

¹⁴⁰ British Library Maps C.49e.55, Volume 1, enclosure 65, letter dated 5 March 1942 from Alston to Watson.

¹⁴¹ The process was used in the preparation of photographic plates for printing. The letter was found in British Library Maps C.49e.55, Volume 2.

Experiments were carried out, authorised by the Ministry of Supply, in printing methods and also into the use of different printing inks, the latter involving chemists from ICI visiting the Waddington factory in Leeds in June 1942.

The sourcing of silk supplies became a real issue for the Ministry of Supply relatively early on in the War. Supplies from the Far East (especially Japan), not unexpectedly, dried up and HMG had to turn to their contacts in the English silk industry based in Macclesfield for help in securing alternative sources. The leading Macclesfield silk manufacturing companies had had the presence of mind to stockpile raw silk from Japan prior to the outbreak of hostilities in the Far East but this supply was soon under considerable pressure from the Ministry of Supply who needed it for parachute production. Nylon had only just been developed (in the USA), it was not yet available in the UK, at least in the quantities required. All the standard supply sources for silk, China, Japan, Italy and France, were in enemy hands. It was necessary to identify alternative sources as a matter of urgency. That task fell to Peter William Gaddum. Born in 1902 and educated at Rugby School, he worked for the family firm of H. T. Gaddum from 1923. He was aged 36 at the outbreak of war and already serving in the Army. He was allowed to leave the Army and became Chief Assistant in the Ministry of Supply, responsible for the supply and control of silk and rayon which he proceeded to source from the Near and Middle East. He flew to Cairo and made his first purchase in December 1941. From there he travelled to Beirut in Lebanon where he remained based until January 1944. Silk cocoons were available in Turkey, Iran and Lebanon, although much of the reeling of the silk took place in Lebanon. In the two years he remained in the Middle East, Gaddum travelled widely to ensure a secure supply of the silk needed at home for the war effort, always ensuring that he obtained the highest possible grade of silk. During the period, he visited Baghdad, Tehran, Cairo, Karachi, Delhi, Calcutta and Mysore at various times and took only one-month

of home leave in the entire period. Whilst still relatively young, he did not enjoy good health, being plagued by sciatica.¹⁴² Eric Whiston, the son of another famous Macclesfield silk manufacturing family, was sent out to Lebanon to assist Gaddum, who eventually returned home in December 1944. Whiston moved to Rome in December 1944 and was based with the Allied Command. He was subsequently charged to wind up the Middle East establishment and released from his war duties on 27th December 1945 by H.O. Hambleton who went under the impressive title of The Controller, Silk and Rayon Control, in the Ministry of Supply, based in the Memorial Hall, Queen Victoria Street, Macclesfield.¹⁴³ Whiston immediately journeyed to the Far East, presumably to ascertain the situation there with regard to silk supply for the Macclesfield manufacturers, as life at home returned to a more normal routine.

Whilst there is no evidence that any of the escape and evasion maps were actually printed in Macclesfield, there is evidence that the Macclesfield silk manufacturers were involved in the finishing of the maps, i.e. hemming and folding.¹⁴⁴ The Board Minutes of the company Brocklehurst Whiston Amalgamated (BWA) for 11th July 1940 indicated that they had received an approach from Messrs Johnson & Company Ltd of Great Yarmouth asking for help in looking for premises suitable for making-up purposes since they ‘were under orders from the Ministry of Supply to evacuate their present premises’, presumably to avoid the Luftwaffe bombing raids over

¹⁴² Gaddum, Anthony H. *Gaddums Revisited*. Amadeus Press. Cleckheaton. 2005. The book tells the history of the Gaddum Company. Details of Peter Gaddum’s wartime role are found at pp.224-231.

¹⁴³ I am indebted to Thelma Whiston for providing a copy of the letter from the private papers of the Whiston family.

¹⁴⁴ Dr P.A. Sykas, Research Associate at Manchester Metropolitan University, has been kind enough to share with me some of the results of his research through the Macclesfield print works’ archives which confirm my findings of there being no evidence to indicate that silk maps were ever printed in Macclesfield.

East Anglia.¹⁴⁵ It is clear that BWA did identify premises in nearby Congleton which representatives from the Johnson Company found suitable but no-one could persuade HM Office of Works, who had requisitioned the premises, to release them. It should be noted that the Johnson Company was regularly used at that time by D. Survey to print standard operational mapping, so it could be that they were also involved in printing the escape and evasion maps, although no confirmatory evidence has been discovered.

In addition to the continuing search for silk, it is clear that MI9 and its agent, the Ministry of Supply, was always looking for acceptable silk substitutes, since the priority for dwindling silk supplies was always parachute production. Whilst they certainly made good use of American rayon technology, a man-made substitute for silk, once the USA had joined the Allies, they also utilised mulberry leaf pulp which could be manufactured into an extremely thin and near-noiseless paper which is variously referred to in the records as ‘ML’ (Mulberry Leaf) or more usually as ‘tissue’ or simply ‘paper’. The pulp had been discovered by the Royal Navy on a Japanese ship immediately prior to Japan entering the war. It proved to be a timely and valuable cargo which the ship’s Captain was persuaded to give up.¹⁴⁶

Conclusion

The sheer numbers of maps produced in the escape and evasion map production programme bear testimony to the organisational drive in MI9 to ensure that the programme progressed, albeit apparently against all the odds. An evaluation of the size and scope of this aspect of Britain’s war effort has, until now, not been undertaken. This research has revealed its extraordinary extent and thereby highlighted its very real significance in the overall history of both military map-making and World War II. The

¹⁴⁵ Brocklehurst Whiston Amalgamated, Board Minute Book 2, 1935 – 1947, L6255 2008/84 Z3243, p.330.

¹⁴⁶ Connell. *The Hidden Catch*, p.33.

lack of D. Survey (formerly MI4)'s involvement until much later in the war produced unnecessary challenges. It did not, however, appear to prevent MI9 progressing production: they simply carved their own path, although arguably at greater effort and cost. The maps were produced in very substantial numbers. It also becomes clear that at least some aspects of the map production programme progressed from the original idea of escape and evasion to embrace both the intelligence aspects of the war and also the operational aspects. Whatever the tangential purposes, in terms of escape and evasion there remained for MI9 the not insignificant challenge of ensuring that the maps reached the prisoners of war in sufficient numbers and in a timely and appropriate fashion to ensure that they were of use, hopefully to facilitate successful escapes. This aspect will be addressed in detail in Chapter 3.

Chapter 3

Escape Aids and Communication with the Camps

All my life, magicians, illusionists, escapologists in particular, have fascinated me. I expect it goes back to the night I tried to outwit Houdini.
(Christopher Clayton Hutton).¹⁴⁷

The previous chapter set out the nature of the map production programme. The extent of that programme, in terms of both variety and volume, is made clear in the individual map series inventories shown at Appendices 1-9. It is now appropriate to examine in detail the very significant challenge of ensuring that prisoners of war, who were planning to escape, received the various escape aids and gadgetry which MI9 had contrived to have produced, not the least of which were the maps themselves. After considering the British tradition and propensity for smuggling, and the national fascination with games and magic, the chapter explores the escape training afforded to Intelligence Officers, the concealment of escape aids in games and leisure equipment sent to prisoners, items secreted in books and records, and in Christmas crackers and pencils. Thereafter, the means used to copy maps in the camps and the importance of conveying compasses to potential escapers are considered. The development of emergency ration packs, purses of currency with maps and the modes of delivery of the escape aids, in their apparently harmless host packages, into the camps are reviewed. Finally, the level of organisation and planning of escapes in the camps is considered. Essentially the chapter seeks to demonstrate how MI9 was able to ensure that the escape aids, and especially the escape and evasion maps, were conveyed to the camps and contributed to the planning and execution of successful escapes.

Hutton needed to devise a fool-proof system to deliver the escape aids to recipients imprisoned in the camps and later confessed that he spent many sleepless

¹⁴⁷ Hutton. *Official Secret*, p.9.

nights wrestling with this challenge.¹⁴⁸ MI9 was acutely aware that most of the many thousands of men taken prisoner at Dunkirk had little or nothing by way of escape aids and devices and yet each of them was a potential escaper. They reasoned that getting the aids through in small numbers was not what was required; they needed to devise methods which would allow a steady flow of thousands of aids and devices. This was precisely what they attempted to do and it was here that the staff of MI9 were able, once again, to demonstrate their considerable ingenuity, resourcefulness and creativity.

The art of smuggling and a fascination with magic

Officers working within MI9 needed to devise methods by which the maps and other escape aids could be smuggled into the camps without being detected and it is fascinating to discover the extent to which Hutton and his colleagues resorted to the basic tenets of smuggling which, over the centuries, British smugglers had arguably developed into an art form. With a coastline of some 15,000 kilometres in length, the United Kingdom's borders are impossible to patrol in their entirety and, particularly in earlier times, determined groups have exhibited ingenious expertise in outsmarting the customs' authorities. There is a considerable history of contraband being smuggled into the country through hollowed out containers, seemingly of standard construction when viewed externally, or concealed beneath the false bottoms of seemingly standard containers.¹⁴⁹ The significant characteristic of items designed to carry contraband goods

¹⁴⁸ Hutton. *Official Secret*, p.74.

¹⁴⁹ *The Strand Magazine*. No.10, October 1891, pp.417-425. *Strand Magazine* was a monthly publication founded by George Newnes in 1891. It was probably the most popular of the Victorian illustrated periodicals: it had a regular circulation, enjoying a strong demand at the height of its popularity of over 400,000 copies a month, continuing for many years until its eventual demise in 1950. The magazine contained a mixture of serialised stories for adults, general interest non-fiction, and material for children. Much well-known fiction was first serialised in this publication, most notably Arthur Conan Doyle's short stories featuring Sherlock Holmes. It is also the magazine in which smugglers' devices and contraband merchandise were discussed and which Hutton and his contemporaries would have known since childhood.

was hollowness and it was a lesson which Hutton quickly incorporated into his plans. What MI9 embarked on in 1940 was thus essentially a programme of large scale smuggling to ensure that the maps and other escape aids which they had caused to be produced would successfully reach the prisoners of war and thereby ensure that their planned escapes had the greatest possible chance of success.

Hutton confessed to his own childhood fascination with magic and the illusionary escapology tricks as practised by Harry Houdini, and the extent to which he had personally been involved in such an experience with Houdini, described previously in Chapter 1.¹⁵⁰ In his personal reflections, Hutton provided a remarkable insight into his penchant for devising means to deceive the enemy. Few men could have proved better suited to the task. It was against this backdrop of his own fascination with smuggling and magic, that the programme to smuggle escape aids into the camps began to take shape.

Role of the Training School at Highgate and the MI9 Bulletin

It was part of the training which Intelligence Officers received at IS9, the training school in Highgate, that they were briefed on the types of escape aids which MI9 devised. A key tool of the training offered at the School was the Bulletin. This was an extremely detailed volume compiled by MI9, and was essentially a textbook, designed for use by Intelligence Officers when instructing others and was likely regarded as the escapers' handbook. It was produced as an A5 size, loose-leaf manual for ease of updating through the regular issue of amendments issued in numerical sequence and each carrying the month and year of issue. The overall security classification of the Bulletin was MOST SECRET. The first entry was a short, true story about Winston Churchill's experience of escaping in the Boer War and leaving behind his escape aids

¹⁵⁰ Hutton. *Official Secret*, pp.9-12.

when he dropped over the wall: the moral of the story was emphasised ‘ALWAYS CARRY YOUR ESCAPE AIDS WITH YOU’. The Bulletin comprised 23 chapters in all, with the first seven chapters covering such topics as security, escape and evasion, escape aids, international law, interrogation by the enemy, field-craft, and travel through Europe by rail. The subsequent chapters, each dedicated to a particular country or geographical region, provided a detailed description of the circumstances in each, recommended routes for escapes and detailed supporting maps. There were tips on successful escape ruses, physical appearance (how to blend in) and recommended behaviour.¹⁵¹

It was in Chapter 2 of the Bulletin that all the various aids to escape were listed and described in detail, but it was in the individual country chapters where copies of the maps produced to support particular, recommended escape routes, were to be found. It was in Chapter 15/Germany where Maps Nos. 4 and 5, Schaffhausen Salient (East) and (West), numbered A1 and A2 respectively, were to be found. These maps are described in detail in Chapter 2 and Appendix 9, and their significance is further commented upon in Chapter 5. The maps were accompanied by ground photographs of the border area showing detailed views of topographic features (streams and paths) and landmark features (telegraph posts). These photographs may well have been those taken by Johnny Evans during his pre-war reconnaissance of his own successful escape route in World War I. It was also in Chapter 15 of the Bulletin that a set of large scale plans of the Baltic ports was to be found. These were detailed plans of Danzig/Plan No.1 marked A3, Gdynia/Plan No. 2 marked A10, Stettin/Plan No.3 marked A11 and Lübeck/Plan No.4 with no additional sheet number marked. None of the Baltic port plans was marked with a security classification. This absence of any security marking

¹⁵¹ TNA: WO 208/3268 is a record copy, No.703, of the MI9 Bulletin. The copy is the latest state of play, having incorporated the amendments as issued. It does not, therefore, provide a running history of the Bulletin as it evolved.

was notably unlike the 2 small scale maps of Norway Military Zones marked Map B covering southern Norway, and Northern Norway marked Map C, both dated March 1943, which were both classified SECRET. Details of all these maps can be found at Appendix 9 and the significance of the Baltic port plans is considered in Chapter 6.

Apparently operational aircrews were only allowed direct access to the Bulletin under the supervision of their Commanding Officer or the RAF Station's Intelligence Officer. They were not, however, under any circumstances allowed to make notes or copy items in the Bulletin: everything had to be memorised. In the case of the maps, this must have been particularly challenging, not least since those being briefed had absolutely no idea of where they might find themselves in the event of capture. Notwithstanding the restrictions placed on its access and use, there is no doubt that the Bulletin contained the very best information and advice on escape and evasion known to MI9. By autumn 1942, it was being updated by the issue of regular monthly amendments which also included intelligence information gleaned from the reports of the debriefing interviews to which all successful escapers were subjected.¹⁵²

The Bulletin was indeed a veritable bible of escape and evasion, and contained everything that could be of assistance to Service personnel who found themselves cut off in enemy occupied territory or captured by the enemy. It was devised as a textbook for all who were called on to give instruction on escape and evasion and its contents could change regularly and radically in the light of new information received from the field.¹⁵³

¹⁵² TNA: WO 208/3242, p.77.

¹⁵³ TNA: WO 208/3242, p.12.

The use of board games, sports equipment and other leisure items

The maps were smuggled into the camps hidden inside all sorts of items such as games boards (Monopoly, Ludo, Snakes & Ladders, draughts), dart boards, cribbage, backgammon and chess sets, pencils, gramophone records, sports equipment such as table tennis sets and squash rackets.¹⁵⁴ It has been suggested that cricket bats and balls were also sent into the camps, although no proof has so far been discovered that these also conveyed escape aids. Certainly there exist some family history stories that companies such as Spalding were manufacturing cricket bats with hidden compartments inside which maps could be secreted.¹⁵⁵ John Worsley was a war artist who had been captured and sent to the Marlag and Milag Nord camp constructed by the Germans south west of Sandbostel, some 40 kilometres north east of Bremen. One of his surviving water-colours depicts a cricket match in full flow. Whilst it is difficult to make out the bat at all clearly, the stumps and wicket keeper, complete with pads, are very clear, providing evidence that cricket equipment was clearly sent to the prisoners of war. Indeed, there are also mentions of cricket matches in some of the wartime reminiscences.¹⁵⁶ There is, however, no indication in the extant records that the Spalding Company was ever involved in covert activity with MI9.¹⁵⁷

Hutton tackled this very challenging part of his task with apparent alacrity. The first company which he turned to was the Waddington Company of Wakefield Road, Leeds. He was already in regular contact with the company, through the Ministry of

¹⁵⁴ TNA: AIR 20/6805, enclosure 9, p.5.

¹⁵⁵ Donald Purr was the Export Sales Manager for A.G.Spalding & Bros during World War II. His son recalls that, as a young child, he was told by his father that Spaldings had manufactured cricket bats with silk maps hidden in the handles and compasses in the top of the handles and these had been sent to prisoners of war.

¹⁵⁶ James. *Escaper's Progress. The Remarkable POW Experiences of a Royal Naval Officer*, p.29.

¹⁵⁷ A list of the manufacturers involved in helping to produce escape aids for MI9 appears at enclosure 4 (originally 8A) of TNA: AIR 20/6805. It was produced after the war by Sqd. Ld. J. Whitehead (Ret) who had worked for MI9. The list does not include the Spalding Company.

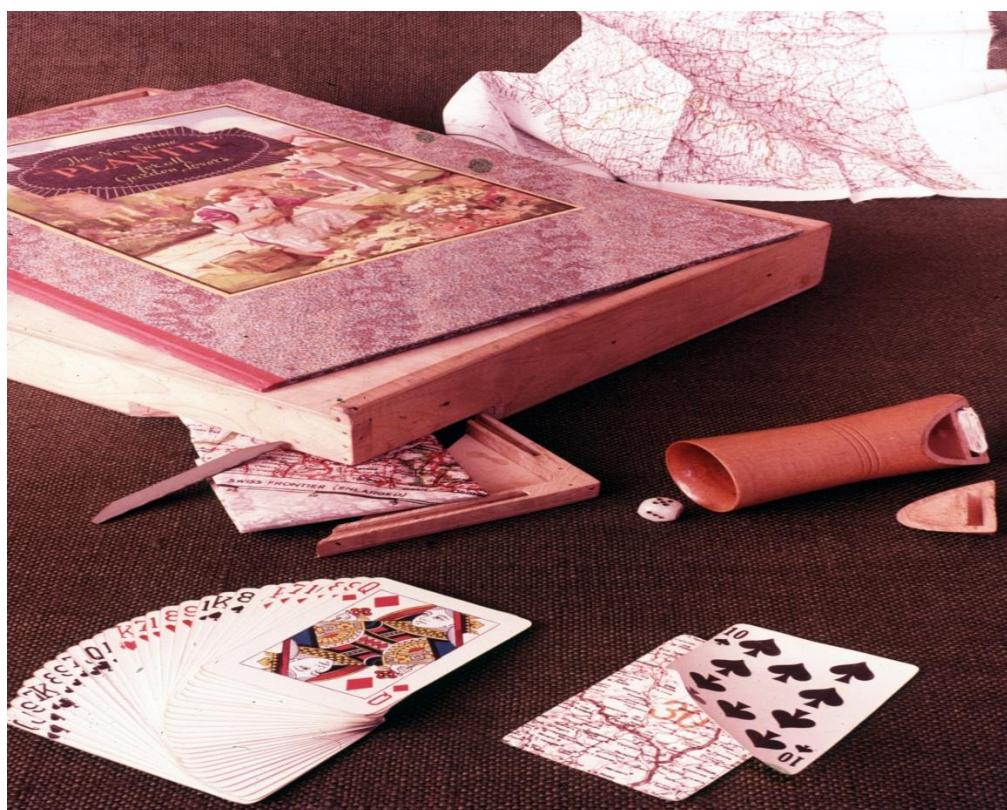
Supply, having established that they were rare, if not unique, in the commercial sector in being able to print on silk. Since they were already printing maps on silk for MI9, it was but one further step to ascertain the extent to which they could help MI9 in the manufacture of the means to despatch the maps into the camps. The fact that they were the principal agent in the UK to manufacture and distribute the English version of the popular US board game Monopoly was an undoubted gift to MI9. Monopoly boards began to be manufactured with escape maps hidden inside them. Those containing maps of Italy had a full stop after Marylebone Station and those containing maps of Norway, Sweden and Germany had a full stop after Mayfair.¹⁵⁸ Additionally, boards were also produced containing maps of northern France, Germany and associated sections of the frontier: MI9 again insisted they carry some distinguishing mark and, in this case, it was a full stop after Free Parking. The practice ensured that there was a ready means of differentiating which boards carried particular maps and this system of coding also ensured that the appropriate games were sent to prisoners of war in the appropriate geographical area. Currency was, of course, also needed by those planning to escape and the Monopoly money provided an ideal hiding place for local currency. Waddington was also sent in March 1941 a selection of small metal instruments and asked if they could consider how best to secrete these in the Monopoly sets. Such instruments comprised saws and compasses.

When Christopher C.L.Bowes, the Waddington company archivist, came to deposit a notable number of escape and evasion maps into the British Library collection in 1999, he wrote that one of the ways of smuggling maps to prisoners was to enclose them in a pack of cards.

¹⁵⁸ Letter dated 26th March 1941 from Victor Watson to Christopher Clayton Hutton, held as enclosure 3 of Volume 1, under British Library reference Maps C49e55, which forms part of a cache of Waddington's wartime correspondence which Christopher Bowles, the Company's archivist, donated to the British Library in 1999.

The map would be made from a material impervious to water and sandwiched between the back and the pip side of the cards by water soluble glue. When dropped into a bucket of water the cards could come into three parts: front, back and the map. Each segment of map was serially numbered (in orange on the cards that I have seen) and overlapped the next segment on all sides by about $\frac{1}{4}$ inch. Each pack contained one map in 48 segments. The four aces contained a small scale map of Europe and the Joker held the key or map legend. To make up such a pack must have been fiendishly difficult because of the overlaps. There are one or two specimens in the RAF Museum at Hendon (I think, though it might be Duxford).¹⁵⁹ (see Illustration VIII)

Illustration VIII: games box and playing cards



On 11th May 1942 a letter was passed to the company from the Ministry of Supply with an order for 224 packs of playing cards, 24 packs of which were to be Prize Packs ‘on the formula we discussed’: this appears to relate to the type of packs described by Bowes.¹⁶⁰ It is clear from ensuing correspondence that a considerable

¹⁵⁹ British Library reference Maps C49e55.

¹⁶⁰ British Library reference Maps C49e55, Volume 1, enclosure 105.

increase in the cost of manufacturing such playing cards resulted, not least because of the need to ensure adequate overlaps between the cards. The overlaps were deemed necessary to ensure the total map was covered and that no portion would be missing. Such increased cost was later queried as being ‘rather high’ and the statement was made that the requirement was deemed ‘not of sufficient importance to warrant expenditure’.¹⁶¹ This was a rare, possibly unique, indication that MI9 was alert to the costs of its endeavours. The cards which were produced were packed into individual packs and also packed in bridge sets.

The *Per Ardua Libertas* volume was produced by Hutton in February 1942. It was a detailed photographic review of the range of work for which MI9 had been responsible during the first two years of its existence. The volume was bound in red leather and was clearly a high quality presentation piece, possibly seeking to influence their sister organisation in the USA, MIS-X, the Americans having declared war on the Axis powers on 11th December 1941.¹⁶² The volume showed a photographic record of the way in which the playing cards were produced. It also contained photographs of various sizes of chess sets and confirms that maps were hidden inside them during manufacture. Norman Watson of Waddington was able to provide Alston, his principal contact in the Ministry of Supply and intermediary with MI9, with details of three companies in London which marketed pocket chess sets, indicating that they were probably agents rather than actual manufacturers. The companies were Thomas Salter,

¹⁶¹ British Library reference Maps C49e55 Volume 1, enclosure 120.

¹⁶² Extant copies of the volume exist but are extremely rare. One such copy was sold in Bonhams Sale Room in London in January 2013. It appeared to have emanated from the records of the Sun Printing Company. A further copy is housed in the Intelligence Corps Museum under their accession number 1024: this was a bequest from the estate of Desmond Tuck, a member of the Tuck greeting card family, who had worked for MI9.

Illustration IX: artwork of a chess set



(Reproduced with the permission of the RAF Museum, Hendon.)

Baileys and E. Lehman & Co.¹⁶³ There is also separate confirmatory evidence, in the form of the original artwork held in the RAF Museum, that chess sets were produced with secret compartments inside the boards, within which maps could be hidden (see Illustration IX).

¹⁶³ British Library reference Maps C49e55, Volume 1, enclosure 216 .

Books and records

During the course of the war, Hutton needed continuously to generate new and ingenious ideas for hiding the maps and other aids, not least because the German camp guards did discover some of his early hiding places. Hutton acknowledged that the majority of the hiding places were undiscovered for long periods of time but each, in turn, was eventually spotted by an alert guard and had to be replaced by a new host device.¹⁶⁴ Once MI9 had been alerted to the discovery, they suspended distribution of the items until an alternative replaced it. Initially, for example, Hutton had used books but, once they had been discovered as the repository of escape aids, he turned his attention to gramophone records, approaching John Wooler, Head of the Record Development Laboratory at EMI. Hutton's initial idea was apparently to conceal miniature compasses inside the records. However, he rapidly discovered from Wooler that it was also possible to conceal maps and currency in the records. Wooler pointed out to Hutton that when the Columbia and His Master's Voice (HMV) record companies amalgamated in 1930, the two companies were using very different processes for record production.¹⁶⁵ Essentially, HMV records were solid, whereas those produced by Columbia used a more economical method of Col Powder lamination.¹⁶⁶ The possibility of exploiting the lamination process was quickly realised since it allowed items to be hidden under the laminate in specially incorporated compartments. By adding extra layers it was possible to conceal up to four maps in each record or a combination of maps and currency (see Illustration X). It is clear that Wooler did the

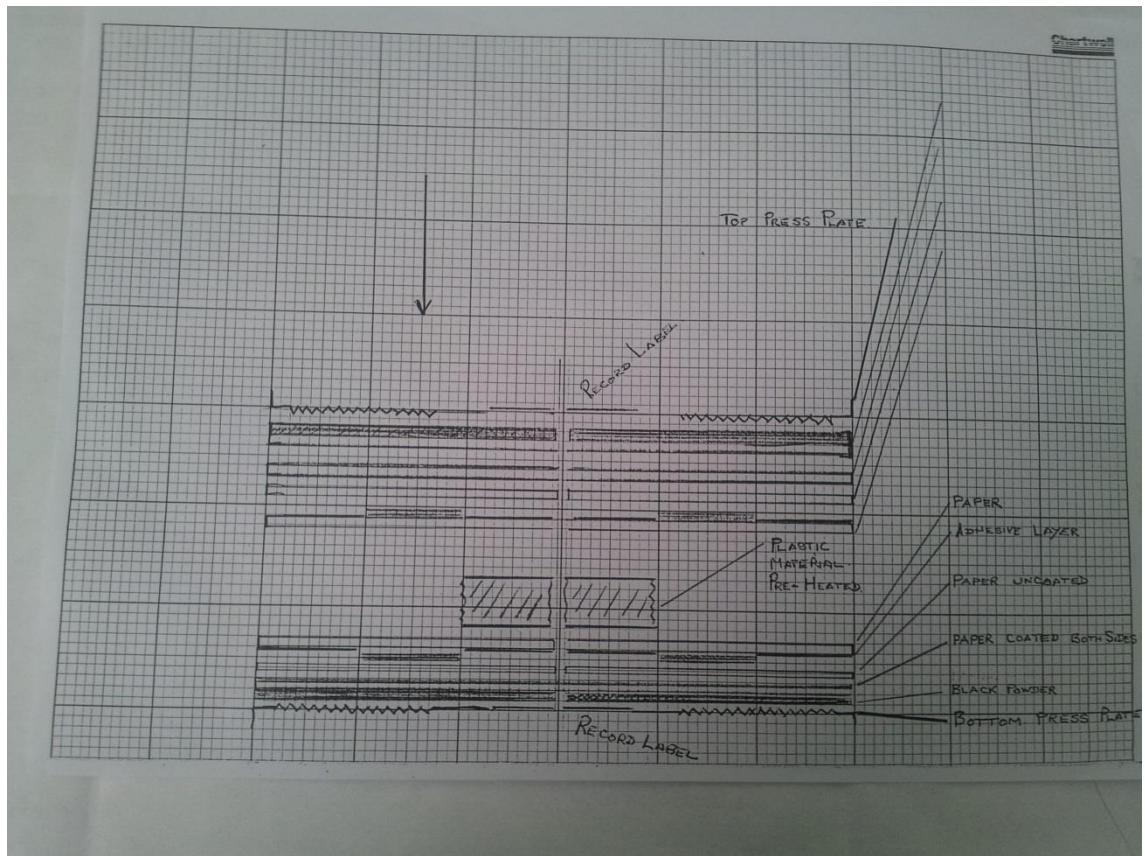
¹⁶⁴ Connell, Charles. *The Hidden Catch*, pp.66-67.

¹⁶⁵ John Wooler deposited a small cache of material relating to this wartime work in the RAF Museum at Hendon where it is held under reference DB319.

¹⁶⁶ Powder adhesives were apparently used at that time in the lamination process as an alternative to heat lamination.

pressing of these special records himself at weekends when the usual press workers were not around. Records were packed into boxes, each box containing five records.

Illustration X: drawing to show layered construction of a gramophone record



(Reproduced with the permission of the RAF Museum, Hendon.)

One record contained a frontier map in two parts i.e. the map and the route. Whilst not specified, the map is believed to be the Schaffhausen map, sheet Y (see details in Chapters 2 and 5, and Appendix 1). Records survive of the despatch which took place on the 14th May 1941 and it is clear that some of these boxes were destined for Oflag IVC, Colditz, Stalag XXI D, Posen and Stalag Luft 111, Sagan. Sagan can only be identified by four men whose names appear on the despatch list, namely Flight Lieutenants J.C. Breese and D.A.Ffrench-Mullen, Pilot Officer W.H.C. Hunkin and Squadron Leader W.H.N. Turner, and whose names also appear in the Sagan Camp

history as coded letter writers.¹⁶⁷ Certainly it is the case that some of the individuals to which the records were despatched subsequently escaped successfully, for example Captain P.R.Reid from Oflag IVC, Colditz. The timing of the despatch is also such that the hidden map might have helped in the escape from Colditz of Airey Neave. (Neave's escape is described in detail in Chapter 5). Sagan was notable as the camp where the tunnels Tom, Dick and Harry were dug and through which (Harry) the Great Escape took place in March 1944. Fifty of the recaptured British and Allied officers were notoriously executed by their German captors. The location of the camps at Colditz, Posen and Sagan are all shown on the map of prisoner of war camps reproduced at Illustration XI.

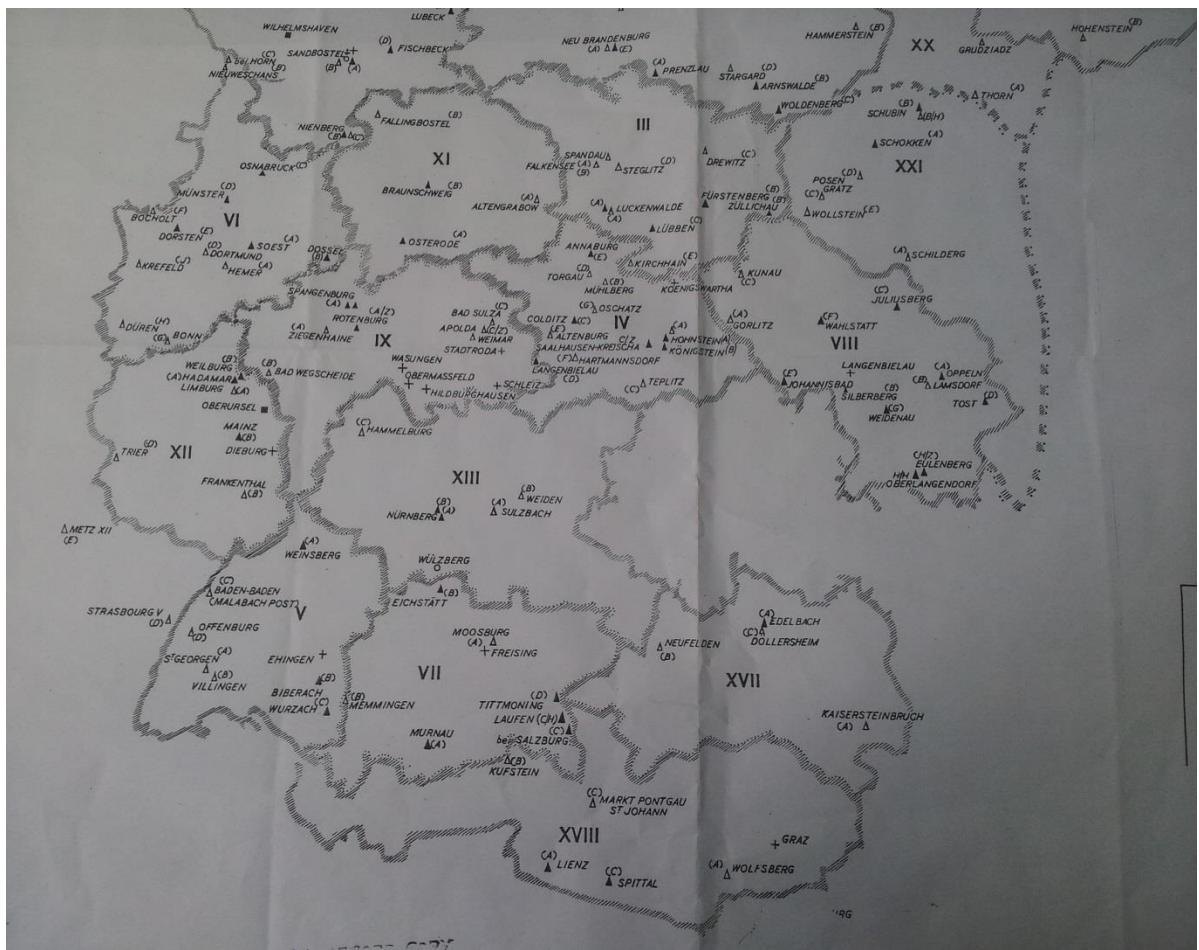
A total of 1,300 gramophone records containing maps were produced and despatched.¹⁶⁸ Hutton's choice of the particular gramophone records to send was clearly subjected to the same careful consideration and reasoning which was the hallmark of all his work: he chose to send recordings of the works of Beethoven and Wagner, studiously avoiding the selection of any Jewish composers which would have been automatically confiscated by the German censors or guards. Whilst the records were perfect in every aspect of manufacture and could be played, Hutton did see the irony of the fact that the prisoners of war had to break the records in order to access the concealed items and, employing a touch of black humour, he dubbed the whole enterprise 'Operation Smash-Hit'.¹⁶⁹

¹⁶⁷ TNA: AIR 40/2645 is the Camp History of Stalag Luft III Sagan.

¹⁶⁸ Details of Hutton's dealings with Wooler, including manufacture of the gramophone records and their despatch to the camps, are contained in the cache of material which Wooler personally donated to the RAF Museum in Hendon, London on 2nd November 1990 and which is held in that collection under catalogue reference DB 319.

¹⁶⁹ Hutton. *Official Secret*, p.111.

Illustration XI: map showing location of prisoner of war camps



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Christmas crackers

It is clear that other members of MI9 came up with ideas for concealment of escape aids from time to time. One ruse was apparently the brainchild of Jimmy Langley who had escaped from a German field hospital after Dunkirk, and successfully reached the UK after a lengthy journey through France and Spain. He was largely responsible, together with Airey Neave, for running the European escape lines. His idea was to hide maps, currency, compasses and dockyard passes inside Christmas crackers which were despatched in September 1943 in boxes as apparently innocuous seasonal treats from the Lancashire Penny Fund, one of the cover organisations, to arrive in the camps in

time for Christmas.¹⁷⁰ The parcels were accompanied by an open letter to the Camp Commandant inviting them to share in this harmless Christmas cheer. The prisoners of war had been alerted in coded letters beforehand which colour box was ‘good’ and which was ‘naughty’ to ensure that only the innocent crackers went to the German captors, although it was subsequently reported that the escape aids in some of the crackers were discovered by the Germans. The matter was apparently regarded as serious enough for the Germans to report the matter as a breach of the Geneva Convention. However, since the ‘contraband’ had not been sent under cover of the Red Cross, the referral apparently resulted in no action.¹⁷¹

Toiletries and Pencils

In October 1943, as part of a Hogmanay scheme, sticks of shaving soap were being sent in toilet parcels into 8 camps where there had previously been no contact with MI9. The sticks of soap contained maps, compasses, money and a message.¹⁷² It was successful in 4 of the 8 camps chosen.¹⁷³

Pencils were also used as the secret conduit for the provision of maps. Certainly at one stage the Cumbrian Pencil Company became involved in covert activity with MI9. The company is mentioned in a post-war list of companies as being involved with MI9.¹⁷⁴ The Pencil Museum in Cumbria also bears witness to the Company’s involvement with the examples in their collection of Derwent pencils appearing perfectly normal and usable but with a silk or tissue map rolled very tightly inside the pencil. The *Per Ardua Libertas* volume also contains an illustration of maps being concealed in bridge marker pencils.

¹⁷⁰ TNA: WO 165/39, report dated September 1943; TNA: WO 208/3242, p.77.

¹⁷¹ TNA: AIR 20/6805, enclosure 9, p.5.

¹⁷² TNA: WO 208/3242, p.78.

¹⁷³ TNA: AIR 20/6805, enclosure 9, p.5.

¹⁷⁴ TNA: AIR 20/6805, enclosure 4 (originally 8A).

Reproduction of the escape and evasion maps in the camps

It is clear that when the maps got through, they almost certainly needed to be copied in whole or in part. A single map was of little use if there were multiple planned escapes, as there often were. There are mentions in the literature of the need to copy maps, such as Airey Neave's description that 'less technical minds studied languages, copied maps and collected stolen articles of civilian clothing.'¹⁷⁵ There are also indications that the prisoners of war were able to set up miniature printing works. Wallis Heath, who had been an officer in the Royal Corps of Engineers, later recounted the story of how the prisoners of war in Oflag XI, Braunschweig, initially hand copied maps which they had received from MI9. However, he and Philip Evans, a prisoner in the same camp, had experience of printing and so they decided to set themselves up as the Brunswick Printers. They did so in the knowledge that the Allies were advancing and the camp apparently planned a mass escape as they feared German reprisals. Showing considerable ingenuity, they were apparently able to create both the substitute artwork and printing plates they required. They removed some limestone tiles from the toilet area and ground them clean to ensure the surface would be a suitable one to use as a lithographic stone in printing. They traced the detail of the maps onto the tiles using carbon paper which, one can only assume, they had stolen or acquired through bribery from their German guards. Separate reverse tracings were made for each colour on the map, black for text and railways, red for roads and blue for rivers. These were to act as the individual printing plate for each layer of detail on the map. They then went over the line-work with a fine pen dipped in boiled margarine. In essence, they were using the lithographic principle that water and oil do not mix and utilising what was essentially the collotype method of reproduction. Tiles were coated with gelatine, taken

¹⁷⁵ Neave. *They Have Their Exits*, p.64.

from the tins of meat in Red Cross food parcels, to act as a sensitising agent. Inks were made from all sorts of powders, sometimes even those intended as stage make-up.¹⁷⁶ Those elements of map detail drawn in the margarine retained the coloured ink. They constructed a printing press from wooden floor boards covered in leather with a roller made from a window bar. The tiles were used in turn to build up the map image.¹⁷⁷ Whilst the maps made by the Brunswick Printers were never apparently used as the Braunschweig Camp was liberated peacefully, there is some limited evidence that similar techniques were employed elsewhere and the resultant maps used successfully by escaping prisoners of war. Certainly there are two maps in a collection in Scotland which appear to be crudely printed versions of escape and evasion maps, although their provenance cannot now be proved conclusively. (For details and illustrations, please refer to Chapter 6).

When the individual camp histories came to be written at the end of the war, they often contained useful check lists of the sort of escape aids which were needed and found to be most useful. Certainly, that for Stalag Luft III Sagan contained a very detailed chapter on the type of escape materials which had been needed. Maps at varying scales were described, such as large scale port plans ‘showing location of quays used by neutral shipping’ and ‘maps of neutral frontiers’. There was also mention of the need for a map tracer and enlarger.¹⁷⁸ Interestingly, in the Colditz camp history, it is clear that the prisoners were able to steal such a machine, known as a pantograph, from

¹⁷⁶ *The Times*, 23rd June 1997.

¹⁷⁷ Details from a leaflet written by Debbie Hall, a cataloguer in the British Library, who curated a small exhibition of World War II escape and evasion maps entitled “Wall Tiles and Free Parking”. The exhibition was located in the foyer of the Map Room in the summer of 1999 and showed examples of the work of the Brunswick Printers together with items from the Waddington Company archive. I am grateful to Peter Barber, Keeper of the BL Map Library, for providing a copy of the leaflet. Examples of the maps produced by the Brunswick Printers are held by the British Library as Maps C25a23.

¹⁷⁸ TNA: AIR 40/2645, Chapter III, p.36.

the canteen and put it to very good use, although it was not made clear why such a machine would be in the canteen in the first place.¹⁷⁹ Use of the pantograph not only meant that maps could be traced and enlarged at the same time, but also that multiple copies could be produced through repeated use of the machine.

Compasses, Purses and Escape Packs

From the beginning Hutton had decided that compasses were as vital as maps to aid the escapers. He designed them in a quite bewildering variety of forms. Miniaturised, they were hidden in the buttons of RAF uniforms, both trousers and tunics. When eventually the buttons were found by German guards to hide compasses, Hutton simply resorted to altering the screw direction by having them manufactured with a left, rather than right, hand thread which proved to be a simple but very effective change.¹⁸⁰ In addition, Hutton arranged for almost anything made from metal to be magnetised, for example razors, hacksaws and pencil clips. Together with maps, compasses were sometimes hidden in a small compartment inside the heel of an RAF flying boot so that any air crew who were shot down, and managed to evade capture, had at least a fighting chance of finding a route to escape successfully.

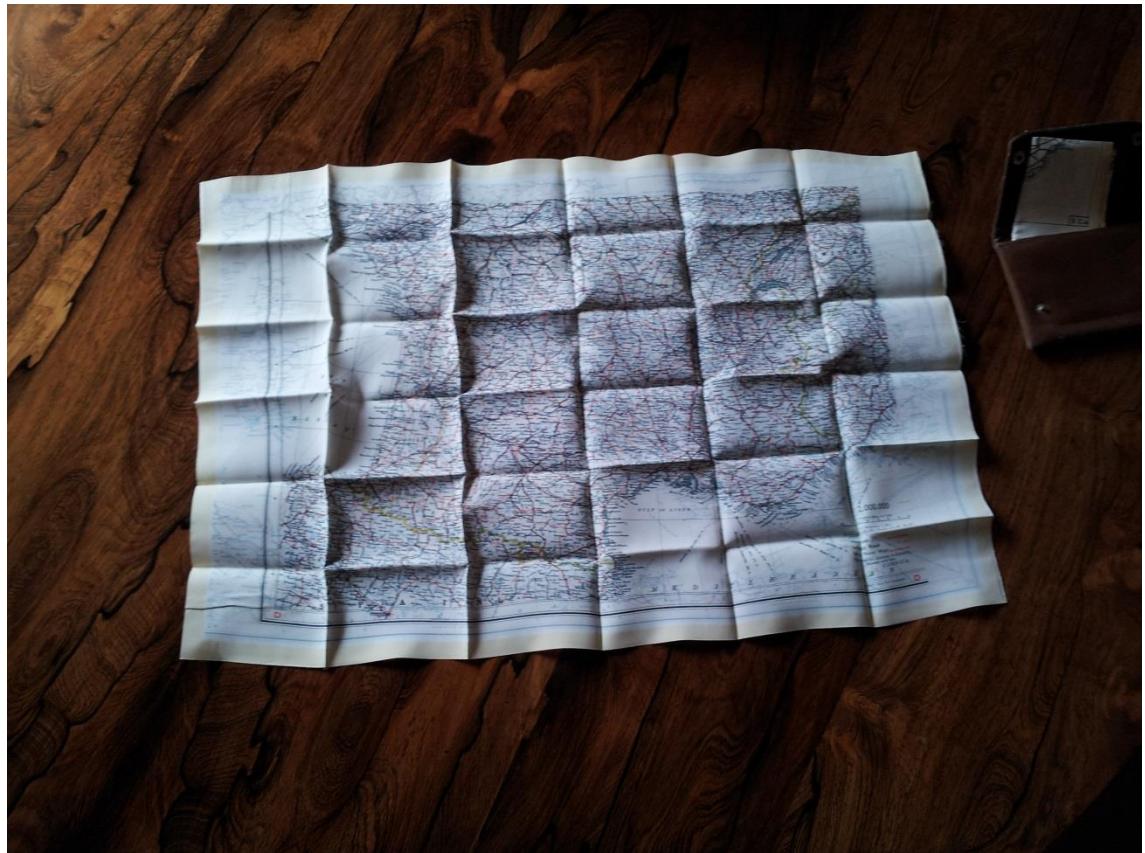
Purses with currency and maps were also provided for RAF flight crews. They were essentially tobacco pouches but they were also used to hold maps (see Illustration XII). This illustration of a purse and the map contents is an example of what was issued to RAF pilots over-flying occupied Europe. This particular one was issued to Flight Lieutenant John H. Shelmerdine DFC who, for three years from April 1942 flew Spitfires out of RAF Benson in Oxfordshire on photographic reconnaissance flights

¹⁷⁹ TNA: WO 208/3288, Chapter II, section 7, p.29.

¹⁸⁰ Connell. *The Hidden Catch*, p.67.

over Western Europe.¹⁸¹ The term Purse Maps was at one point coined as the generic term for all escape and evasion maps produced on fabric and tissue. Some years ago, in the early 1980s, the Intelligence Corps Museum held a volume of escape and evasion maps entitled Purse Maps. Sadly this was apparently lost in the move of the Museum from Ashford in Kent to Chicksands in Bedfordshire. It was a large, black-bound folio of one hundred pages with 'PURSE MAPS' marked on the spine. It contained maps on 37 of the 100 pages, many of them double-sided and a few of which have never been found elsewhere in other collections. The source of the folio in the collection at that time was clearly indicated as being MI9.

Illustration XII: purse and folded maps



(Reproduced with the permission of the owner.)

Purses were also produced containing town plans and addresses of British Consulates in Spain, although there is evidence that these were in fact photographic

¹⁸¹ I am grateful to John Shelmerdine's daughter, Nicola, for permission to use this illustration and for the information on the provenance of the purse and maps.

plans which were subsequently considered to be undesirable for inclusion. MI9 directed that they should be removed and destroyed as a new type of purse was to be made available and the older ones were to be withdrawn and returned to MI9.¹⁸²

It was Johnny Evans who, with the benefit of his escape experience in World War I, had long advocated to Hutton the need for some form of food-pack or emergency ration box to sustain the evader. Based on his own experience in World War I, Evans assured Hutton that ‘the escaper’s greatest enemy is hunger. When a man is starving, he very soon becomes reckless and insensitive.’¹⁸³ In fairly typical fashion, Hutton initially decided against involving the Quartermaster’s department in whose field of responsibility this would fall, but rather went directly to commercial companies who had proved to be so helpful and supportive thus far in MI9’s covert work. He felt that the standard fifty cigarette tin was ideal in size and shape as it would fit into the breast pocket of an RAF flyer’s uniform and also into the map pocket of battle-dress trousers. He acquired these cigarette tins in large numbers from the Wills cigarette factory in Bristol, having personally approached the company Directors to seek their cooperation. After experimenting and listening to the experiences of former escapers such as Evans, Hutton apparently decided that each pack should contain malted milk sweets (provided by Horlicks), chewing gum, a bar of peanut blended food, water purifying tablets, a rubber bottle for water, a small saw, a bar of chocolate, Benzedrine tablets (for the purpose of keeping escapers awake at critical times), matches, a compass, thread, tape and two tissue maps (one of Germany and one of northern France).¹⁸⁴ This escape pack became standard issue for RAF crews over-flying occupied Europe. Later, after the Chairman of Halex, the toothbrush manufacturers, had been persuaded to help, a new

¹⁸² TNA: AIR 20/9165, enclosure 21A dated 25.4.43.

¹⁸³ Hutton. *Official Secret*, p.39.

¹⁸⁴ Connell. *The Hidden Catch*, p.77.

case was manufactured in plastic. This plastic case had three advantages over the cigarette tin: it was waterproof and transparent, it had a compass built into the screw top and it could be moulded to better fit the human frame, proving less obtrusive and rather more comfortable than its predecessor.¹⁸⁵ Indeed, the escape pack became very popular. It was later modified further to avoid the inclusion of a rubber bottle, rubber having become scarce, whereby it was made in one piece of plastic with a screw top to serve as a water bottle in its own right. Despite preferring to avoid the ‘pettyfogging bureaucrats’ in the Ministry of Supply, Hutton found that he had to deal with them since he needed food supplies to ensure the efficacy of the escape packs. He had a number of brushes with them but largely succeeded in acquiring supplies of everything needed for inclusion in the escape packs.¹⁸⁶

As with some of the maps, after the war ended, the Ministry of Supply sold off some of the surplus escape packs. It is clear that some of these were purchased by an enterprising individual who subsequently advertised them for sale as ‘Holiday Accessories for Campers’ at the not inconsiderable price at the time of 11/- (shillings), the equivalent of £13-64 in present day terms.¹⁸⁷

Delivery and Communication

Given the volume and diversity of escape aids being manufactured for MI9, there was a pressing need to develop a reliable system of delivery. They had to smuggle the items into the camps without arousing the suspicions of the enemy. There were two existing supply channels, both provided for under the Geneva Convention, namely Red Cross

¹⁸⁵ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, pp.57-59.

¹⁸⁶ Hutton. *Official Secret*, pp.46-47.

¹⁸⁷ An advertisement appeared in the *Daily Mirror* on Saturday 19th March 1949 and an original copy of the advertisement was retained at enclosure 7 of TNA: AIR 20/6805; www.moneysorter.co.uk 6th November 2013.

parcels and monthly parcels sent by family and friends. MI9's system had to be different and separate to ensure that neither of these two existing channels was ever compromised. Such compromise would have inevitably resulted in the withdrawal of the privileges and MI9 was already only too aware of the extent to which some of the camps were dependent on Red Cross food parcels as a veritable lifeline since camp rations were often extremely thin. In response, therefore, distinct but entirely fictitious cover organisations were set up, amongst which were the Prisoners' Leisure Hour Fund, 'a voluntary Fund for the purpose of sending Comforts, Games, Books etc to British Prisoners of War', the previously mentioned Lancashire Penny Fund, and the Licensed Victuallers' Sports Association. The War Diary entry for August 1941 noted:

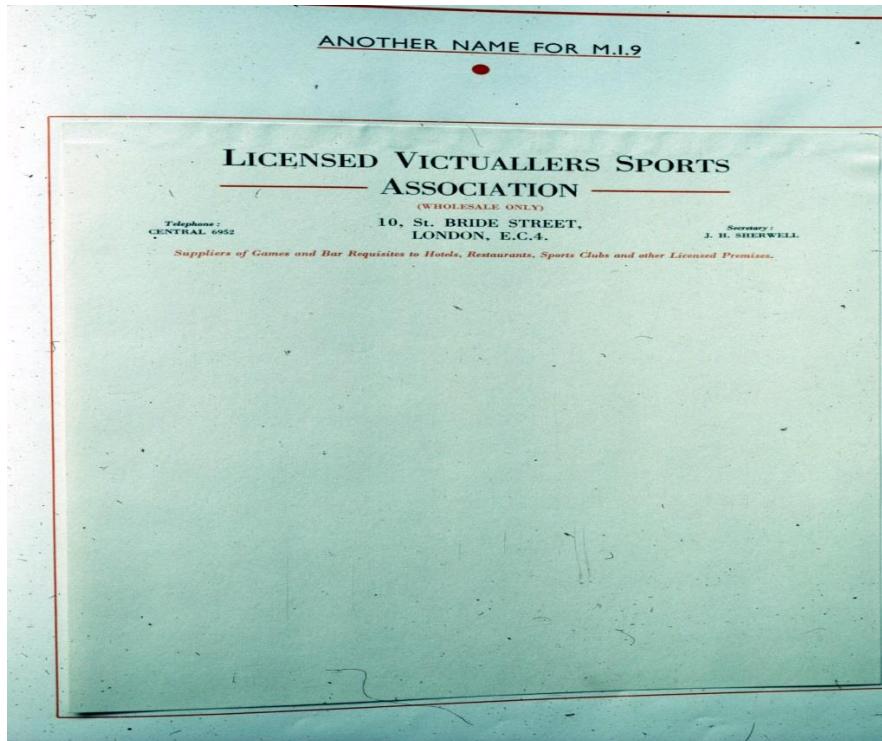
This month has marked an important step forward in the parcel side of our work. In March, April and May large numbers of parcels containing escape material as well as clothing of all kinds were sent to prisoners under the auspices of "The Prisoners Leisure Hour Fund". Considerable anxiety was felt as to whether the Enemy would swallow this Fund and it has been most gratifying for us to receive during this month no fewer than 63 acknowledgements of parcels despatched under its name.¹⁸⁸

These organisations had properly headed notepaper and apparently real, but entirely fictitious, addresses in London. The notepaper for the Prisoners' Leisure Hour Fund was particularly notable; not only did it contain details of the company's officers and non-executive Board members, but it also carried an apparent quotation from Runyan (sic) 'the treasures to be found in idle hours – only those who seek may find', clearly an allusion to what was contained in the parcels and an apparent play on the work of John Bunyan and the notion of pilgrimage. It provided yet another example of the black humour which sometimes characterised MI9's covert work (see Illustration XIII). There were many more of these cover organisations carrying such titles as the Authors' Society, Browns Sports Shop, Jig Saw Puzzle Club, League of Helpers, The Old Ladies

¹⁸⁸ TNA: WO 165/39

Knitting Committee, The Empire Service League, League of Helpers, Crown and Anchor Mission and others with similarly innocuous titles.¹⁸⁹

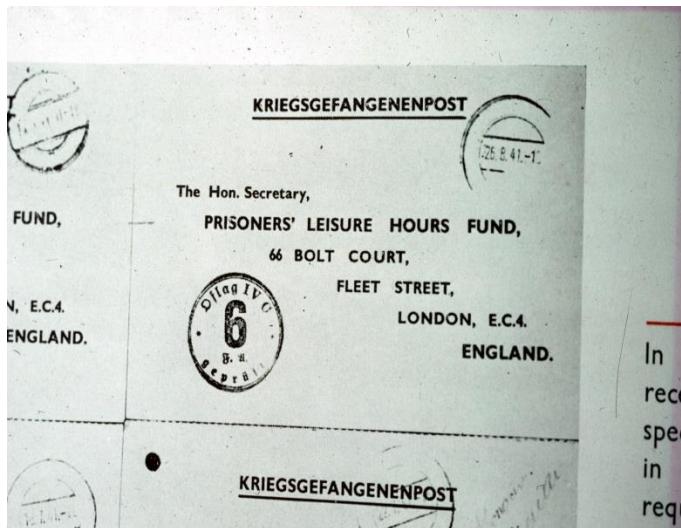
Illustration XIII: headed notepaper of one of MI9's cover organisations



MI9 was keen to test the extent to which parcels were getting through successfully to the prisoners in the camps and, therefore, inserted special cards requesting that the Camp Commandants allow the prisoners of war to acknowledge receipt, thus saving the prisoners one of their weekly letters. The Germans proved to be very helpful in allowing the prisoners to send back their signed receipts. To afford as much cover as possible to the 'naughty' parcels, MI9 also sent in 'good' parcels containing much needed winter clothing, jumpers, socks, vests and the like. The receipts clearly indicated what had been received and were franked with the Oflag stamp from which they had come. A number of the extant examples show clearly the stamp of Oflag IVC, namely Colditz (see Illustration XIV).

¹⁸⁹ TNA: AIR 20/6805, enclosure 9, p.4.

Illustration XIV: receipt showing Oflag IVC despatch stamp



In his wartime memoirs written many years after the war, Lieutenant John Pryor RN, mentioned his receipt of a ‘naughty’ parcel, how he had been alerted to its imminent arrival in the Marlag camp through a coded message in a letter from his (unknown) Auntie Florrie, how they were able to intercept the parcel in the parcel room and what it contained, in his case a chess set. When the chessboard was split open, it was found to contain German currency, hacksaw blades, copies of a German Ausweise (work and travel pass or permit) and examples of letters of introduction.¹⁹⁰ John (Johnny) Pryor was apparently the best forger of documents in that particular camp.¹⁹¹ In his memoirs Pryor also recalled enough about the title of the organisation for it to be identified as part of this research as the Licensed Victuallers’ Sports Association. There is no doubt that the Germans did find some of the escape aids and the prisoners did try to alert MI9 to any mishaps. In the coded letter dated 14th February 1943 from John

¹⁹⁰ John Pryor’s papers are held in the Second World War Experience Centre under their reference SWWEC RN/Pryor J. The Centre now holds the title to the papers and has given permission for extracts to be quoted for research purposes.

¹⁹¹ The importance of the work of Lieutenant John Pryor RN in aiding escapes from the Marlag and Milag Nord Camp is described on a number of occasions in James, *Escaper’s Progress. The Remarkable POW Experiences of a Royal Naval Officer*.

Pryor, the hidden message was ‘German found content of games parcel for Franklin Milag.’¹⁹² Franklin would have been the name of the recipient and MI9 would know what the parcel contained and, therefore, which method of hiding the escape aids had been compromised. Such a warning would have ensured that that particular method would not have been used again and no further parcels would have been despatched to Franklin. It has already been noted in Chapter 1 that the Germans were aware of at least some of the Escape and Evasion maps, through discovering them in clandestine parcels, and the extent to which escape was regarded as a duty by the British officers and men.¹⁹³

The men in Stalag Luft III Sagan regarded the most secure method of concealing escape aids to be ‘in games parcels, especially in poker chips, shovels ha’penny boards and dartboards, chess sets etc. A first rate carpentry job of this kind could not be detected unless the article was destroyed completely.’¹⁹⁴ Apparently every method of concealment was successful at one time or another: the German censors tended to concentrate on one category for a period, as their suspicions were aroused, and then turned their attention to another category, i.e. all gramophone records would be searched before they moved on to search all items in another category. After the winter of 1942, all gramophone records which arrived in Sagan were apparently sent to Berlin to be x-rayed and 20% were found to contain escape aids. No records were allowed in the camp thereafter until the Senior British Officer (SBO) eventually persuaded the

¹⁹² Details of the coded letter system of communication between MI9 and the Camps are contained in the Chapter 4.

¹⁹³ A copy of the translation of the captured German document is held by the RAF Museum, Hendon under their reference B3227.

¹⁹⁴ TNA: AIR 40/2645, Chapter III, p.37.

Camp Commandant to allow the German Medical officer to x-ray them, presumably as he knew that they were ‘clean’ by that time.¹⁹⁵

Certainly in the Sagan camp, all parcels arrived at the local railway station and the post office. They were collected by prisoners of war supervised by German guards and parcel censorship staff. Red Cross parcels were stored in one store and all other parcels were placed in a separate store where they were sorted by the prisoners of war who had been briefed by their Escape Committee, as a result of coded messages from MI9, on which parcels to select and remove. Cigarette and tobacco parcels were usually not checked by the Germans, as together with Red Cross parcels, they were regarded as above suspicion. The selected parcels were often, therefore, secreted into the sacks of the cigarette and tobacco parcels in order to smuggle them into the compounds. Games parcels were often subsequently smuggled back into the store, once the aids had been extracted, so that suspicion would not be aroused.

MI9 was in direct communication with the camps from the very earliest months of its operation. Initially, the only means of communication with the prisoners of war was through coded letter traffic. By 1942, this coded communication had developed markedly with messages being distributed more widely. As a result, escape equipment was being sent in increasing volume into the camps. By Christmas 1942, MI9 was feeling bold enough to send the first bulk parcel containing only escape material into Oflag IVC Colditz.¹⁹⁶ They were advised by a successful escaper from Colditz, likely to have been Airey Neave, who had returned to the UK earlier that year, that they should send advance notification to the camp so that the store room could be broken into and the parcel’s contents extracted. The plan worked successfully and the plan was

¹⁹⁵ TNA: AIR 40/2645, Chapter IV, p.39 and p.60.

¹⁹⁶ TNA: AIR 20/6805, enclosure 9, p.5.

implemented with other camps. Some 70% of these bulk parcels subsequently successfully reached the camps and the men for whom they were intended. This considerably eased the problem of continuously searching for new ideas to conceal the escape aids. By August 1943, large quantities of escape aids were arriving in the camps, including material as bulky as cameras, typewriters and wireless sets. The wireless sets allowed far more immediate contact with the camps.¹⁹⁷

The degree of contact with the camps varied enormously. Stalag VIIA Moosburg, for example, did not apparently receive very much by way of escape aids. This camp was located some 29 miles NE of Munich and by 1944 there were in excess of 10,500 British prisoners of war in the camp. After the war, one of the liberated prisoners reported that the only escape aids they had received were contained 'in some gramophone records' which arrived in July 1942 and no further parcels were received for the duration of the war.¹⁹⁸ This clearly indicates that delivery was patchy to some of the camps.

The methods of communication, especially the coded letter traffic, between MI9 and the camps, played a very significant part in the whole story of the escape and evasion mapping programme and are, therefore, addressed in detail in the following chapter.

Camp organisation

Given the considerable level of organisation, planning and activity which characterised the work of MI9 to support the objective of successful escape, it arguably comes as no surprise to discover that this was matched by a similar level of organisation and activity

¹⁹⁷ TNA: WO 208/3242, p.77.

¹⁹⁸ TNA: WO 208/3276, un-numbered enclosure.

in the camps. Each camp sought to create its own Escape Committee, headed by the Senior British Officer (SBO), or the Senior American Officer (SAO) in camps where the two nationalities were mixed. All escape plans had to be authorised and overseen by this Committee. Whilst the organisation, of necessity, was rather more loose than that of any operational battalion or squadron, organised it most certainly was, albeit in a very unobtrusive way.¹⁹⁹ In the Milag and Marlag Nord camp, the Escape Committee had a system of ‘patents’; all schemes were registered with the Committee and each person was allowed the first attempt with their own idea.²⁰⁰ The Escape Committees directed and supervised all activity in support of any plan it authorised, including the provision of the requisite escape aids. The aids provided by MI9 were carefully allocated, plans were monitored, and all supporting activity, such as the provision of civilian clothes, the forgery of local papers required for travel or the copying of maps, was overseen by the Committee.

It is likely that MI9 was helped in its attempts to hoodwink the Germans by the age, physical condition and life-style of the guards. Many of them were elderly and certainly not fit enough for operational action on the front lines. Their own life style was far from comfortable, with the result that many were easily bribed. In some camps it is clear that the black market was extensive and the Germans were very corrupt, ‘there being nothing that could not be obtained at a price for either money or cigarettes.’²⁰¹ Whilst some of the ruses and methods employed by MI9 were discovered and they had to keep coming up with new ones, it is clear that the sheer volume of activity by MI9 in keeping up the flow of escape aids helped to support many successful escapes.

¹⁹⁹ Foot & Langley. *MI9 escape & Evasion 1939-1945*, p.50.

²⁰⁰ James. *Escaper’s Progress*, p.40.

²⁰¹ James. *Escaper’s Progress*, p.21.

Those prisoners who had particular expertise from their civilian employment were given support work which maximised the value of their contribution. It has already been noted that prisoners in the Brunswick camp were able to create a crude, but very effective, print works to re-produce maps. John Pryor, whose personal story will be recounted in more detail in Chapter 6, was regarded (as already mentioned) as the master forger in Milag and Marlag Nord Camp. His son recalls that his copperplate handwriting could look as if it had been typeset. Clearly an innate talent was put to good use during his captivity in producing forged passes for potential escapers, an artistic talent which he subsequently employed to good effect as a hydrographic surveyor when he returned to active duty after the war. Those who had been tailors were employed to make the civilian clothes; those with any kind of technical, or even criminal, bent were able to pick locks, make keys or even steal items which were needed. The men had sufficient leisure time to scrounge or steal from, or bribe their captors; any bribery was usually done with cigarettes.

It was usual, though by no means consistently done, for those planning to escape to be employed on map copying, as this afforded them the opportunity to learn the geography of the terrain over which they planned to travel. There is, however, little mention in the subsequent escape reports of the maps, which appears to reinforce Foot's comments that all who were issued with escape maps were briefed never to mention them: it is clear that few did.²⁰² There is evidence that in some of the camps, roster systems and timetables were organised so that, as some of the men were deployed copying maps or producing forged documents, for example, others were deployed to act as look-outs and give warning of the approach of any of the German guards.²⁰³

²⁰² Interview with Professor M.R.D.Foot in the Savile Club, London, on 31st January 2012.

²⁰³ TNA: WO 208/3288, Chapter II, section 3, p.23.

It is clear that there was a level of organisation in many of the camps which allowed the escape activities to proceed relatively unencumbered. The infrastructure that was created allowed many of the escape plans to proceed to a successful outcome. It was very important in the greater scheme of things that the camp organisations were effective in realising the benefits of MI9's detailed work in support of escape activity.

Passage and volume of parcels into the camps

MI9 certainly kept detailed records of the despatch of parcels to the camps. Almost certainly this would have been in the form of a card index noting the contents of the individual parcels, to which camps they were despatched, when and what acknowledgements were received. Although this record does not appear to have survived, it is possible to track the volume of the parcels despatched through the monthly entries in the War Diary. For example, the entry for August 1941 indicated that 497 had been despatched up to that point, of which 78 had been acknowledged. An additional 193 clothes parcels i.e. straight parcels, had also been despatched, of which 33 had been acknowledged. By July 1943, almost 400 parcels were despatched in a single month to camps in Germany and Italy and one of the parcels sent to Germany consisted entirely of escape aids.²⁰⁴ No evidence has been found to support the hypothesis that the Germans had an equivalent organisation and there appears to be no indication that there was any similar traffic passing in the opposite direction, although it is not possible to make an unequivocal statement to this effect.

Conclusion

The story which emerges from this chapter is one of breath-taking ingenuity and inventiveness engendered by necessity, initially by MI9, but the more so by the

²⁰⁴ TNA: WO 165/39.

prisoners of war themselves. Having embarked on a programme to produce escape and evasion maps in an appropriate form and in sufficient numbers to ensure that the escape philosophy was enacted in reality, MI9 sought to ensure that those maps reached the camps in prompt and effective ways. Escape, whether ultimately successful or not, took a great deal of planning both at home and in the camps, and MI9 showed their acute awareness of this and the extent to which the maps were a key part of successful escape. It is also clear that the prisoners of war showed admirable courage and indefatigability, apparently accepting and actively responding to the philosophy of war that it was each man's duty to attempt to escape. The Escape Committees must have been re-assured in their commitment and endeavours when they saw the extent to which MI9 was seeking to support them. When they asked for items, MI9 did their best to respond. The escapes from the camps were always a team effort and for every man that made it home successfully, there was a support team left behind in the camps. Similarly, at home, there was a very real sense of teamwork and cooperation as commercial companies in the UK contributed both materially and in terms of their expertise to the whole escape and evasion enterprise which MI9 had created and fostered. It is certainly the case that the reality of what was done has proved to be decidedly more astonishing and impressive than that conveyed by any work of fiction.

Chapter 4

Coded Correspondence

‘Cryptography concerns communications that are deliberately designed to keep secrets from an enemy.’ (Simon Singh).²⁰⁵

It is clear from the previous chapter that it was critical to the success of getting the maps and other escape aids into the camps, in order to assist the prisoners of war in planning and executing their escape, that regular contact with the prisoners of war was established and maintained by MI9. Under the Geneva Convention, prisoners of war were allowed to receive up to two letters and four cards monthly.²⁰⁶ MI9 took full advantage of this aspect of the Convention by establishing a system of coded letter exchanges with the camps. This was certainly the principal method of contact before wireless sets were smuggled into the camps. As this research into the detailed character and scope of the escape and evasion mapping programme has progressed and especially as a result of the successful deciphering of a cache of John Pryor’s coded letters, the sheer volume and real significance of the coded letter traffic has begun to emerge.²⁰⁷ It has become very clear that coded letters constituted a vital means for gathering intelligence from the prisoners of war and a channel through which they, in turn, could send their requests for escape and evasion maps of particular areas. The evidence assembled has thus substantially reinforced the assertion regarding the significance of the coded letters which was highlighted in the author’s discussion with Professor M.R.D. Foot.²⁰⁸ There can now be no doubt that coded letters were indeed a key part of the system which ensured that maps and other escape aids reached the camps in a timely fashion to aid the escapers in their attempts to return home.

²⁰⁵ Singh, Simon. *The Code Book. The Secret History of Codes and Code Breaking*. Fourth Estate. London. 2000. Introduction, p.xi.

²⁰⁶ Article 71 of the Geneva Convention refers.

²⁰⁷ Second World War Experience Centre, reference SWWEC RN/Pryor J.

²⁰⁸ Interview of Professor M.R.D. Foot 31st January 2012.

The letters allowed the potential escapers to indicate precisely what they needed to support their escape plans and, in turn, alerted them not only to the nature of the parcel being sent but also to the particular markings it would carry. The coded letters were of crucial significance to the way in which MI9 was able to ensure that information on the escape aids, not the least of which were the maps, was communicated with the camps. Requests for, and the despatch of, items to aid the escapes which the prisoners were planning, were made through this important and covert channel of communication. Discovering how it worked, why and just what it owed to the sheer ingenuity and commitment of both MI9 and the prisoners of war themselves, as this chapter will show, provides another key part of the whole story of the escape and evasion mapping programme.

Background history of the use of codes²⁰⁹

In his fascinating book on the history of code use, Simon Singh highlights the importance of effective coded communication through history by monarchs and generals in governing their countries or commanding their armies and the fact that it was the threat of enemy interception of critical messages which was the catalyst in the development of codes and ciphers.²¹⁰ Singh, in particular, describes how the practice of utilising codes has often had a dramatic impact on the course of history. How different, for example, might British history have been had Mary, Queen of Scots, not engaged in treasonable activity and incriminated herself through coded letters. The letters were

²⁰⁹ To be strictly accurate, the word ‘cipher’ should be used in the context of this research since it more appropriately describes the cryptographic process of hiding or disguising secret messages. Codes are the use of words to disguise, for example, the identity of an agent or the nature of an operation: for example, Airey Neave’s code name in MI9 was Saturday and Overlord was the code name for the Allies’ invasion of mainland Europe. However, the terms ‘code’ and ‘coded’ are used as they are most commonly used and understood by laymen. This explanation is set out in Singh’s book.

²¹⁰ Singh. *The Code Book. The Secret History of Codes and Code Breaking*; Haynes, Alan. *Invisible Power: The Elizabethan Secret Services 1570-1603*. Alan Sutton Publishing. Bath. 1992. pp. 54-82.

intercepted and successfully deciphered by Queen Elizabeth I's Principal Secretary, Sir Francis Walsingham, generally acknowledged as the founder of Britain's Secret Intelligence Service.²¹¹ The Babbington letters did, however, use an elaborate and very obviously enciphered text, and it was from Tudor times onwards that the art of enciphering and coding grew inexorably.

The system which MI9 elected to pursue was, of necessity, rather different to the obvious encipher approach which would never have made it past the German censors. MI9 chose rather to develop a system of constructing letters which did not arouse suspicion as they appeared quite innocuous, but contained a hidden message. This was a distinctly alternative way of employing cipher alphabets. In essence, it did not matter if the general encryption method, or algorithm, became known; rather it was the specific key which identified the particular encryption which needed to remain secret. Even if the encoded message or cipher text was intercepted by the enemy, it could only be deciphered if the key was known. This was exemplified exactly in the deciphering of John Pryor's letters. The general encryption method which MI9 employed has, of course, been known for some time since it had been publicised originally by Green and later by Foot and Langley.²¹² The key comprised two Arabic numbers and an alphabet letter. In Green's case this was 5 6 O.²¹³ However, Pryor's individual key was not known and had to be identified. The numerical parts of his code were discovered early in the research as he had recalled it correctly, as it later transpired, in his memoirs as 5 4, but the alphabet letter was unknown. The discovery of the key was achieved by a lengthy process of elimination, testing each letter of the alphabet until a word which

²¹¹ Deacon, Richard. *A History of the British Secret Service*. Granada Publishing Limited. London. 1969. p.29.

²¹² Green, J.M. *From Colditz in Code*. Robert Hale & Company. London. 1971; Foot & Langley. *MI9 Escape and Evasion 1939-45*.

²¹³ Green. *From Colditz in Code*, p.163.

made sense was deciphered. This proved to be the letter S.²¹⁴ A full consideration of the construction of the code used in the letters is made later in this chapter.

Selection and training of the code users and development of the codes

It is not, perhaps, surprising to discover that coded correspondence between MI9 and the camps played such a key role in the escape and evasion mapping programme. It is worth recalling that one of the intelligence organisations pushing hard for the creation of MI9 in 1939 was MI1. MI1 was, in fact, the Military Intelligence Code and Cipher School which subsequently morphed into the Government Communications Headquarters, more generally known as GCHQ. It is, therefore, quite likely that MI9 staff also worked with MI1 in the development of the coded communication with the camps, although no confirmation of this likely connection has been discovered to date.

With the fall of France in June 1940, barely six months after the creation of the Branch, MI9 knew that over 50,000 Army personnel, in particular, were in captivity and very few of them had been briefed on any aspect of escape and evasion, and none had been briefed on coded correspondence. Indeed, at that stage they knew of only three prisoners of war who were code users, two in the Royal Air Force and one in the Royal Navy. They very quickly alerted the censors to the need to try to identify any letters from prisoners of war which they ‘suspected of secondary meaning or of containing a private means of communication.’²¹⁵ Through this means they were able to identify a few private codes which some individuals had had the foresight to establish with their families prior to deployment. MI9 contacted these individuals, initially using the

²¹⁴ I am indebted to Professor David McMullan, School of Mathematics and Physics in Plymouth University, whose considerable assistance in identifying the full key for John Pryor’s code enabled the deciphering of his letters home and greatly contributed to a more detailed understanding of the importance which the system of coded correspondence played in MI9’s escape and evasion mapping programme.

²¹⁵ TNA: WO 208/32423, Enclosure I, p.82.

private codes they had set up. By early 1941, MI9 was in contact with men who had been briefed on the coded system prior to deployment and who were in turn briefing others in the Oflags into the system. The big challenge was then to establish contact with the Stalags. They managed this through padres, doctors and dentists who had the opportunity to minister to the needs of the Other Ranks (ORs) in the Stalags and could identify those most likely to be able to pick up the coded system and use it. They then briefed these men and slowly the system was spread through the camps. During 1941 the work grew to such an extent that a dedicated section had to be formed to cope with the increasing volume of coded letters being sent and received. The new section, Section Y, was formed in January 1942 and was attached to the training school in Highgate.²¹⁶ From these small beginnings, the coded system of contact with the camps grew and developed apace.

Potential coded letter writers were initially selected by the MI9 lecturers and trainers from officers who attended the training courses at the Highgate School or who they met during their lecturing visits to the various RAF camps and operational Army units. MI9 was on the look-out for men who appeared bright, responsible and discreet. These individuals were taken aside at the end of the lecture or training course and taught a simple code so that, if captured, they could conceal a coded message in an apparently routine letter to their family.²¹⁷ Before the selected individuals were authorised as code users, they were required to do practice exercises to ensure that they were proficient enough with the system of encoding.

²¹⁶ TNA: WO 208/3242, Enclosure I, p.83.

²¹⁷ Information supplied by Professor M.R.D. Foot during an interview on 31st January 2012. He added that he was not one of the chosen few.

From very early in 1940, the staff of MI9 were involved in devising codes. By April of that year, Lieutenant Commander Rhodes and Flight Lieutenant Evans were spending a great deal of their time in trying to perfect a suitable code. Initially known as the H.K. code, it had been suggested by Mr Hooker in the Foreign Office and was regarded by MI9 as the best idea put forward for a straight-forward and simple code.²¹⁸ The code was taught to the selected RAF and Army personnel. It was imperative that a detailed record of those briefed in the code was kept and that their families were also subsequently briefed, should their sons be unfortunate enough to be captured: as with all MI9's records, these were held on a detailed card index.²¹⁹

By September 1940 coded letters were being exchanged with men in prisoner of war camps in Germany and, at home, a scheme had been started to ensure that contact was maintained with the close family of any code-user who had been captured. Local intermediaries were established on a regional basis and families were regularly briefed. MI9 was determined that their relationship with the families should be personal rather than being perceived as formal and official. The War Diary entry for August 1941 mentions the 'good relations and close co-operation' which had been established with the relatives and the extent to which it was increasing.²²⁰ Relatives clearly appreciated this and were known to have expressed their thanks to the War Office, indicating how they valued 'the War Office keeping in touch with them in a personal way' and not just behaving as an 'official machine'.²²¹ It must have been some consolation to the families

²¹⁸ TNA: WO 165/39, entry for July 1942.

²¹⁹ TNA: WO 165/39, entry for July 1941.

²²⁰ TNA: WO 165/39.

²²¹ TNA: WO 208/3242, Enclosure I, p.84.

to know that their sons were still doing their duty and continuing to contribute to the war effort whilst remaining in captivity.

The system of codes steadily developed and related research work is regularly mentioned in the War Diary, although no detail about the construction of the codes and methods of encryption and deciphering was ever disclosed in the monthly reports. That detail was, however, included in other reports produced at the time and it is clear that work continued throughout the war on the development of the codes. There were 11 codes developed in all, some being retained for very specific use.²²² Codes I, II, III and VI were apparently developed for use in general correspondence with the camps. Code III was being developed during early 1942 and this was in use in some of the camps later that year. Although regarded as an effective code, it apparently limited the length of the message when compared with Code II and the code users appeared to be more prone to making errors in their messages. Whilst it had proved relatively easy to spot errors with Code II, it proved to be far more difficult to spot errors with Code III. By April 1942, the development of Code VI had progressed and was being taught to potential code users. Code V was specifically developed for use in Oflag IVC, Colditz. This code was established within the camp by communicating its detail through code users there who were already using Code II. The first message using the new code was received from Colditz in October 1942: it had been correctly encoded in every respect. Code IV was given to MIS-X for their use. After the USA entered the war, MI9 had advised particular code users to brief selected US prisoners of war in the Oflags, in anticipation of them being ultimately segregated. Code VII was used in the Middle East and Code VIII was retained for special operations, in particular those being organised

²²² TNA: WO 208/3242, Enclosure I, p.84.

by SOE (the Special Operations Executive). Codes IX, X and XI were apparently developed but had never been used by the time the war ended.²²³

The coded letter writers and their role

Coded messages contained three different and important types of information, namely intelligence, the state of morale in the camps, and of most relevance in terms of this research, planned escapes. The extent of the role played by the coded letters which passed between MI9 and its team of covert correspondents in the prisoner of war camps in terms of the intelligence which was actively sought and supplied is, perhaps, one of the more surprising aspects to emerge in the course of this research and one which appears previously to have been largely unacknowledged by historians. Certainly Julius Green's book describing his World War II experience revealed the extent of his own involvement in responding to MI9's requests for current intelligence information.²²⁴ By 1941 Green was in the camp at Sandbostel, close to Bremen, and coincidentally the camp in which John Pryor was held at the same time. Green received a letter dated 11th February 1943, purporting to be from Philippa, possibly his sister, and ostensibly chatting about the mundane matters of the family's general health, especially that of 'Aunt Eleanor' and 'Daddy'. He was asked in the coded request: 'we know of two large oil plants which we call Blechammer North and South are either or both partly working or completed is there a third plant making aviation petrol near Heyderbreck'. Green replied on 24th March 1943 in a letter to his 'Dear Dad' which appeared to talk about war bonds and investments and which he signed 'Your affect. son Julie', his familial nickname. However, Green had managed to encrypt within his letter the response 'Blechammers making from 6 to 9 thousand qts oil daily I've access to plant'.²²⁵ Green

²²³ TNA: WO 208/3242, Enclosure I, p.84.

²²⁴ Green, Julius. *From Colditz in Code*.

²²⁵ Green, Julius. *From Colditz in Code*. p.185.

was in the privileged position as a dentist of being in that elite group of prisoners of war who were allowed under the Geneva Convention rather more freedom of movement than most prisoners of war.²²⁶ Doctors and padres also belonged to this group and it is known that MI9 maximised the opportunities presented. In Green's case he felt on occasion overwhelmed by the amount of potentially valuable information he was able to acquire, commenting 'so much information was pouring in to me now that I could not possibly encode it all.'²²⁷ Part of what he saw was evidence of the extermination programme of his fellow Jews which he described in his book in hauntingly moving terms:

Once, on the way to visit the main camp at Lamsdorf, my guard and I had to change trains. In a siding we saw a train of closed trucks from which an intolerable stench issued ... we walked back with the moaning and whimpering from the trucks in our ears ... The trucks contained Hungarian Jews who were being transferred to an extermination camp for 'processing'. The sound has never left me and I still hear it.²²⁸

It is not known whether Green ever reported this experience to MI9 or whether any action about the concentration camps was ever taken prior to liberation but it is clear that their existence was known to some of the prisoners of war.

Similarly, John Pryor, a captured naval lieutenant and a prisoner of war, was also providing intelligence which would clearly be of considerable assistance to the RAF for targeting purposes.²²⁹ In a letter he sent to his parents in December 1942, which at face value was describing the gardening activities in the camp and the Christmas parcels which had been received from the Red Cross, he encrypted the message 'Large

²²⁶ The Geneva Convention described medical personnel as 'protected persons' and regarded them as 'non-combatants'.

²²⁷ Green, Julius. *From Colditz in Code*, p.114.

²²⁸ Green, Julius. *From Colditz in Code*, p.112.

²²⁹ As previously noted, Pryor and Green were in the Sandbostel camp at the same time.

munition dumps just south of new bridge at Narkau on new Berlin-Marienburg road' for MI9.²³⁰ Since all Pryor's received correspondence was lost during his repatriation in 1945, there was initially no indication that he was responding to a received request or simply providing acquired intelligence. However, it subsequently emerged that he was, in effect (just like Julius Green), responding to requests for information.²³¹

Evidence was also found, as part of this current research, of the second aspect of the coded letter traffic, namely the extent to which it afforded MI9 the ability to assess the morale of prisoners of war in the many camps with which they were able to establish and maintain contact. In March 1941 Pryor had written a letter to his parents mentioning the vegetable garden, receipt of parcels and a letter from home. In it he had managed to encrypt the coded message 'owing supposed condition prisoners canada we may suffer here urgent inquiries necessary.' These words conveyed information that there were fears amongst the prisoners who apparently expected the German guards would take retaliatory action over the reported mis-treatment of German prisoners of war being held in Canada.

Decoding of request for escape aids

The principal interest of the coded traffic, however, in so far as it is relevant to this research, is to demonstrate the way in which it reflected the importance of the contact in requesting and providing the wherewithal to assist planned escapes. In a letter sent in May 1942 to his parents, which at face value purported to talk about the books he wanted and the extent to which the camp gardens were improving, Pryor managed to

²³⁰ John Pryor's papers are held in the Second World War Experience Centre under their reference SWWEC RN/Pryor J. The Centre now holds the title to the papers. The deciphering of this letter was, however, carried out by this researcher.

²³¹ TNA: WO 208/3501 contains copies of some of the coded letter correspondence sent to the Camp by MI9.

encrypt the following message: ‘clothing and local maps obtained require some of borders especially swiss pasport information and renten marks’. Despite the spelling mistake in ‘passport’, it was unmistakeably a request for assistance to support an escape. Since this letter was the first to be decoded as part of the current research project, it provides an ideal example of the methodology employed to uncover the hidden message: this is shown later in this chapter at figures 1 and 2, pages 146 and 147. The precise response to this message is unknown. However, it is known from Pryor’s own memoirs written in his later life that he did receive early in 1943 a letter alerting him to expect a parcel from the ‘London Victuallers’ Company’ (almost certainly the Licensed Victuallers Sports Association, a known cover organisation for MI9 which was referred to in Chapter 3). He recounted in some detail how he was then detailed by the Escape Committee to be present in the Post Room to ensure that the parcel was not opened by the German censors, but was appropriated by the prisoners of war and carefully whisked away to be hidden until it could be opened and explored in more secure surroundings. He continued by describing the chess set he found inside the parcel and the subsequent splitting open of the chessboard to reveal its hidden contents, namely German currency, hacksaw blades, copies of German passes and letters of introduction. The items were handed over to the Escape Committee. There is no indication as to whether he received a response to his request for maps of the Swiss border; however, it is more than likely that he did, since the Swiss border was certainly an escape route recommended by MI9. Interestingly, when it came to Pryor’s own escape (described in detail in Chapter 6), the route he attempted was not across the Swiss border but via the Baltic ports which were located geographically very much closer to the Marlag and Milag Camp.

There is also evidence contained in a letter received by Lieutenant F.C.Hamel of the Royal Naval Volunteer Reserve (RNVR), also a prisoner in the Marlag and Milag camp. The letter was sent in June 1943 and purported to be from his mother. It carried, however, a hidden message from MI9 which read ‘Decca records Alger soak covers to get maps’.²³² It appeared to alert them to the despatch of a parcel to an individual named Alger. It is also apparent from the message that MI9 was continuing to use gramophone records but, instead of hiding the maps in a laminated compartment in the centre of the record, they were rather encapsulating them in the record covers, probably in similar fashion to the method used to hide them inside playing cards.

Volume and passage of coded letter traffic

MI9 responded promptly to requests for information and equipment to aid escape, such as currency, passes, maps, saws, compasses. They could advise on routes, specifically which were the best and most likely to result in a successful escape and which to avoid. By the 28th February 1941 most of the coded letters received in London contained requests for escape materials and German currency.²³³ By this time also, MI9 had developed the Number II code and were also briefing men involved in particular covert operations. One disadvantage of the coded letter was the length of time it could take to reach its destination in either direction. It often took weeks and sometimes months for the letters to arrive. It appears that MI9 enjoyed more success in maintaining contact with the camps in Germany than with those in Italy. The relative lack of success in Italy was ascribed to the inefficiency of the Italians as ‘mail and parcels could take over a year and were often lost or destroyed’.²³⁴ The transit and delivery of letters and parcels to the camps in Germany appeared to be rather more swift and efficient. It is an

²³² TNA: WO 208/3501, enclosure 101.

²³³ TNA: WO 165/39

²³⁴ TNA: WO 208/3242, p.80.

irony that Teutonic efficiency apparently contributed to the success of the escape and evasion programme.

The numbers of letters steadily increased as more personnel were briefed in their use and as more men were captured. In the month of March 1941, 60 coded letters were received in MI9 and 56 were despatched.²³⁵ Four months later the total number of acknowledgement slips for parcels and coded letters received from the camps had increased to 4,279 or approximately 138 every day.²³⁶ Incoming letters were picked up by the Censors who were given a list, known as the Special Watch List, by MI9 of the names to look for and ensure that any letters from them were re-directed to MI9. By December 1941, there were 928 names on the list and MI9 knew it could potentially rise very quickly to 1,500. They recognised how challenging and taxing it was for the Censors to pick up all the coded letters. This identification of which letters to de-code was, after all ‘the vital link in the chain and, if broken, the whole structure will collapse’.²³⁷ MI9, therefore, made every effort to ensure that the list of names was kept as current as was humanly possible in order to make the Censors’ job less onerous. The decoding work was regarded as urgent and always treated as a priority by MI9. Once they had decoded the hidden messages, the letters were passed on to the families. Matters relating to escapes were dealt with by MI9; anything relating to technical or operational intelligence was passed immediately to the appropriate departments of the three Services. It was not unknown at this stage of the war for over a dozen intelligence reports to be received in a month. They were also succeeding in speeding up the transit of coded letters so that, by the end of June 1941, the War Diary entry notes an example of a letter despatched by MI9 on 10th May, reached the particular Camp during the first

²³⁵ TNA: WO 165/39

²³⁶ TNA: WO 165/39, entry for July 1941.

²³⁷ TNA: WO 165/39, entry for December 1941.

week in June and a reply was received in MI9 on 29th June.²³⁸ By this time there were 72 coded correspondents operating in the camps in Germany and Italy.

Prisoners of war who were being transferred to different camps would often pass on their code to a fellow prisoner to ensure that contact with the camp was not lost. It was also the case that some prisoners who were to be moved were briefed by code holders so that the code could operate from the camp into which they were being moved. Such was the case with Lieutenant John Pryor who indicated in his memoirs that it was during January 1941 whilst he was in Oflag VIIC/Z at Titmoning that he was approached by a junior Army officer who had heard that the naval prisoners were to be moved to another camp. He asked Pryor if he would be prepared to learn a secret code so that messages could be hidden in his normal letters home. Pryor confessed that he was initially suspicious, thinking that the officer might be a German plant. He approached the Senior British Officer, General Fortune, and was reassured that the approach was genuine. Pryor proceeded to learn the code. This practice of teaching the code methodology to others indicates the close cooperation which existed between the prisoners of different Services and was a practice which Pryor himself used later on in his captivity. In March 1942 he wrote a letter in which he hid a message indicating that he had taught codes to four others, namely 'elder 6 5 M heap 5 7 K hamel 7 5 O wells 5 6 J'. There is an indication in his letter that he had been asked to do this since the hidden message starts by indicating that he had understood the coded letters dated 24th December and 3rd January which he had received. Interestingly, but inexplicably, he found it necessary to re-send the four codes he had allocated by repeating the message in a letter he sent two weeks later in early April. Not surprisingly, the two letters are superficially about quite different topics and the hidden messages, as a result, are

²³⁸ TNA: WO 165/39.

encoded differently though relaying the identical information: in itself, this demonstrates the sheer versatility of the coded letter system.

It is clear from Pryor's memoirs just how much effort went into the planning and execution of escapes. Of particular note was the extent to which he was able to use the MI9 code and encrypt messages in some twenty one letters to his parents. They contained both intelligence and requests for assistance. His efforts serve as a stark reminder of the *raison d'être* of MI9 and the extent to which prisoners of war had taken on board the escape philosophy. Of necessity the codes were hardly simple; they had to avoid detection by the German censors. To encode letters, as Pryor did, must have taken many hours of intellectual effort in circumstances which were hardly conducive to such activity. It is to his eternal credit, and that of the many other prisoners of war who endured captivity, that he continued to do exactly what MI9 asked them to do, harass the Germans at every opportunity, attempt to escape, be the proverbial thorn in the enemy's side, and provide intelligence in response to requests. In return, MI9 stuck determinedly to their part of the 'agreement', providing all the escape aids in their considerable armoury to aid the planned escapes. They also ensured that all families who had sons in captivity and who had been schooled in the art of sending and receiving coded letters knew exactly what was happening. It must have been some comfort to those families to know that their sons were still able to contribute to the war effort despite their incarceration behind barbed wire in occupied Europe for such long periods of time.

By July 1941, MI9 was operating a network of 254 code correspondents. By February 1942 they were in contact with 27 Camps in Germany and Italy and estimated that the system allowed them to maintain contact with over 62,000 prisoners of war.

They also knew of 465 attempted escapes by that time.²³⁹ The work done to develop the codes and make them more robust has been described earlier in the chapter (page 131). The value of the coded letters as a source of potentially useful intelligence information was being steadily realised by other Government departments. They increasingly passed questions to MI9 to be directed through the coded letter system to prisoners of war in particular camps where they were known to work outside the camps alongside Germans and could report on what was going on in the surrounding area. The occurrence of this practice is suggested by the volume of intelligence passed by Green. There was one reported compromise of the system by British Government officials and this occurred when the British Military Attaché (MA) in Stockholm acted unilaterally in sending parcels to prisoners of war and included instructions on how to use one of the codes. Three camps, Stalag Luft, Oflag IX and Oflag VIB, were able to warn MI9 what the MA had done, that it had been discovered by the Germans and the whole system was potentially compromised. An MI9 officer was immediately despatched to Stockholm to order the MA to stop sending parcels.²⁴⁰ It was never clear why he had taken such action in the first place but the extent to which his action potentially compromised the whole system was clear. MI9 immediately stopped using the Number III code and speeded up the introduction of the Number VI Code. Code users were able to alert MI9 on more than one occasion to problems such as the discovery of escape aids in parcels. Interestingly, no reported discovery of maps has been found.

The construction of the coded letters

It is, perhaps, germane at this point to set out how the codes worked and specifically how the letters were constructed with the messages hidden. There are two significant published works which discuss the detail of the MI9 code, both of which have already

²³⁹ TNA: WO 165/39.

²⁴⁰ TNA: WO 165/39, entry for May 1942.

been previously mentioned. The first was authored by Julius M. Green and published in 1971.²⁴¹ It was based entirely on his personal experiences as a dentist in the field during World War II and specifically as a prisoner of war, eventually finding himself in Colditz. Green had been a Territorial Army reservist from his days at Edinburgh University in the early 1930s. He was commissioned in 152 Field Ambulance Brigade of the 51st Highland Division on 24th August 1939. The second source is Foot and Langley's book published eight years later.²⁴² Both books contained a detailed appendix setting out how the code operated. However, Foot and Langley acknowledged that Green's book was the source of their information.

Coded letters were immediately identifiable by the form of the date: 22/3/42, rather than the more usual form of 22nd March 1942; this numeric date form indicated that the letter contained a coded message. Underlining the signature also confirmed that the letter carried a coded message, as did the inclusion of the word 'very' in the closing line e.g. 'yours very sincerely'. The length of the message was determined by multiplying together the number of letters in the first two words of the first line of the letter after the salutation. If the first two words each comprised five letters, then the message was $5 \times 5 = 25$ words in length and a grid 5 x 5 needed to be constructed. If the words had different numbers of letters in them, then the first word indicated the number of words running horizontally in the grid and the second word indicated the number of words running vertically in the grid. In the example being used, a grid was drawn with 25 squares in it, i.e. 5 x 5. The rest of the first line of the letter was ignored. It was then necessary to start with the second line of the letter and resort to the numerical part of the personal key of the individual coder; in the case of Julius Green this was five and six, meaning that the fifth and sixth words alternately were selected

²⁴¹ Green. *From Colditz in Code*.

²⁴² Foot & Langley. *MI9 Escape and Evasion 1939-45*.

and placed in the grid, starting in the top left hand corner and working left to right on each consecutive line as indicated in the grid below.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

The message, however, was eventually read starting bottom right, reading across and then diagonally, across and diagonally, etc, as shown below, reading in sequence 1 – 25.

25	24	22	19	15
23	21	18	14	10
20	17	13	9	6
16	12	8	5	3
11	7	4	2	1

The last word of the message, therefore, went into the first box on the grid and the first word of the message went into the last box of the grid. It appeared that different code users were briefed to use different word counts. That of Julius Green was the fifth word followed by the sixth word, whereas that of John Pryor was the fifth word followed by the fourth word. It is clear that there were variations in the codes given to each code user and MI9 needed to have kept a very detailed record on the previously mentioned card index.

If the word ‘but’ occurred as the fifth or sixth letter, it signified the end of the message which should, of course, also have accorded with the completion of the grid. Words which were hyphenated or had an apostrophe in them were to be treated as one

word for the purposes of counting e.g. ‘two-days’, ‘I’ve’. If the word ‘the’ occurred in the sequence, i.e. the fifth or sixth word, this indicated that the spelling code started. Commencing with the next sentence, the first letter of each consecutive word was written down in groups of three. Each letter was identified on the alphabet listing shown below and then the number of the column in which it occurred. Thus, if the sentence started ‘Which brings the’ the significant letters were w b t. Each group of three letters signified a letter in the table. With the example given of w b t, and using the alphabet grid which Julius Green used, shown below, w was in column 3, b was in column 3 and t was also in column 3. This represented the number 333 which indicated that the letter was N.

O 111	P 211	Q 311
R 112	S 212	T 312
U 113	V 213	W 313
X 121	Y 221	Z 321
. 122	A 222	B 322
C 123	D 223	E 323
F 131	G 231	H 331
I 132	J 232	K 332
L 133	M 233	N 333

Julius Green’s spelling code consisted of the alphabet starting with O. The alphabet was written down in three columns, as shown, and after Z, a full stop occurred. This meant 27 items and three columns of nine letters. The word was built up by continuing to take the first letter of consecutive groups of three words until the full stop occurred in the coding (i.e. 122). The de-coding then continued by moving to the next sentence and reverting to the word count. Again, there were variations since it could also involve moving to the next paragraph and then reverting to the word count.

In the same way that there were variations in the word count, it was proved by Professor McMullan that there were also variations in the alphabet code. He identified the letter S as the missing alphabet key in John Pryor's code by a lengthy elimination process of all other letters of the alphabet. The S alphabet code is shown below:-

S 111	T 211	U 311
V 112	W 212	X 312
Y 113	Z 213	. 313
A 121	B 221	C 321
D 122	E 222	F 322
G 123	H 223	I 323
J 131	K 231	L 331
M 132	N 232	O 332
P 133	Q 233	R 333

Whichever alphabet code was used, it was based directly on a form of modular arithmetic where the pattern of three is key to constructing the coded message and deciphering it.

Whilst MI9 did initially describe their codes as 'simple', it is clear that, from a layman's perspective, they were far from simple and, in order to avoid the searching oversight and scrutiny of German censors, it is hardly surprising.²⁴³ The code user was essentially required to reverse engineer his message. He started with the message to be encoded, constructed the grid, numbered it, placed those numbers/words in the correct order in his letter with the requisite number of spaces alternating between, reflecting his own personal numerical code, and then sought to construct a sensible sounding but totally innocuous letter linking it all together.²⁴⁴ The whole exercise required

²⁴³ Foot & Langley. *MI9 Escape and Evasion 1939-1945*. p.105.

²⁴⁴ TNA: WO 208/3242, Enclosure I, Section IV, pp.258-261.

considerable intellectual horse-power, time and commitment to plan and construct the message ahead of time. They were then in a position to maximise the use of the limited opportunity they were given by their German captors to write letters home, and commit that opportunity to a covert purpose. It must also have been a considerable morale booster for the prisoners of war to know that, despite their loss of liberty, they were still in a position to contribute in a very significant way to the war effort, and also to have the re-assurance of knowing that an entire organization was working at home to aid their attempts to escape, that they might contribute valuable intelligence information, and that the authorities at home were ensuring that their families were being kept briefed about their continuing contribution. It must also have relieved the considerable boredom of long months and years spent in captivity with ample ‘leisure’ time on their hands.

Decoding a hidden message

Using the letter dated 7/5/42 which John Pryor wrote home, reproduced as a Word document at Figure 1, the exercise to decode the letter is marked up on a Word document and is shown at Figure 2 where significant words and letters are highlighted in red.²⁴⁵ The following method of decoding was employed to discover the hidden message. The first two words after the salutation are ‘Last week’: a 4 x 4 grid is, therefore, constructed. Moving to the second line of the letter and using Pryor’s numerical code of 5 and 4, the fifth word is ‘marks’, so this goes into the top left box of the grid and is, therefore, the final word of the message. The fourth word after this is ‘the’ which indicates that the alphabet code starts at this point.

²⁴⁵ The exercise was made possible because of the initial work by Professor McMullan in identifying the missing key to John Pryor’s code which has been noted earlier.

Figure 1 coded letter

7/5/42

My Dear Mummy & Daddy, Last week I received a short letter from Robert. The envelope had the marks of five of the RAF censors. I can't imagine what his new number on the envelope means, maybe he has been turned over to rather different occupations, which of course I can't know anything about. I am glad the information I sent you, especially about the Uffa Fox and other books of the sailing variety, reached you. As regards other possible books, my present desires seem mostly for interesting literature of events in our country's history. A subject I am unfortunately very weak in. The gardens are improving, borders of wire which require a net to keep the football off. Possibly a move to Marlag Nord in the late summer may prevent getting all advantages from some of the later plants, but we hope not. During the course of the last days we obtained some chairs, from local sources I believe, also some tables, which give the recreation room a much better appearance. A few weeks ago we arranged a rather useful scheme, so men could get "legergeld" by remitting money at home for that received here. After another year – year and a half my clothing requirements etc. will be but a mere trifle. As I have received all your clothing parcels sent off up to the end of 1941. The suitcase in the last one arrived a bit battered but still quite usable. Private cigarette and tobacco parcels seem to be coming in better now, so I am hoping to get another shortly as my last one arrived in November. Now I must stop, hoping you are all as well as I am. Remember me especially to Marj. Your very loving son.
John.

Figure 2 coded letter with hidden message highlighted

My Dear Mummy & Daddy, Last week (**4x4 grid**) I received a short letter from Robert. The envelope had the **marks (5)** of five of **the (4 - start alphabet code)** RAF censors. I can't imagine what his new number on the envelope means, maybe he has been turned over to rather different occupations, which of course I can't know anything about. I am glad the **information (5)** I sent you, **especially (4)** about the Uffa Fox **and (5)** other books of **the (4 – start alphabet code)** sailing variety, reached you. As regards other possible books, my present desires seem mostly for interesting literature of events in our country's history. A subject I am unfortunately very weak in.

The gardens are improving, **borders (5)** of wire which **require (4)** a net to keep **the (5 – start alphabet code)** football off. Possibly a move to Marlag Nord in the late summer may prevent getting all advantages from some of the later plants, but we hope not. During the course **of (4)** the last days we **obtained (5)** some chairs, from **local (4)** sources I believe, also **some (5)** tables, which give **the (4 – start alphabet code)** recreation room a much better appearance. A few weeks ago we arranged a rather useful scheme, so men could get "legergeld" by remitting money at home for that received here. After another year – year **and (5)** a half my **clothing (4)** requirements etc. will be **but (5 – indicates end of message)** a mere trifle.

As I have received all your clothing parcels sent off up to the end of 1941. The suitcase in the last one arrived a bit battered but still quite usable. Private cigarette and tobacco parcels seem to be coming in better now, so I am hoping to get another shortly as my last one arrived in November. Now I must stop, hoping you are all as well as I am. Remember me especially to Marj. Your very loving son.

John.

This means that, starting with the next sentence, the first letter of each consecutive word is written down in groups of three, each letter is identified on the alphabet listing shown below and then the number of the column in which it occurs. Thus, in this example, the decoder moves to the next sentence which starts ‘I can’t imagine’ and proceeds to list the first letter of every word in groups of three. Each group of three letters signifies a letter in Pryor’s alphabet table, O, as shown below.

O 111	P 211	Q 311
R 112	S 212	T 312
U 113	V 213	W 313
X 121	Y 221	Z 321
. 122	A 222	B 322
C 123	D 223	E 323
F 131	G 231	H 331
I 132	J 232	K 332
L 133	M 233	N 333

Transposing each group of three letters into the alphabet letter from this table, the following word emerges.

ICI	333	R
WHN	222	E
NOT	232	N
EMM	211	T
HHB	222	E
TOT	232	N
RDO	313	.

The word spells ‘renten’, the name of the currency in Nazi Germany, and becomes the second word on the grid. At the point where the full stop occurs, the decoder reverted to the 5 4 sequence at the start of the next sentence in the letter but maintaining the correct rhythm. Having finished on the fourth word at the previous stage, this time the fifth word is counted. This gives the word ‘information’ which becomes the third word on the grid. The following fourth word is ‘especially’ which becomes the fourth word

on the grid. The fifth word is ‘and’ which becomes the fifth word on the grid. The next fourth word is ‘the’ signalling that the alphabet code starts again at the beginning of the next sentence. Taking the first letter of each word and setting them out in groups of three produces the following:-

ARO 133 P

PBM 121 A

PDS 111 S

MFI 133 P

LOE 332 O

IOC 333 R

HAS 211 T

IAU 313 .

It contains a spelling error but is nonetheless recognisable as the word ‘passport’ which becomes the sixth word on the grid. Reverting to the start of the next complete sentence in the letter and picking up the 5 4 rhythm, the fifth word is ‘borders’ which becomes the seventh word on the grid. The following fourth word is ‘require’ which becomes the eighth word on the grid. The following fifth word in the letter is ‘the’ which indicates that the alphabet code starts again, as follows:-

PAM 111 S

TMN 212 W

ITL 323 I

SMP 111 S

GAA 111 S

FSO 313 .

The ninth word on the grid is ‘swiss’.

Reverting to the start of the next complete sentence in the letter and keeping the 5 4 rhythm, the fourth word is ‘of’ which becomes the tenth word on the grid. The following fifth word is ‘obtained’ which becomes the eleventh word on the grid. The

following fourth word is ‘local’ which becomes the twelfth word on the grid. The following fifth word is ‘some’ which becomes the thirteenth word on the grid. The following fourth word is ‘the’ which indicates that the alphabet code starts again at the beginning of the next sentence. This produces the following:-

AFW 132 M
 AWA 121 A
 ARU 133 P
 SSM 111 S
 CGL 313 .

The fourteenth word on the grid is ‘maps’.

Reverting to the start of the next complete sentence in the letter and keeping the 5 4 rhythm, the fifth word is ‘and’ which becomes the fifteenth word on the grid. It is worth noting at this point the deliberate repetition of the word ‘year’ which makes no sense in English but is clearly designed to ensure that the fifth word is ‘and’ so that the hidden message will make sense. The following fourth word is ‘clothing’ which becomes the sixteenth and final word on the grid. To reinforce the point, the fifth word after this point is ‘but’ which confirms the end of the coded message: the introduction of the apparently superfluous ‘etc’ ensured that ‘but’ occurred as the fifth rather than the fourth word. Placing all these words in their correct consecutive position on the grid produces the following:-

marks	renten	information	especially
and	pasport	borders	require
swiss	of	obtained	local
some	maps	and	clothing

Starting in the bottom right corner and reading across and diagonally in sequence, the message reads ‘clothing and local maps obtained require some of borders especially

swiss pasport information and renten marks'. Leaving aside the mis-spelling of 'passport', it is a clear request for maps of the Swiss border, and information which would allow them to produce passports. It also carries an indication that they have already been able to obtain local maps and clothing.

It is worth noting at this point that Pryor was at the time (May 1942) located in the Westertimke camp near Sandbostel in northern Germany. Asking for maps of the Swiss border is perhaps surprising, since the distance to be covered was considerable. Escape via the Baltic ports, which is what Pryor and others subsequently attempted, would have been more likely. The message does, however, serve as a stark reminder of the *raison d'être* of MI9 and the extent to which prisoners of war had taken on board the escape philosophy. John Pryor's memoirs contain many mentions of planning escapes and he clearly recalled that escaping was the duty of every prisoner of war but with 'the whole of NW Europe under German control and with no maps or compass it seemed a pretty hopeless task.²⁴⁶ He was involved in detail in the preparation of the escapes, often helping to dig the tunnel. He, himself, did escape but was recaptured (see Chapter 6). However, he helped many others to escape successfully. He was liberated by the advancing Allies in 1945 and went on to serve his country also in peacetime as a hydrographic surveyor in the Royal Navy.

Organisation in the Camps

The level of organisation in the camps dedicated to planning and executing escapes has been described in Chapter 3. Such detailed organisation was also maintained so far as the coded letter system was concerned. The ingenuity required to compose a message that seemed like an innocent and innocuous letter to the family back home must have

²⁴⁶ Second World War Experience Centre, reference SWWEC RN/Pryor J.

been very great and would have needed some considerable time. Time was something the prisoners of war had in abundance but they would also have needed their colleagues to keep watch to ensure that the activity was not discovered by the guards. The SBOs and the Escape Committees decided which messages were sent and by whom. They alone knew the identities of all the coded letter writers in each camp. New arrivals were interrogated by them and, if they knew the code, they were ordered not to send messages independently but only when told to do so. There were reports from at least one camp, namely Stalag Luft III/Sagan, at the end of the war that mistakes had been made by MI9. The criticisms mentioned use of the same typewriter for letters to different individuals in the same camp; different signatures by the same fictitious individuals; one prisoner's code key marked on the envelope instead of his prisoner of war number; use of similar notepaper for letters to different code users; and a lack of understanding in MI9 of the difficulties of keeping detailed records in the camps of all coded messages sent.²⁴⁷ Such detailed criticisms could only have been made by a team that was monitoring each and every letter. Whilst the prisoners of war in each camp apparently knew that some means of secret communication between the camp and the UK existed, its precise form was known only to the SBOs, the Escape Committees and the code users. The activity was certainly managed in a highly controlled and meticulous fashion with considerable attention to the detail and the security.

Conclusion

This review of the exchange of coded letter correspondence reveals two particularly remarkable points. The first of these is the considerable degree to which prisoners of war exposed themselves to danger, not simply in planning their own escapes but also in sending intelligence information back to MI9. Whilst the penalty for attempted escape

²⁴⁷ TNA: AIR 20/2645, pp.70-71.

was thirty days in solitary confinement, the penalty for providing intelligence was likely to be a session with the Gestapo for alleged espionage activities. Secondly, the sheer cleverness of the codes is strikingly impressive. As noted already, the codes employed were described as simple by MI9, but the finesse of the methodology was such that, since each was likely unique to the user, it was unlikely to be discovered. Since each code comprised three elements, namely two Arabic numbers and a letter of the alphabet, there were 2,600 possible permutations. This allowed for the existence of 2,600 coded letter writers, if each was to use a unique code. By December 1940 there were already 928 coded correspondents in operation and it was anticipated that this number would likely increase to 1500 very rapidly.²⁴⁸ By the end of the war in 1945, a total of 12,500 coded letters had been despatched and received by MI9. The peak year was 1943 with a total of almost 4,500 in that year alone. By 1944, radio communications had been established in many of the camps and, together with the collapse of Italy, this resulted in a reduction of the coded letter traffic.²⁴⁹

There is indeed no evidence that a coded letter was ever deciphered by the Germans (or the Italians) or, indeed, that they were even aware of their existence, until the action by the MA in Stockholm which might well have wrecked the entire system, but apparently did not. The difference in national approaches to the use of codes is also relevant. The Germans used a technical approach with machines to encrypt their coded messages, of which ENIGMA is the most famous. The British had always tended to regard codes and encryption as an intellectual exercise, preferring to use people rather than machines. Crosswords and chess were well-known as leisure activities in the UK; it was essentially the same approach of the application and discipline of intellectual thought and logic which allowed the coded letter approach to succeed as effectively as it

²⁴⁸ TNA: WO 165/39.

²⁴⁹ TNA: WO 208/3242, Enclosure I, p.87.

evidently did. It was arguably this significant difference in national traits and practices which allowed MI9 to succeed with this most important link in the whole escape chain: it allowed the prisoners of war to indicate what they needed by way of maps and other escape aids and ensured that MI9 could respond by reporting what was being sent, to whom and when.

MI9 regarded the whole operation of coded correspondence as a success story. From their perspective, they took inordinate care with the operation of the entire system. They also recognised that, integral to the success, had been the outstanding security and planning which had taken place in the camps.²⁵⁰ It is, therefore, perhaps one of the most surprising aspects of the whole story of the coded letters to realise the extent to which it has not been addressed in detail by historians to date. Certainly Foot and Langley mentioned it in the history of MI9 which was published over 30 years ago and Green's book tracing his own role as a coded letter correspondent with MI9 was published over 40 years ago.²⁵¹ Foot and Langley acknowledged Green's book as their primary source and Foot emphasised in conversation as recently as 2012 the importance of the coded letters. One might reasonably ask why that importance was not recognised by other historians, especially those who more recently have had access to rather more open MI9 related files than Foot and Langley ever did in the 1970s. One might conjecture that the story has perhaps been overshadowed by that of Bletchley, ENIGMA, Alan Turing and his staff. For whatever reason, it is certainly the case that the coded letter story appears to have engendered no real interest or consideration by historians and, more particularly, by those involved in the history of British intelligence in the twentieth century. And

²⁵⁰ TNA: WO 208/3242, Enclosure I, p.87.

²⁵¹ Foot & Langley. *MI9 Escape and Evasion 1939-1945*. Appendix 3, pp.322-324; Green. *From Colditz in Code*.

yet, when one considers precisely what MI9 managed to do and what the prisoners of war managed to contribute in terms of current intelligence as well as planning escapes, it has to be acknowledged that this was a quite stunning contribution to the war effort.

The construction of the network of coded correspondence bears testimony to the extent to which escape had become a professional undertaking involving painstaking planning and execution. The programme of coded correspondence was every bit as carefully planned and executed in all its aspects as the map production programme. By this stage of the unfolding story, it is very clear that MI9 demonstrated the same professionalism, attention to detail and application in every aspect of the escape and evasion programme on which they had embarked. The importance of the coded correspondence as a vital link in the escape chain will become even more clear in the next two chapters where a number of case studies will show the extent to which the maps were used in the geographical areas selected by MI9 and in a number of particular escapes which are described.

Chapter 5

A case study approach: Airey Neave and the Schaffhausen Salient

Life's battles do not always go to the stronger and faster man, but sooner or later the man who wins is the man who thinks he can.
(Anonymous).²⁵²

The way in which the mapping programme was conceived, the significant resources which were dedicated to it, the ways of getting the maps into the camps and the method of coded contact have been set out in earlier chapters. There remains, however, the whole issue of how the maps were used in actual escapes and the extent to which they successfully, or otherwise, fulfilled their role. This aspect is now explored through three case studies, each selected to highlight a different aspect of the mapping programme. The first case study, the focus of this chapter, assesses the escape of perhaps one of the most well-known personalities to emerge from World War II, Airey Neave, who followed one of the principal escape routes out via Switzerland. The second case study, outlined in the chapter that follows, describes the Baltic ports' route, another MI9 recommended route and for which they produced some of the largest scale maps in their entire inventory. The final case study focuses on the survival of two maps produced by the prisoners of war themselves, based directly on maps which MI9 successfully smuggled into the camps. Each study has been selected to demonstrate how the maps were used, and the extent to which they were a key aspect in escape attempts: in essence, the purpose of the case studies is to demonstrate the geography of escape.

Case study escape routes

Before setting out each of the case studies, it is necessary to appreciate some important aspects of the escape routes which were selected by MI9 and the critical extent to which

²⁵² Airey Neave's private papers were deposited in the Parliamentary Archive by his widow, Lady Neave, after his murder on 30th March 1979. This quotation, which he did not ascribe, appears in Post-War file AN 705.

MI9's rationale for their choices was reflected in the escape and evasion mapping programme. It is certainly the case that there were more attempts and more successful escapes from German prisoner of war camps than there were from Italian camps. As noted before, to a very great extent and in a surprisingly paradoxical way, this appeared to reflect German efficiency and Italian inefficiency. MI9 relied on German efficiency to deliver, in a timely manner, the coded letters and parcels, containing the escape aids. Italian ineptitude, on the other hand, meant that letters and parcels were often held up for months behind a wall of bureaucracy and sluggishness. MI9, therefore, appeared to concentrate resources on aiding and supporting escapes from Germany. Time was spent in documenting the passage of the coded letter traffic.²⁵³ Prisoners of war with whom MI9 was in coded contact were encouraged to acknowledge receipt of the letters they received. There were a number of examples of this in John Pryor's letters. His letter dated 22/3/42, for example, contained a coded message which confirmed receipt of two coded messages from MI9 'yours 24 dec and 3 jan understood'.²⁵⁴ The message continued with details that Pryor had briefed four other men in the coded letter system and provided the individual codes he had given to each man.

The principal escape routes out of Germany which MI9 chose were south to the neutral country of Switzerland and north via the Baltic ports to the neutral country of Sweden. Because of the landlocked nature of Switzerland, there had to be a further route out via France and Spain. This onward movement was, however, through organised escape routes, amongst the most famous of which were the Pat and Comet Lines. The Pat, or PAO, line was named after Patrick Albert O'Leary, the cover name of a Belgian national, Albert-Marie Guérisse, masquerading as a French speaking Canadian airman, who established the escape route from Marseilles via the Pyrenees to

²⁵³ TNA: WO 208/3242, p.80.

²⁵⁴ World War II Experience Centre, reference SWWEC RN/Pryor J.

Madrid. The Comet Line ran through western France and, similarly, across the Pyrenees to Madrid. Along these organised escape lines, the escapers were not on their own; they were accompanied by members of the Resistance, sometimes by paid guides and even, on occasion, by professional smugglers, who knew the terrain, so that large scale mapping, in particular, was not required. A good example of this was coverage of the Pyrenees. Series 43 sheets, described in Chapter 2 and listed in detail at Appendix 5, which cover Western Europe, are all at small scale (1:1,000,000) with four larger scale insets of border areas, and even those vary in scale from as small as 1:500,000, through 1:300,000 to the largest one at 1:250,000 scale. Two of the insets appear on sheet 43A and both are at 1:500,000 of sections of the Pyrenees across the French-Spanish border. MI9's mapping resources tended to be concentrated on small-scale blanket coverage with large scale coverage of specific escape points. This aspect is also reflected in the first two of the three case studies chosen. It is also important to highlight that the largest centres of MI6/SIS activity during World War II appear to have been concentrated in Berne, Stockholm, and Madrid, the capital cities of the three principal neutral countries in Europe, and the centres through which escapers would need to travel as part of their escape routes. SIS certainly ensured from as early as the summer of 1940 that they controlled the escape routes which MI9 sought to establish through the neutral nations. It was also the case that the section within MI9 responsible for this aspect of their work was run by Jimmy Langley who was in fact a member of SIS and was never actually appointed to the staff of MI9. (This aspect of the SIS/MI9 relationship will be considered in more detail in the Conclusion).

The first of the case studies covers the Schaffhausen salient, a rather tortuously oriented section of the German-Swiss border. The second study relates to the route via the Baltic ports, another extremely successful route to freedom and the one chosen by many, not least a number of the coded letters writers, for example John Pryor. The final

case study is of a rather different type. It relates to surviving copies of two MI9 escape and evasion maps which were clearly produced inside a prisoner of war camp. They survived in a Scottish University collection where they were deposited a few years after the war, in one case in 1947, and described simply as ‘prisoner of war’ maps. Sadly no records survive which would allow their earlier provenance to be traced. However, this research will show that the circumstantial evidence of their derivation and production will prove to be strong and very relevant in terms of MI9’s mapping programme.

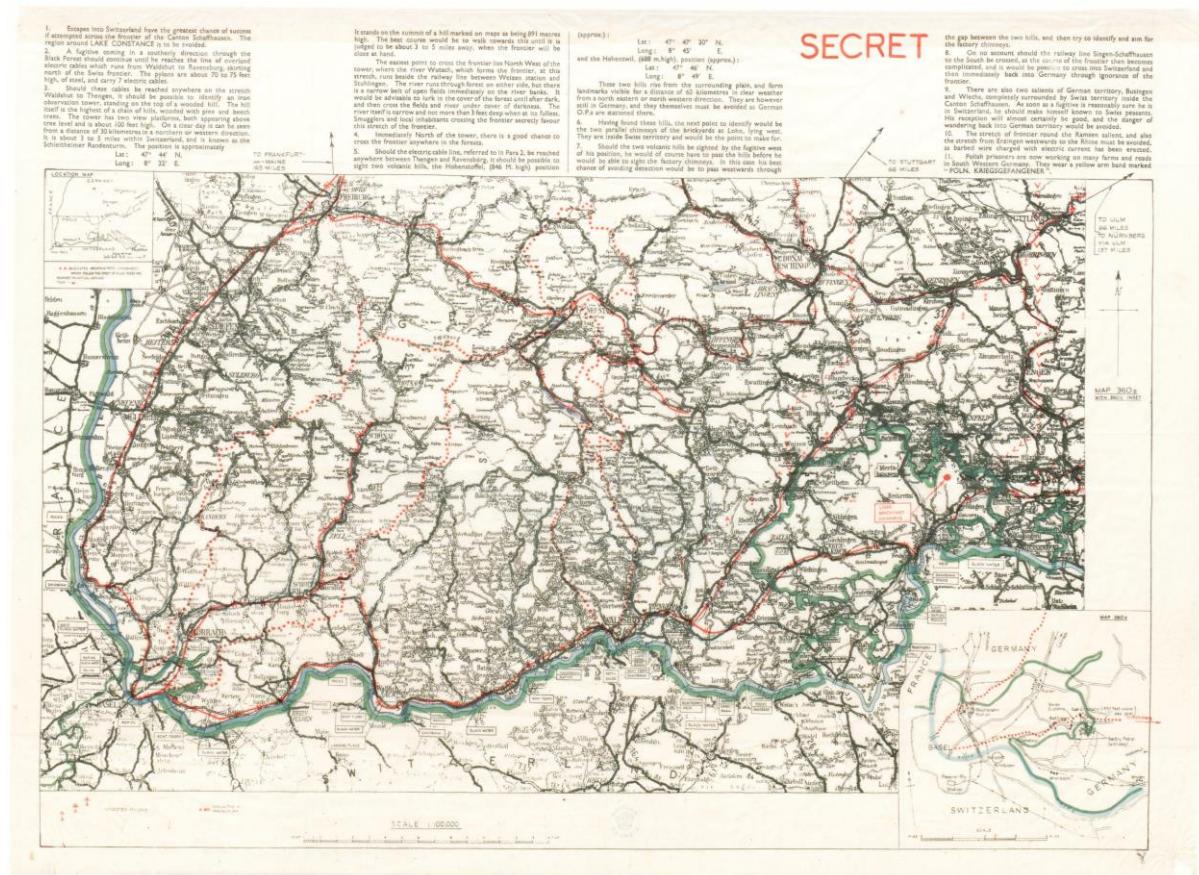
What now follows is a description of the Schaffhausen escape route. This route was important in the greater scheme of MI9 organised escape, not least in terms of the success rate which attached to the attempted escapes across this particular border: almost 20% of all successful escapes throughout the 6 years of the war were into Switzerland and the majority of those were along this route.

Escape to Switzerland: the Schaffhausen Salient²⁵⁵

MI9 appeared to work hard to identify potential escape routes and provide the necessary maps to help prisoners of war to escape. One of the most intriguing maps identified has been sheet Y, a large scale (1:100,000) map of the Schaffhausen salient, located on the border area of Germany and Switzerland, to the west of Lake Constance. (see illustration XV) Sheet Y is a very different map from most of the escape and evasion maps which MI9 produced. Firstly, at 1:100,000, its scale is very much larger

²⁵⁵ A ‘salient’ is a peninsula-like projection of the territory of one state (in this case, Switzerland) into the territory of an adjacent state (Germany). It would have been the closest stretch of the border for those seeking to escape from Germany into Switzerland.

Illustration XV : sheet Y



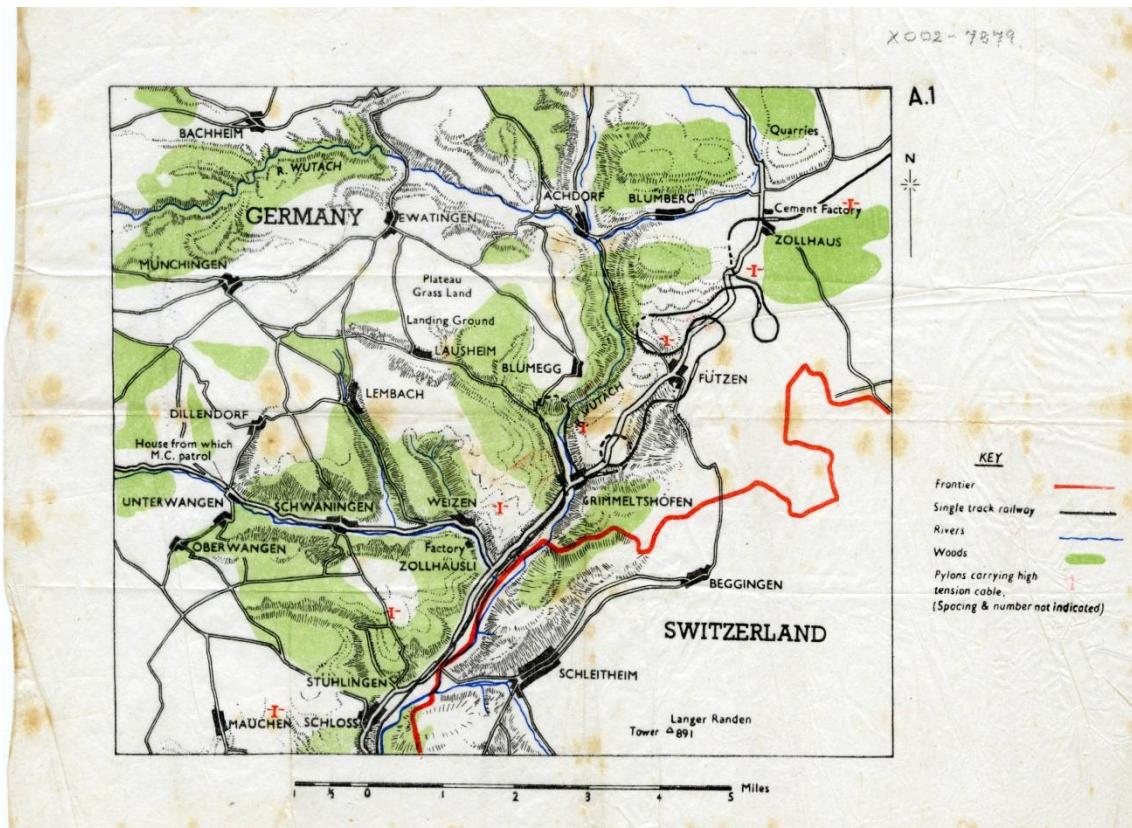
(c) British Library Board, Maps CC 5a 424.²⁵⁶

than most of their mapping programme. Secondly, it is clear that the localised area of coverage had been carefully selected to afford escaping prisoners of war the maximum chance of a successful escape. Thirdly, it contains a considerable amount of textual information, in military circles known as ‘goings’ information (terrain analysis), i.e. identifying and describing in considerable detail the significant features in the landscape which would help the escaper to navigate a successful route and also highlighting any features which would likely hamper or impede escape. The goings information (terrain analysis) on sheet Y commenced by stating:

²⁵⁶ The density of detail on the map and its age, together with the relatively poor printing registration on the only extant copy identified, has made it impossible to acquire a clearer image.

Escapes into Switzerland have the greatest chance of success if attempted across the frontier of the Canton Schaffhausen. The region around Lake Constance is to be avoided.

Illustration XVI : sheet A1 Schaffhausen Salient (West)



(Reproduced with the permission of the RAF Museum, Hendon.)

Sheet Y was based directly on native Swiss-German topographic mapping of the border area and, because of the density of detail, the colour specification and the need to print on fabric (which had initially proved a considerable technical challenge for the Waddington company), the one extant copy of this sheet which has been identified, is quite difficult to read, despite its larger scale. MI9 also produced cover of the same area at the same scale in two sheets, namely Schaffhausen Salient West and East, marked respectively A1 and A2 (see Illustration XVI).²⁵⁷ These two maps were included in the

²⁵⁷ It has not been possible to acquire an illustration of sheet A2 Schaffhausen Salient (East) since no extant copy of the escape and evasion map has ever been discovered.

Bulletin: refer to Appendix 9. The significant difference between these two maps and sheet Y is that they were redrawn to a simpler specification to show only a selection of the topographic detail on sheet Y. Contours have been removed and elevation data were shown only in outline by hachures. The textual goings information has also been removed, but the man-made landmarks described have been included as annotations, for example, ‘the brickyards at Lohn’. The result is a considerable enhancement in the clarity and readability of the detail when compared to sheet Y.

By 8th May 1940, MI9 was despatching this ‘special map of the Northern Swiss frontier near Schaffhausen with a memorandum on the prevailing conditions in the area obtained from MI sources’.²⁵⁸ This was clearly sheet Y. It is fascinating to try to discover just how MI9 was able to produce such a detailed map which contained so much local intelligence information, and key to the story is the role played by the officer recruited to MI9 to act as the principal point of contact and liaison with the RAF, namely Squadron Leader A.J. (Johnny) Evans.

Johnny Evans’ role as a lecturer, user of coded correspondence as a means of escape, and source of ideas for escape aids, has already been mentioned and discussed previously, particularly in Chapter 3, but it was really in the production of sheet Y that his contribution appears to have been even more significant. Evans had been a major in the newly formed Royal Flying Corps in World War I. He had been involved in the Somme offensive in July 1916, over-flying the German front line in an attempt to take out their gun batteries. His aircraft engine failed and, although he survived the crash landing, he was immediately captured. Because his brother had been captured at Ypres, and the family had received no news of him for over a year, together with the statistical

However, it is known to have been identical in specification to sheet A1 Schaffhausen (West).

²⁵⁸ TNA: WO 165/39.

likelihood of capture as a member of the fledgling Royal Flying Corps, Evans had had the foresight, prior to his deployment, to set up a coded contact system with his mother. His mother was able to maintain contact with him once he had been captured and she succeeded in providing maps and compasses, secreted inside food parcels, to aid his ultimately successful escape.

Evans, and his colleague, Lieutenant S.E. Buckley, originally with the Northamptonshire Regiment and later with the Royal Flying Corps, escaped from a train whilst being moved from one camp to another. They walked over 130 miles, south from the point where they jumped from the train close to Nuremburg, all the way to the Swiss border. They had decided not to attempt to board a train but rather rely on walking to the border and staying off the beaten track. It took them 18 days to reach their objective, the Schaffhausen salient, and cross safely to freedom in Switzerland. Their biggest challenge was to find enough food to sustain them and they resorted on many days to digging up potatoes from the fields they passed as the meagre rations they carried had run out early in their escape. They did, however, have the ‘excellent maps’ which Evans’ mother had sent him and ‘accurate and detailed knowledge of the whole route.....to the frontier’ acquired from fellow prisoners who had escaped, been re-captured and had briefed fellow escapers on the detail of the route to freedom.²⁵⁹ However, Evans clearly recalled the problems they had faced on this particular stretch of the border and, particularly, in knowing precisely when they had reached safety. On such a winding stretch of the border, it was easy to be confused and cross back into Germany by accident. The detailed goings information which appeared on the northern edge of sheet Y (see Illustration XV) clearly reflected his own, first-hand experience, as follows:

²⁵⁹ Evans, A.J. *The Escaping Club*, p.152.

On no account should the railway line Singen–Schaffhausen to the South be crossed, as the course of the frontier then becomes complicated, and it could be possible to cross into Switzerland and then immediately back into Germany through ignorance of the frontier.

Evans became convinced that his World War I experience might prove of value during a second war which many began to anticipate in the 1930s.

Evans, however, went further than simply recalling his World War I experience and offering the benefit of it to MI9. As Hutton described his actions, Evans decided to spend a holiday cycling around the Schaffhausen district in 1937. His objective was to photograph both sides of the section of the German-Swiss frontier across which he had made his ‘memorable march to freedom’.²⁶⁰ The fact that sheet Y carried detailed textual directions on the nature of the frontier alignment doubtless reflected his own experience. Evans subsequently joined MI9 in 1940, becoming one of their most valuable lecturers and trainers. Whilst no record has been found which clearly identifies sheet Y as the product of Evans’ foresight, there is much circumstantial evidence to support such a hypothesis. It is a matter of record that the map covers the same stretch of the German–Swiss frontier across which he had escaped to freedom in World War I; he produced much of the intelligence described in minute detail on the map; he was certainly a committed member of the MI9 staff from the beginning; the map of the Schaffhausen salient was one to which MI9 attached great significance and Evans was, from the beginning, regarded as one of their best lecturers at the Training School. Hutton reinforced the perception of Evans’ contribution by emphasising the extent to which Evans’ photographs of the Schaffhausen salient proved invaluable to MI9’s work.²⁶¹ As indicated in Chapter 3, these photographs are likely to be the ones reproduced in the MI9 Bulletin showing detailed views of the topographic and landmark

²⁶⁰ Hutton, C.C. *Official Secret*, p.15.

²⁶¹ Hutton, C.C. *Official Secret*, p.15.

features which would be of most navigational significance to those attempting to escape across this particular stretch of the frontier, including views of river banks and areas patrolled by German border sentries.

There were many escapes through the Schaffhausen salient which were documented in the records, almost all of which were initially highly classified. Pryor had asked for maps of the Swiss border in one of his coded letters and he also mentioned in his memoirs the escape attempt by Lieutenant R.F. Jackson on 2nd February 1944. Jackson was fluent in French and was furnished with papers indicating he was a French national. Having succeeded in getting clear of the camp, he travelled south by train to Schaffhausen, a considerable distance from the camp, and then made his way on foot to the border. Unfortunately, in the dark, he stumbled on a trip wire and was caught by guard dogs before he was able to cross into Switzerland. It is notable that he chose to travel south to the Swiss border, which had been the area for which Pryor had originally requested maps. Whether or not Jackson had access to maps is not mentioned by Pryor. As has been shown, the Schaffhausen salient, west of Lake Constance, on the south German/Swiss border was, however, a well-researched escape route and one for which MI9 had produced three large scale and very detailed maps to aid the escapes. The importance of the route and of the maps produced of the area will be more fully demonstrated in the first case study which follows, the escape of Airey Neave from Colditz.

Case Study 1: Airey Neave's escape from Colditz in 1942

The story of Neave's escape demonstrates not only the importance of the Schaffhausen escape route, but also the value of the maps which MI9 produced to aid that particular route. It is, therefore, key to this attempted review of MI9's escape and evasion

mapping programme to look in detail at one of the few successful escapes during World War II across this particular border which was subsequently recorded publicly. It demonstrates not only the importance of the Schaffhausen escape route, but also the unquestionable value of the maps which MI9 produced to aid that particular route to freedom.

Airey Middleton Sheffield Neave was born in London on 23rd January 1916. Educated at Eton, he went on to read jurisprudence at Merton College, Oxford, where he graduated in 1938. At the outbreak of war, Neave (already in the Territorial Army) became a lieutenant in the Royal Artillery. He was sent to France early in 1940 as a Troop Commander in the 1st Searchlight Regiment of the Royal Artillery. On 26th May, whilst trying to defend a forward position to the south of Calais, he was wounded and subsequently captured, as he lay on a stretcher. He was held in various Oflag and, after a number of unsuccessful escape attempts, he was eventually imprisoned in Oflag IV C, the castle in Saxony more commonly known as Colditz. The fortress, which stood on the site of an earlier castle, had been largely constructed in the sixteenth century by the Elector of Saxony, and extended further by Augustus the Strong of Saxony in the eighteenth century.²⁶² It was to Colditz that those who repeatedly attempted to escape were often sent as its construction and location ensured that breaking out of such a fortress was a considerable, if not impossible, challenge. Neave was in fact the first British officer to escape successfully from Colditz, and not Pat Reid who was depicted as such in the film *The Colditz Story*. The portrayal clearly rankled with Neave who subsequently complained and took action to set the record straight.²⁶³ Neave told his own story in the first book he published in 1953.²⁶⁴ He insisted that he had written the book without access to official sources, but simply from his own

²⁶² Parliamentary Archives, Colditz File, AN 677.

²⁶³ Parliamentary Archives, Literary File, AN 671.

²⁶⁴ Neave, *They Have Their Exits*.

personal recollections.²⁶⁵ That may well have been the case but it is certain that he would still have needed official sanction at that time to publish such a book, not least since, as a recently elected Member of Parliament, he was very much in the public eye.

In many ways Neave personified the approach to escape which MI9 had sought to inculcate. He mentioned the philosophy of escape a number of times in his published account of his escape in a very telling way, to the extent that it was later quoted by Foot and Langley:

The real escaper is more than a man equipped with compass, maps, papers, disguise and a plan. He has an inner confidence, a serenity of spirit which makes him a Pilgrim.²⁶⁶

Neave had attempted to escape on two previous occasions from Colditz, on 20th August 1941 and on 23rd November 1941. The first attempt saw him try to walk out dressed as a German guard and the second involved crawling through the attics and trying to drop down 70 feet on a knotted sheet over the wall: both attempts failed before he got clear of the camp. He eventually succeeded on 5th January 1942. Dressed as a German Oberleutnant, he was accompanied by his Dutch colleague, Lieutenant Toni Luteyn of the Netherlands East Indies Army. The two nationalities had apparently ‘agreed to pool their resources for escaping’.²⁶⁷ Most of the Dutch officers spoke fluent German and were, therefore, ideal travelling companions. The British were able to contribute the aids to escape which had been provided by MI9.²⁶⁸

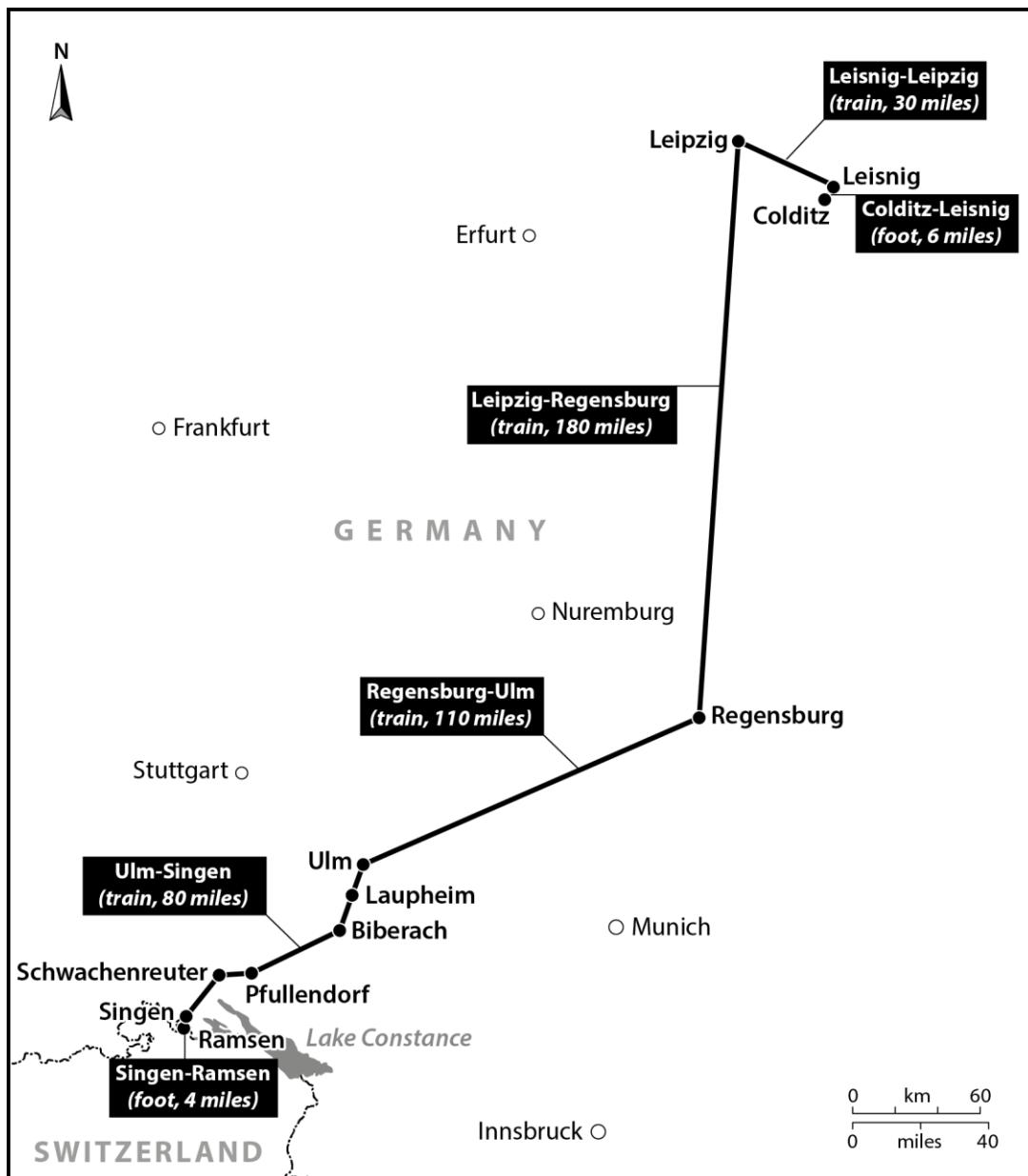
²⁶⁵ Parliamentary Archives, Literary File AN 655.

²⁶⁶ Neave. *They Have Their Exits*, p.15.

²⁶⁷ Foot and Langley. *MI9. Escape and Evasion 1939-1945*, p.127

²⁶⁸ Neave. *They Have Their Exits*, p. 84.

Illustration XVII : Neave's successful escape route



(produced by the GeoMapping Unit, Plymouth University.)

In plotting the entire route of their escape (see Illustration XVII), as described by Neave in his book, on a small-scale map of Germany and northern Switzerland and using also his subsequently discovered escape report, one aspect of their escape became abundantly clear. Whilst he and Luteyn travelled south towards the Swiss frontier, they did not make for the nearest point of the frontier, i.e. they did not travel due south to the frontier but veered south west at one point in order to reach the Schaffhausen salient.

From Colditz, they had walked six miles to the small town of Leisnig where they caught a train to Leipzig, a distance of some 30 miles further on. From there they travelled south 180 miles by train to Regensburg where they changed trains for Ulm. They travelled a further 110 miles to Ulm where, on arrival, they again changed trains, trying to get to Singen on the Swiss border. Singen is located some 80 miles south west of Ulm, close to the Swiss border and the Schaffhausen salient, and to the west of Lake Constance. It had been in Ulm that they had almost been recaptured since their attempt to purchase tickets for a destination on the Swiss border had apparently aroused considerable suspicion. They were fortunate to avoid recapture in Ulm, and then decided to continue to travel by train to Singen, but to avoid the main line, travelling rather through Laupheim, Biberach, Pfullendorf and Schwachenreuter.²⁶⁹ From Biberach it would arguably have made more sense for them to travel directly south towards the eastern end of Lake Constance, being less than 40 miles distance to the Swiss border, instead of which they chose a much longer route. They eventually crossed the frontier south of Singen, reaching Ramsen which was the first settlement inside Switzerland. The more one considered their route, the clearer it became that their aim had always been to reach the Schaffhausen salient section of the border. Why would they do that if they had not already been briefed on the most likely point to cross the border successfully and consulted a map which showed detailed coverage of that stretch of the border? In considering their route to freedom, which Neave eventually described in more detail in his escape report, the virtually inevitable conclusion is that Schaffhausen was always their objective.

Such a hypothesis is also supported by independent evidence. Whilst this may never be proved conclusively, it seems highly likely that they had access to sheet Y and the intelligence contained on it, or to sheet A2, since both would have provided them

²⁶⁹ TNA: WO 208/3288, Chapter X, p.75.

with the detail of the area they needed and demonstrably possessed. It now appears likely that Neave was trying to hide the fact that such a map had actually been sent covertly into Colditz by MI9, since he mentioned it neither in his book nor in the escape report written on arrival safely back in London. Neave's apparent reticence with regard to the role played by possession of a covertly acquired map reinforces Foot's insistence that 'maps were never discussed' as that is what 'we had been briefed on'.²⁷⁰ It is also significant that Neave's first book was originally published in 1953, less than ten years after the end of the war, at which point the protocols and restrictions regarding public disclosure of MI9's methodology would still have been paramount.²⁷¹ A 'D' notice (number 42) had been issued on 19th January 1946 which forbade the public disclosure of escape and evasion methods, including any assistance given to prisoners of war. The notice also embraced the non-disclosure of information relating to the use of secret methods of communication with the prisoner of war camps and the identities of nationals of European countries who had assisted in the escape programme.²⁷² There is, however, quite specific evidence to confirm that MI9 had, in fact, sent advice into Colditz on some declared escape requirements 'concerning routes and destinations', and that they had not only made plans to send parcels containing escape materials to selected officers in a number of specified camps, of which Oflag IVC (Colditz) was one, but that many such parcels had already been sent by the time of Neave's escape.²⁷³ By May 1941, MI9 had received confirmation that escape material had been received in four camps, of which Colditz, was one of those listed. During the same month, MI9 had

²⁷⁰ Interview with Professor M.R.D.Foot at the Savile Club, London, on 31st January 2012.

²⁷¹ The Korean War did not end until the summer of 1953 and it is possible that military maps were still being produced on fabric at that time, although probably intended more for operational use rather than for escape and evasion purposes.

²⁷² The system of 'D' notices was introduced in 1912 and still continues. They are Defence Advisory Notices which seek to advise organisations in the UK which information should not be published or broadcast, since to do so could prove prejudicial to the national defence interest.

²⁷³ TNA: WO 165/39, entry for January 1941.

despatched 62 parcels under the guise of the Prisoners' Leisure Hour Fund.²⁷⁴ By July 1941, parcels had certainly arrived in Colditz, confirmation having been received in MI9: it was noted that they had been despatched in March and April 1941.

Additional evidence that it was indeed either sheet Y or A2 which Neave and Luteyn used is also to be found in the history of the Colditz Camp.²⁷⁵ After the war had ended, and on the repatriation of the prisoners of war, the Senior British Officer (SBO) in each camp was required by the War Office to produce a written record as an historical review of life in the Camp. It is likely that these reviews were produced in order to ensure that any possible war criminals amongst the German guards, or treasonable behaviour by any of the prisoners of war, could be documented and pursued through proper legal process. In writing the Historical Record of Oflag VII, Colditz, the rapporteur included, at Chapter X, a review of the successful escapes. The escape report written by Captain P. (Pat) R. Reid of the Royal Army Signals Corps and Flight Lieutenant H. N. Wardle of the RAF was included. Reid and Wardle escaped from Colditz on 16th October 1942, nine months after Neave and Luteyn. Following an identical route, they made for the same crossing point on the Swiss border and, once successfully across, they turned themselves over to the Swiss border guards in the same town, Ramsen, as Neave and Luteyn had done. Their report includes far more detail about the maps they used, including mention of a 'Swiss frontier map and half inch diameter brass compass, both W.D. issue.'²⁷⁶ In this context, the acronym W.D. almost certainly referred to the War Department (or Office). It also becomes apparent that they must have received feedback from Neave through the coded letter system since they made very specific mention of beginning reconnaissance in daylight 'to find Neave's fork' in the road leading to the frontier. Many years after the war, in 1974, Neave

²⁷⁴ TNA: WO 165/39.

²⁷⁵ TNA: WO 208/3288.

²⁷⁶ TNA: WO 208/3288, Chapter X, p.83.

himself confirmed this in an interview he gave to his local newspaper. He stated unequivocally that he had sent back details of the precise Swiss frontier crossing point to Colditz in a coded letter and that ‘the same route was later used successfully by Major Pat Reid.’²⁷⁷

The SBO’s history also made very clear that ‘a comprehensive supply of maps covering the whole of Germany was available to intending escapers’.²⁷⁸ Those men whose escape plans had been endorsed by the Escape Committee were required to make their own copies of the maps so that they would learn more thoroughly the detail of their planned route. It was also made clear that intending escapers were shown detailed maps of the frontier but were never allowed to copy those particular maps, being required rather to memorise them, for reasons of security.

Careful reassembly of the various pieces of the story has shed important new light on Neave and Luteyn’s chosen escape route. It can now be reasonably asserted that such parcels as had already been despatched to Colditz prior to January 1942 contained specifically a copy of sheet Y or A2 which aided considerably the first successful escape of a British officer from the camp, namely that of Lieutenant Airey Neave. It is, moreover, now possible to contend that, although Neave described the route of his escape in considerable detail in his published account and said next to nothing about the maps, he nevertheless made use of them. In his first published book, he described how he had traced in Indian ink ‘the neighbourhood of the Swiss frontier from a stolen map’, offering no explanation on the apparent theft.²⁷⁹ To have had an opportunity to steal a map of the Swiss border is, at best, regarded as unlikely, not least since Colditz was located in northern Germany, a considerable distance from the Swiss border. He added

²⁷⁷ *Brentwood and Shenfield Argus*, 31st January 1974, p.5. An original copy of the press article was found in Neave’s personal papers, in Post-War file AN 679.

²⁷⁸ TNA: WO 208/3288, Chapter II, p.29.

²⁷⁹ Neave. *They Have Their Exits*, p.74.

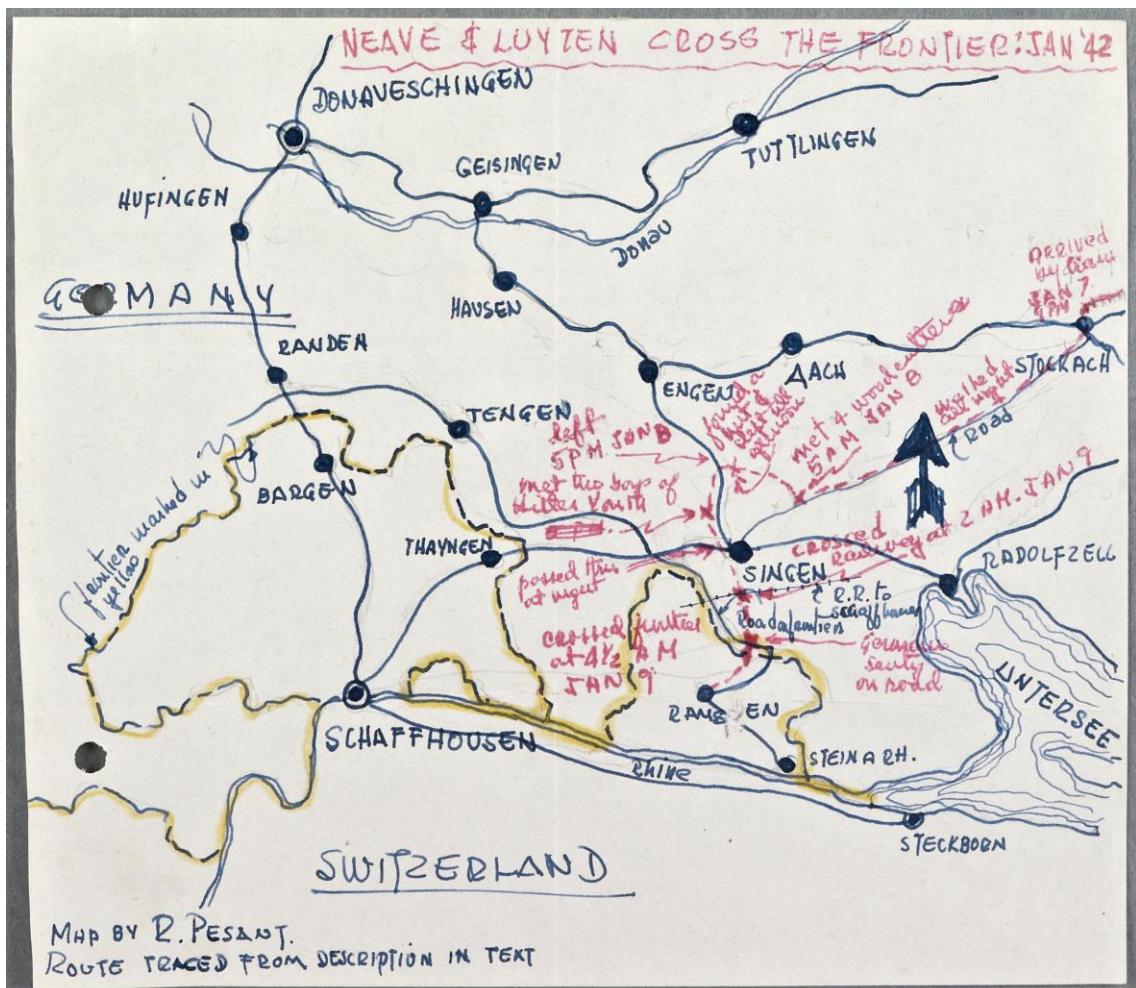
that the currency they were given for their journey had come from ‘black market deals with the guards’ and that Luteyn had been able to buy ‘a map of the surrounding country in a small shop’ in Ulm during their journey to the border.²⁸⁰ That again appears to be an unlikely assertion. There is, however, extant documentary evidence which indicates that MI9 had despatched gramophone records to 18 named individuals in Colditz in May 1941.²⁸¹ The despatch list indicated that one record in each box contained ‘a map of the frontier’. Whilst there is no indication that it was actually sheet Y or A2, or indeed that the frontier was the Swiss frontier, the circumstantial evidence is strong. One of those parcels was addressed to Captain P.R. Reid. Reid had been appointed in January 1941 by the Colditz SBO to be in charge of escaping. By October of that year, an Escape Committee had been formed and Neave had been appointed to be Reid’s deputy and had been placed in charge of the Committee’s Maps Section.²⁸² It was the Map Officer’s responsibility to hide the maps being held in the Camp. It was Reid who closed the door through which Neave and Luteyn escaped from Colditz, and who was subsequently able to escape successfully via the same route. The conclusion to be drawn, therefore, is that Neave and Luteyn had access to maps supplied by MI9, and Neave’s commitment to his promise never to disclose information about smuggled MI9 maps led to the fudged account in his first book.

²⁸⁰ Neave. *They Have Their Exits*, p.74 and p.102.

²⁸¹ The despatch note is contained in a folder of information deposited by J.Wooler in the RAF Museum in 1990 and held under the catalogue reference DB 319. As previously indicated, Wooler had been employed during World War II on the covert project in EMI to conceal maps, compasses and currency inside the records.

²⁸² TNA: WO 208/3288, Chapter II, p.20.

Illustration XVIII: Pesant's sketch map



Neave's personal papers contain a sketch map (see Illustration XVIII) showing the route he and Luteyn took once they had arrived in close proximity to the Swiss border. It was surprisingly, however, not drawn by Neave, but was rather sent to him by a Cuban architect, Roberto Pesant, who wrote in the accompanying letter, dated 23rd September 1958, that it was his attempt to reconstruct Neave and Luteyn's crossing of the Swiss frontier from the textual description contained in Neave's book, published in 1953. He asked that Neave comment on the accuracy of his tracing of the exact escape route. Neave replied to Pesant on 9th October that the sketch map was 'extremely good', correcting a couple of aspects and commenting 'we actually went through the town of Singen travelling westward before we turned south to cross the frontier as your

map describes'.²⁸³ Both sheets Y and A2, show the frontier crossing point on the road between Singen and Ramsen, located in the extreme south east corner of both sheets, but depicted with rather more clarity on A2 than on sheet Y.

For MI9, any escape from Colditz was a priority. These were, after all, the men who had repeatedly tried to put the MI9 philosophy of escape-mindedness into action. They had failed to make it back to the UK to date, but they had certainly proved themselves worthy of every aspect of the support mechanism which MI9 could muster. To this end, MI9 had developed a special coded message system, Number V, and proceeded to reserve its use for contact with the Colditz prisoners of war.²⁸⁴ They managed to send a detailed explanation of the official system through a series of coded messages using the existing private code which one of the prisoners of war, Captain R.F.T. Barry, had had the foresight to set up with his wife prior to deployment (refer to Chapter 4 for the detail of what transpired). It is also clear that Neave was on MI9's Special Watch List since the War Diary entry for January 1942, the month in which Neave escaped, noted that during the month 'one British Officer succeeded in escaping from Germany to Switzerland. He was on the Special Watch List and had received escape material'. Whilst he was not identified in the War Diary entry, it was rare for the War Diary reports to comment on individual escapes; they tended rather to document monthly escape statistics. Since Neave was the first British officer to escape successfully from Colditz, clearly using information with which he had been provided by MI9, it was likely regarded by MI9 as worthy of special mention.

Like all successful escapers, Neave was interviewed on his return to London. The report of his debriefing is of particular interest in itself. The report is not to be

²⁸³ The exchange of correspondence described is contained in Parliamentary Archives Literary File AN 670.

²⁸⁴ TNA: WO 208/3242, List of Codes at Part IV, Section Y Appendix L, p 248 and description of Code No. V at pp.269-270.

found in the general collection of such reports where the vast majority are to be found but rather in the Historical Record of MI9, almost buried from sight.²⁸⁵ A copy was also subsequently found in the Colditz Camp history. The report was also notable for its brevity. Most of the reports carried detailed descriptions of the escape, offering commentary on likely routes, appropriate behaviour, and places to avoid. There is a far more detailed description of the escape in Neave's published account than there is in the debriefing report.²⁸⁶ Certainly he made no mention at all in his escape report of any use of maps. It was MI9's practice to ensure that any information gleaned from returning escapers was relayed back to the camps to help inform and update the planning of the escapes. It was for that reason that a coded message was relayed on 11th November 1944 indicating 'strangers near schaffhausen salient are liable to arrest for questioning even if papers are in order'.²⁸⁷ Whilst it is known that the message definitely went to the Milag and Marlag Camp, such a message would certainly have been relayed to all the camps with which MI9 was in contact. Some detail of the Swiss frontier was also acquired from the Dutch since two of their number had almost succeeded in reaching Switzerland, only to be foiled at the last moment, recaptured and returned to Colditz.²⁸⁸

There is clearly sufficient evidence to support the hypothesis that Neave indeed had access to sheet Y or A2, although he personally never declared that fact in his description of the escape, either in the report he wrote on arrival back in the UK in 1942 or, indeed, in the book he subsequently wrote about his escape which he later published. Neave kept his secrets, as he had been briefed to do, and it is understandable that no inkling of what really happened in terms of the maps was ever revealed in his book, published so soon after the war. He certainly made clear in the interview he gave in

²⁸⁵ TNA: WO 208/3242 pp.173-175.

²⁸⁶ TNA: WO 208/3242 pp.173-175.

²⁸⁷ TNA: WO 208/3501, enclosure 151.

²⁸⁸ TNA: WO 208/3288, Chapter II, p.31.

1974 that there was a great deal he had never revealed. Sadly, he was murdered by the IRA in 1979, long before the notions that secrecy about possession of escape and evasion maps would have seemed redundant. Even so, it is worth recalling that Foot remained reticent in discussing the maps until the end of his life.

This all certainly appeared to mirror the pre-deployment briefings which Foot had described and the order that ‘maps were never discussed’, and the extent to which it reflected his and Langley’s expressed view that to discuss such methods could prove prejudicial to their future deployment.²⁸⁹ Looking at the statistics produced by MI9 at the end of the war, it is clear that the escape route out of Germany and into Switzerland was not only one of their targeted routes but was also one of the most successful: the total number of escapes through Switzerland was 5,143, almost 20% of all successful escapes from enemy occupied territory by the end of the war.²⁹⁰ Foot and Langley reasonably drew attention to the fact that wartime statistics ‘cannot be claimed as perfect’, and there are certainly variations in the figures which appear in various sources at the time. The figures do not, however, vary significantly enough for there to be serious concern over their veracity. It is also notable that the figures did emanate from MI9 which, it is known, was keenly and carefully monitoring the numbers of escapes on a monthly basis.²⁹¹

Unravelling the story in this research of Neave’s escape has served to bring into focus the true contribution of the mapping programme to successful escapes and emphasises the extent to which MI9’s considerable efforts to communicate with the camps and smuggle the maps successfully to the prisoners of war paid very real dividends. Escaping from Colditz was, in itself, a significant challenge; travelling

²⁸⁹ Interview with Professor M.R.D.Foot at the Savile Club in London, 31st January 2012; Foot & Langley. *MI9 Escape and Evasion 1939-1945*. p.331.

²⁹⁰ TNA: WO 208/3242, p.65 and p.79; TNA: AIR 20/6805, enclosure 9.

²⁹¹ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, p.313.

successfully through Germany over 400 miles to the Swiss border and crossing successfully to freedom was arguably only possible with detailed navigational information which the maps and the supporting intelligence provided. The following chapter details two further case studies which seek to progress the theme of considering the role of the maps. They will be used to reinforce the notion that the maps were indeed fit for purpose and played a major role in contributing to successful escapes.

Chapter 6

Case studies: the Baltic ports and maps produced in the camps

‘For some a map is not a piece of paper: it is a passport...’²⁹²

The final two case studies seek to demonstrate further the value of MI9’s mapping programme and the ways in which it contributed to successful escapes. The first one describes another escape route selected by MI9 which was to prove even more successful than the Schaffhausen route. The final case study, albeit unsupported by surviving written testimony regarding the escape attempts concerned, demonstrates a critically important aspect of MI9’s escape programme, namely the copying of maps that were smuggled into the prisoner of war camps. The methods employed by prisoners of war to make copies of the maps which they received has been described previously in Chapter 3. However, the remarkable chance survival of two such copies in a Scottish university map collection is used as a final example to demonstrate the extent to which the maps could, and did, provide a veritable passport to freedom for some prisoners of war.

Case Study 2: The Baltic Ports

The second case study relates to the Baltic ports and includes descriptions of the escape experiences of Lieutenant John Pryor RN, Lieutenant David Pelham James of the Royal Naval Volunteer Reserve (RNVR), and Flight Lieutenant Oliver Lawrence Spurling Philpot DFC of 42 Squadron Coastal Command RAF. The route via the Baltic ports was another of MI9’s recommended escape routes. The Bulletin made clear that it was the most effective route to try to escape from occupied Europe and reach Sweden, a

²⁹² I am grateful to Dr. David Forrest, Past President of the British Cartographic Society and presently Senior Lecturer in the School of Geographical & Earth Sciences at the University of Glasgow for this quotation which he heard in a TV advertisement for the Discovery Channel on 2nd June 2003.

neutral country.²⁹³ Danzig, Gdynia, Stettin, Rostock and Lübeck were regarded as the key Baltic ports to be targeted by MI9 as potential escape routes and the aim was always that the escapers should be looking to board a ship of the neutral nation, Sweden. In extremis, some escapers resorted to Finnish ships in the hope that they planned to dock in a Swedish port on their return trip to Finland. Large scale maps of all five ports were produced for incorporation in the Bulletin for training and briefing purposes (see Appendix 9 and Chapter 3).

There is also separate evidence to support the contention that MI9 produced escape and evasion versions of the port plans. A large scale map of Danzig harbour (A4) at approximately 1: 16000 scale has been mentioned previously at Chapter 2. It was produced in relatively small numbers in October 1942, some 300 copies in total, half of which were printed on silk and half on paper (refer to Appendix 1). Analysis of the detail showed that it was based directly on British Admiralty (BA) chart 2377. The BA chart actually comprised two large scale port plans of Danzig and Gdynia harbours. The Danzig plan indicated its primary source as a 1933 German Government Chart. Sheet A4 was a small section only of the BA Danzig port plan, centred on the railway terminal and timber wharves at Wechsmünde, but oriented differently, being significantly east of a true north bearing, and it was void of all soundings information. The basic topographic detail was retained and enhanced with what can only be described as field intelligence annotations (see Illustration III at page 67). The Danzig map was produced in various forms by MI9. At least three versions have been identified: there may have been more. The different versions, varying in geographical extent, content, scale and sheet numbering identification, are listed at Appendices 1 and 9. Close scrutiny of the map detail revealed its true purpose. Almost in the centre of

²⁹³ TNA: WO 208/3268 Chapter 15.

the map were two annotations: these were ‘Swedish ships load coal here’ and ‘Swedish ships unload ore here’. If an escaper could board the ship of a neutral nation, his escape had virtually succeeded. Should the escaper get as far as the port, there was sufficient information on the map, not only to locate ships of a neutral nation but also to show the most accessible route to the wharves where those ships would have docked. Additional annotations showed ‘open farm land intersected by ditches’, ‘impassable marshy ground’, ‘large lone bush’, the location of sentries and searchlights, with even the extent of ‘the possible arc of light’ being drawn in the area of the railway sidings. Such detailed intelligence could only have been acquired from returning escapers who had successfully navigated that escape route. As already noted in Chapter 3, there is considerable evidence that all who successfully returned to the UK were questioned closely on their experiences and that all relevant intelligence was fed back both directly to the camps, through the coded letter system, and also included in the training lectures and the Bulletin.²⁹⁴

The small numbers produced of the Danzig port plan appeared to indicate that MI9’s intention was never to issue them directly to potential escapers during escape training or pre-deployment briefing but rather to use them as briefing aids and also to send them directly to the camps for targeted escapes. Certainly, of the five port plans which appeared in the MI9 Bulletins (refer to Appendix 9), it has been challenging to find the evidence to support the contention that escape and evasion versions were produced, since extant copies of only one of the port plans, Danzig, have been discovered to date. No extant copies of Lübeck, Gdynia, Stettin or Rostock produced on fabric have yet been identified and none of the production records identified to date

²⁹⁴ TNA: WO 208/3298-3327 (30 files) contain the reports of those who successfully escaped from their German captors. The reports describe the initial escape from the camp, the route to freedom and offer advice based on the successful escaper’s experience. The reports resulted from the individual interview which each escaper was required to give on arrival back in London.

has any indication of their production on fabric or paper media as escape and evasion maps. However, entries in the War Diary do in fact indicate that escape and evasion versions of some of the port plans were produced. For example, in December 1942, the War Diary entry indicated that a sketch map of Stettin Docks had been passed for reproduction prior to being sent to the German camps.²⁹⁵ Similarly, in February 1944, the War Diary entry reported that a plan of Gdynia, described as being ‘maps for prisoners of war’, had been passed for reproduction. It is, therefore, clear that the port plans were being produced as escape and evasion maps to be sent directly to the camps in Germany to support planned escapes.

It should be recalled that those being briefed prior to operational deployment or during training at the Highgate school were not allowed to make copies of any maps which appeared in the Bulletin. Those intelligence officers who were briefed on these potential escape routes were allowed only to use the maps for briefing purposes and those being briefed were expected to memorise, and not copy, the map detail. The evidence of the War Diary entries does, however, appear to indicate that the large scale plans of the Baltic ports were being produced and sent to the camps, although there is no indication of the numbers being printed. It is beyond question that these routes out of captivity to freedom were an integral part of MI9’s plans. They were well used by escapers and many succeeded in gaining freedom through that route.

Sweden proved to be the most successful route home for many escapers and evaders: 30% of all returning personnel came home through this route and the large proportion had travelled there via the Baltic ports.²⁹⁶ The advisory notes on escape routes in the Bulletin were regularly updated with fresh intelligence and tips from

²⁹⁵ TNA: WO 165/39

²⁹⁶ TNA: WO 208/3242, p.79.

returning escapers. In February 1944, the Bulletin was revised to indicate that contact with foreign dockers could be made in certain Stettin cafés, and there were many helpful suggestions on the best ways to stow away successfully on board Swedish ships.²⁹⁷ Coded letters were also used as a means of conveying escape intelligence and advice to the camps. For example, in September 1944, a coded message was sent by MI9 to Lieutenant Commander M.J.A. O'Sullivan RN in the Marlag and Milag Nord Camp indicating that four escapers had reached Sweden via Stettin. It described that:

two entered Gotzlow Quay where wire meets SE end of basin. Two got ship Reiher Werder Hafen. Help received from French camp just E of zabelsdorf station.²⁹⁸

Barely a month later, however, a coded message was sent to the camps indicating ‘ref escapes no more Swedish ships from Hun ports’, a clear indication that, for whatever reason, Swedish ships were no longer calling at German ports.²⁹⁹ This was likely to have resulted from Swedish anticipation of Allied victory over Germany, as they advanced northwards and eastwards from the Normandy landings. Effectively, this meant that the escape route via the Baltic ports was no longer feasible. Although the order that prisoners of war need no longer consider it their duty to escape was not issued until 13th January 1945, well before that date (not least through regular wireless contact) the camps certainly knew of the Allied landings on mainland Europe.³⁰⁰

Attempted escapes via the Baltic ports

Three escapes which attempted to use the route via the Baltic ports will now be examined, one unsuccessful and two successful. The first is that of Lieutenant John Pryor RN, who has already been mentioned in Chapter 4 since it was his coded letters

²⁹⁷ TNA: WO 165/39.

²⁹⁸ TNA: WO 208/3501, enclosure 14.

²⁹⁹ TNA: WO 208/3501, enclosure 149.

³⁰⁰ TNA: WO 208/3501, enclosure 160.

which were used as an example to demonstrate the role of the coded letters in MI9's work. There are, however, other aspects of Pryor's experience which serve to highlight important aspects of MI9's escape programme and one of those is the extent to which his experience reflected both MI9's escape philosophy and the importance of the Baltic ports as a selected escape route.

Pryor was educated at Oundle School, Northamptonshire, from 1933 to 1937. He took the military candidate examinations in 1937 and joined the Royal Navy in September that year. As a cadet he trained on HMS Erebus and then served as a midshipman on HMS Vindictive, HMS Hood and HMS Warspite. In 1940 he was ordered to Poole to assist in the small ships' evacuation from Dunkirk.³⁰¹ On Thursday 13th June, he was on board a Dutch coaster, HMS Hebe, as second lieutenant, and played his part in rescuing 200 of the 51st Highlanders from the beach at Sainte Valérie in Normandy, transferring them to a troop ship waiting off-shore. They returned to shore and collected a second group of troops but were unfortunate enough to be grounded on an unmarked shoal and came under heavy fire. The vessel was unarmed. Everyone on board was forced to disembark and captured by the Germans. As a young officer, and in line with German practice to separate officers and men, Pryor was separated from the crew of the Hebe immediately and grouped with some captured British Army officers. Two of these immediately approached him, asking if he would join them in an escape attempt.³⁰² MI9 always briefed that the best time to escape was before they finished up behind barbed wire. Sadly the escape attempt did not include Pryor as he was quickly separated from the Army officers and placed in another lorry for transport away from the coast. The group he was in was moved in stages by road,

³⁰¹ John Pryor's obituary written by his son, Stephen, *The Old Oundelian*, Summer 2012, p.126.

³⁰² Second World War Experience Centre, reference SWWEC RN/Pryor J.

north to Belgium, and by late June they were travelling on Dutch and German waterways deep into the heart of Germany. By 6th July he was in Laufen, south east of Munich having travelled for some days on board a train crowded with British prisoners of war. In Laufen, close to Austria, he was taken by lorry to Oflag VIIC/H, a camp converted from the Archbishop of Salzburg's summer residence on the west bank of the River Salz, where some 500 captured British officers were being held. It was another month before his parents heard that he had been captured and he received his first letter from them on 24th September: it was dated 12th August. He 'celebrated' his birthday on 12th November which he recalled, unsurprisingly, as a 'bad day'. His memoirs do, however, highlight the extent to which the prisoners of war showed that indomitable British sense of humour and tried to poke fun at their German captors, a practice which they often described as 'goon-baiting'.³⁰³ As the Germans attempted to make them drill to German words of command, they would respond by ensuring that the entire parade became a shambles by everyone doing different things. On 18th November all the sea-faring officers, whether from the Royal or Merchant Navies, were forced to march 20 kilometres to Oflag VIIC/Z at Titmoning. It was here, he recalled, that they started to receive Red Cross parcels.

The story of how Pryor joined the team of MI9 coded correspondents has already been told in Chapter 4. On 20th January 1941, Pryor, Elder and other naval officers were transported by rail and lorry to the Sandbostel camp in northern Germany, some 40 kilometres north east of Bremen. This proved to be a large camp comprising several barbed wire compounds, rows of military huts and watch towers. The flat, sandy topography must have looked particularly bleak in the middle of winter, but it was clear that they felt more comfortable surrounded by naval colleagues in the Marlag and Milag

³⁰³ Second World War Experience Centre, reference SWWEC RN/Pryor J.

Nord huts (Marinelager and Marineinternaten Lager). Pryor's awareness of the extent to which 'escaping was the duty of a PoW', however hopeless a task it might appear, has already been highlighted. Both in this camp, however, and the new Marlag and Milag Nord camp later constructed by the Germans south west of Sandbostel, it is clear that there was always much activity focussed on escaping, specifically on digging tunnels. Additionally, a radio had been acquired in exchange for 2000 cigarettes from a Belgian worker. The prisoners of war were often better provided with cigarettes and chocolates from Red Cross parcels, bolstered also by supplies sent in by MI9, than either the local German population or conscripted workers, and they often used these as a form of currency.³⁰⁴ The new radio replaced the crystal set, which had been ingeniously constructed by using the wiring of the hut as an aerial and which had been accidentally destroyed by the German guards during a search: this allowed them to listen to the BBC news which was subsequently cascaded orally through the other huts every night.³⁰⁵

Pryor had been sending coded messages to his parents for some time but it was on 7th May 1942 that he sent the one requesting specific help from MI9 in support of a planned escape. The deciphered message, requesting, amongst other things, maps of the Swiss border has been described in detail in Chapter 4. Pryor disclosed the details of the parcel he received from MI9 and the efforts employed in the camp post room to ensure that the special parcels were not spotted and opened by the German guards. Pryor continued by describing the chess board and pieces he had received and the extent to which escape aids had been concealed in the board. Whilst Pryor made no mention of any maps at this stage, it was common for maps to be secreted inside

³⁰⁴ James. *Escaper's Progress*, p.25.

³⁰⁵ Second World War Experience Centre, reference SWWEC RN/Pryor J.

chessboards by MI9 (see illustration IX at page 99). All the items received were handed over to the escape committee.

Together with Lieutenant John Wells, John Pryor's plan to escape, which would have been sanctioned by the escape committee, was to pretend to be foreign workers dressed in suitable working attire and carrying forged passes. They planned to travel by night and hide by day. No mention was made by Pryor that they had access to any maps, but he had managed to make a compass by magnetising two sewing needles with the magnet in the handle of his razor and using a hollow shirt stud as the pivot. Their plan involved them walking the estimated 45 miles to Hamburg, taking two or three nights to complete this section of their journey, and then boarding a train to the port of Lübeck where they would hope to find a Swedish ship in the harbour and smuggle themselves on board. As previously indicated, this was a classic MI9 escape route on which they would have briefed intelligence officers many times. The previously cited Danzig map (see illustration III at page 67) clearly illustrated the approach to escaping to a neutral country from a northern German or Polish port and it is known that MI9 similarly produced a map of the port of Lübeck. Whilst the only extant copy of this map which has been discovered to date has been the Bulletin version, as late as June 1944 a new plan of Lübeck docks was being reported in the War Diary as having been produced and was being sent to the prisoner of war camps.³⁰⁶

Pryor and Wells took their opportunity on 20th September 1943. They remained on the run for two days but were sadly recaptured on the second night when they were seen by two policemen and, whilst Wells tried (in halting German) to talk their way out of the situation, Pryor was searched and found to have 'equipment and a jacket full of

³⁰⁶ TNA: WO 165/39.

oatcakes'.³⁰⁷ They received the customary spell in solitary confinement but managed to see the positive side of their solitude as an agreeable change to the communal life they had experienced in captivity for the previous three years. Whilst Pryor's bid for freedom was not successful, it is clear from his memoirs that there were many escapes attempted by others in the camp, some, although by no means all, of which were similarly unsuccessful.

The escape of Lieutenant David Pelham James of the Royal Naval Volunteer Reserve (RNVR) was notable since he did succeed in making his bid for freedom via the Baltic ports' route. James had made multiple escape attempts throughout his captivity. His final and successful attempt was from the Marlag and Milag Nord Camp on 10th February 1944, disguised as a 'distressed Swedish sailor' and he took the Baltic ports escape route. He arrived back in the UK on 16th March 1944. His final escape journey proved to be extremely tortuous. He journeyed initially by train to Lübeck, the same route which Pryor had planned to take. When he could find no Swedish ships, he travelled on to Stettin where he similarly failed to find a suitable ship to board. Stettin was the port where MI9 had suggested in their briefings that a good place to find Swedish sailors was in the local brothel. It was a particularly useful venue for those attempting to escape since it was reserved for foreigners: no Germans were allowed to enter. It was eventually blown up by the RAF during a raid in the summer of 1944.³⁰⁸ In desperation, as he was running out of money, James continued on to Danzig where he eventually found a Danish ship, the Scandia, which he boarded and was befriended by a stoker. He mentioned in his account that, had he known the layout of the port and continued for another three miles, he would have found the berth of the Swedish ships. In itself, this appeared to indicate that he personally had had no access to the Danzig

³⁰⁷ Second World War Experience Centre, reference SWWEC RN/Pryor J.

³⁰⁸ TNA: WO 208/3242, p.30.

port plan. However, he did know enough to make his way to a port and to seek out a ship bound for a neutral country. The ship left Danzig and docked in Lübeck port *en route* for Denmark. James knew the geography of Lübeck reasonably well from a previous, failed, escape attempt. In Lübeck, he then boarded a Finnish ship bound for Stockholm, bribed the stoker and 60 hours later he was in the safe-keeping of the British consul in Stockholm.³⁰⁹

One final example of the successful use of this route was the escape of Flight Lieutenant Oliver Philpot who flew with the RAF Coastal Command out of Leuchars on 11th December 1941. His mission was to patrol the coast of Norway, taking aerial photographs. On seeing a German convoy, he attacked on a ‘mast high bombing run.’ The enemy returned fire and the aircraft took direct hits in the starboard engine and tail. He was forced to land in the sea and all the crew made it into the dinghy before the aircraft sank. They drifted for two days and were subsequently picked up by a German convoy. Philpot was eventually imprisoned in Stalag Luft III at Sagan. He escaped on 29th October 1943 through a tunnel and travelled by train from Sagan, over 100 miles south of Berlin, north to the Baltic ports. He made for the port of Danzig and indicated in his escape report that he was familiar with the local geography from ‘the flimsy of which I had a copy and which proved invaluable’.³¹⁰ The ‘flimsy’ was almost certainly sheet A4 of the port of Danzig which had been produced on both silk and tissue by MI9. He eventually boarded the Swedish ship Bjorn which was loading coal. Although the Captain was not happy with his presence on board, he was hidden in the coal bunker by the crew and landed in Södertälje on 3rd November. He travelled by train to Stockholm and arrived at the British Legation on 4th November. Yet again, there is evidence that

³⁰⁹ James. *Escaper's Progress*, p.137.

³¹⁰ TNA: WO 208/3242, pp.236-244 is the full report of his debriefing on arrival back in the UK.

copies of the large scale port plans were reaching the camps and being put to very good use by those planning to escape.

Despite their failed escape bids, it is clear that Pryor and his colleagues continued to plan escapes and harass their German captors as well as they could. Their activity continued up to the Normandy landings in June 1944. Later, messages were broadcast that prisoners of war should no longer attempt to escape but remain in their camps, the famous ‘stay-put’ order.³¹¹ MI9 was quick to realise that escaped prisoners of war roaming around the front line would likely be in danger and also a possible distraction to the advancing Allies. Pryor and his colleagues were eventually liberated on 6th May 1945 by the 7th Armoured Division and he was repatriated to his family home in Saltash, Cornwall, on 8th May, VE Day, after almost five years in captivity. He went on to continue to serve his country in a long and distinguished career as a hydrographic survey officer in the Royal Navy.

There are numerous examples, in both the published literature and contemporary records, of escapes, both successful and unsuccessful, via Swedish or Finnish ships from the Baltic ports. Certainly, Lieutenant John Pryor’s unsuccessful escape with Johnny Wells from Milag und Marlag Nord in 1943 was an attempt to reach Lübeck. Whilst they were captured before they had succeeded in reaching the railway, Pryor did acknowledge that Lübeck was their planned destination. James also headed directly for the Baltic ports, trying them in turn until he found a suitable ship. Similarly, Philpot made directly for Danzig, indicating that he had access to a map which had afforded him knowledge of the local geography of the port. It is a matter of record that this was the most successful escape route which MI9 established out of occupied Europe, to

³¹¹ TNA: WO 208/3501, enclosure 127.

Sweden and eventual freedom. It is also a matter of record that MI9 produced large scale plans of the Baltic ports and persuasive evidence has been found to support the contention that those same maps were sent to the camps for use in escapes. Yet again, MI9 planned a particular route to freedom, briefed in detail on it, and produced the maps to ensure that the prisoners of war had the very best chance of success when using this particular route.

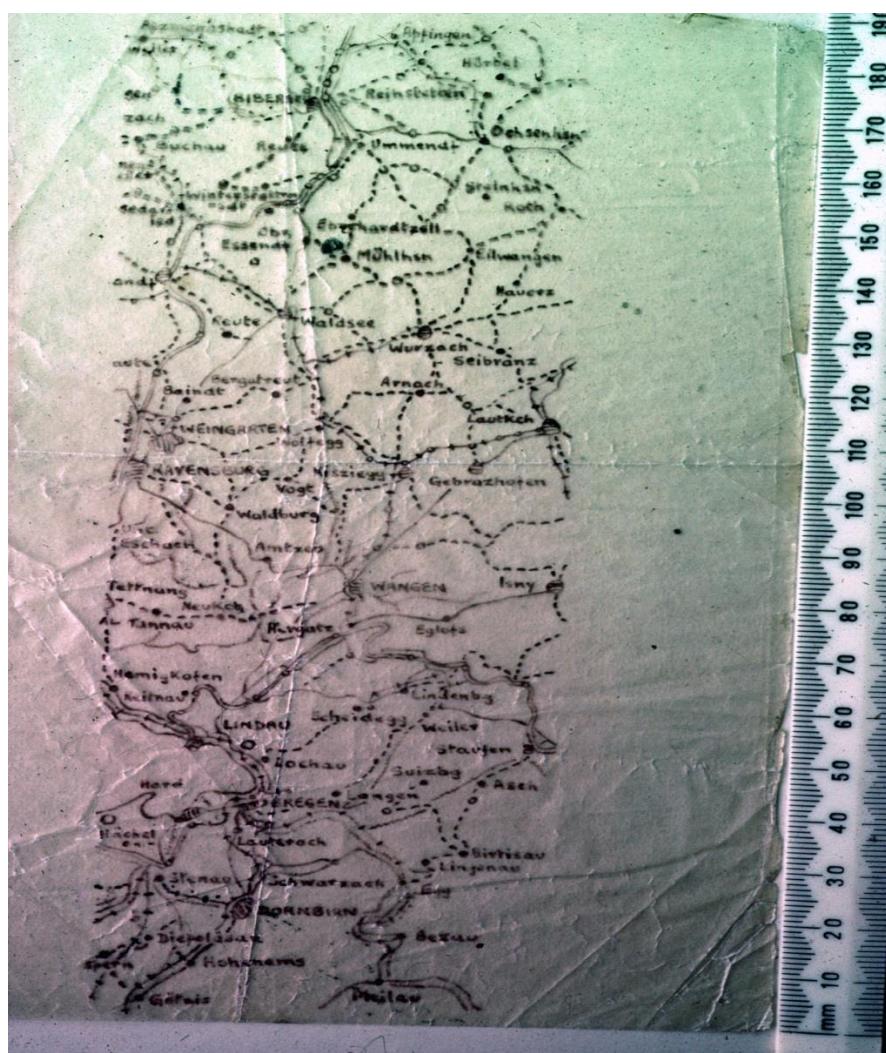
Case Study 3: maps produced in the camps

The final case study comprises a short review of two extant maps which were discovered in a Scottish University collection and proved to be extremely rare. It is a matter of historical record that the prisoners of war spent much time and energy copying maps from originals which MI9 succeeded in getting into the camps. Some of the detail of this copying activity has been examined already in Chapter 3. Multiple copies of the maps which were successfully sent into the camps by MI9 could be provided when multiple escapes were planned and executed. If only one map got through, there was a clear need to copy it and the most straightforward way was simply to trace a copy. There is enough published evidence to confirm that this practice took place. Neave described the practice of copying maps to support planned escapes.³¹² The camp histories written at the end of the war also described the activity, organised by the various escape committees (refer to Chapter 3 for detail of the activity). However, to identify such copies in a British map collection is exceptional, certainly unique for this researcher. The first manuscript map shown as illustration XIX was clearly drawn in Oflag VB. That deduction is based on the fact that Oflag VB was located in Biberach which is shown at the northern edge of this map. The map extends from this point to the Swiss frontier which was the escape route which would logically be taken from that

³¹² Neave. *They Have Their Exits*, p.74.

particular camp, since it represented the shortest distance to freedom. A number of high profile escapes took place from Biberach. Whilst many of them, not least that of Hugh Woollatt, Neave's companion on the journey back from Switzerland, did escape via the Schaffhausen Salient, some successfully crossed the Swiss border at the eastern end of Lake Constance. Indeed, the Germans realised the success of that route very early on and guarded that particular area so closely, that eventually most escapers from Biberach chose to travel the longer western route via Schaffhausen.

Illustration XIX : manuscript map of route from Biberach to the Swiss frontier



(Illustration provided by, and reproduced with, the permission of the University of Glasgow.)

The map is in manuscript form and had been hanging on a library wall for many years before being properly identified. The local record simply stated that the map had been deposited in the collection in 1947: the donor was not named but the map was described as a World War II prisoner of war map. It was relatively straight forward to identify the MI9 map from which the Biberach tracing had been made. It proved to be sheet L32-2/Konstanz of GSGS 3982 [Fabric] (see Illustration V on page 72). The detail is so closely allied, it is clearly the source map.

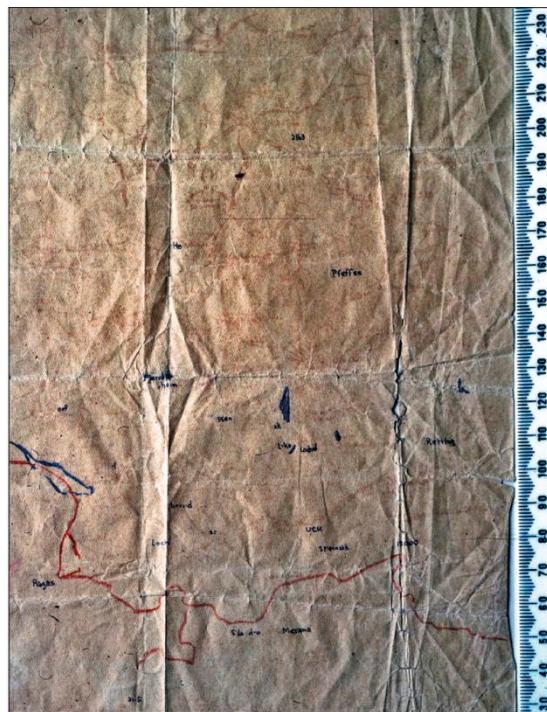
The second manuscript map (see illustration XX) was far less easy to identify since it was so badly faded. However, the availability in this day and age of software packages capable of enhancing photographic detail to a quite remarkable extent has allowed for the successful redrawing of the original map and identification of the MI9 map from which it was apparently copied (see illustration XXI).³¹³ It would appear that the source map is likely to have been sheet A (see illustration XXII), produced by Waddington at MI9's direction from a Bartholomew map (refer to Appendix 1 and Chapter 2 for details of the source map). Sheet A was certainly one of, if not the, earliest map in the whole of MI9's map production programme, witnessed by the map being identified by the first letter of the alphabet. It is also possibly the map which MI9 termed Double Eagle, providing small-scale coverage of both Germany and Austria, and adjacent areas.

The existence of these two maps in a Scottish university map collection bears witness to the fact that they must have been used in successful escapes: how else could they have found their way to the UK? They are a unique testimony to the efforts of the

³¹³ I am indebted to Tim Absalom and Jamie Quinn in the GeoMapping Unit of the School of Geography, Earth and Environmental Sciences, in Plymouth University for their technical expertise in producing the enhanced photographic image of the map which allowed its successful identification.

Illustration XX : manuscript escape map (left)

Illustration XXI : enhanced image of escape map (right)



(Illustration provided by, and reproduced with the permission of, the University of Glasgow).

Illustration XXII: part of sheet A



Interpretation of illustration XXII
(GeoMapping Unit, Plymouth University).



prisoners of war and the extent to which they were supported in their endeavours by the maps produced by MI9.

Conclusion

The three case studies were selected in an attempt to prove the considerable value of MI9's mapping programme. Each study has highlighted the value of a particular map or maps and the extent to which they fulfilled the role for which they were designed. It was a challenging task, not least since there are so few original accounts of the use of the maps on which to draw. Too many of the sources make scant mention of the maps or of their use and value. It has been a lengthy task to piece together the little evidence which does exist and construct these three case studies. Certainly in all three case studies, some telling proof exists of the extent to which the maps fulfilled precisely the role for which MI9 in general, and Hutton in particular, had produced them. There is no way of assessing just how representative the case studies are, since so much of the detail of the maps and their use went unrecorded and cannot, therefore, be recaptured, analysed and assessed. It seems fair to conclude, however, that the circumstantial evidence uncovered in the case studies is likely to have been the tip of the proverbial iceberg in terms of the escapes actually undertaken and the way in which the maps successfully fulfilled the role for which they had been designed.

Conclusion

'It was too little, too late.' J.M.Langley.³¹⁴

This thesis has reconstructed, documented and analysed the escape and evasion mapping programme of MI9 and has set the programme in the wider context of the whole escape and evasion activity on which MI9 had embarked. The work of this particular military intelligence branch has been afforded little recognition in the study of the history of British intelligence organisations of World War II. Hitherto, the MI9 mapping programme has been given even less attention and yet this study has shown that it amounts to a very significant chapter in the evolution of British military mapping and a notable episode in the history of twentieth century cartography. The background research has shown that there has been a long history of military mapping on silk and other fabrics. For all sorts of reasons, however, it transpires that MI9 was never in a position to benefit from that history and experience. Nonetheless, it was able to mount a very significant programme of escape and evasion mapping despite the role played by an arguably self-possessed, eccentric and narrowly focussed individual who was allowed to operate with little or no restriction. The context in which the branch was operating also arguably took its toll. As a newly spawned intelligence branch, it lacked supporters from the beginning of its existence and was, too often, regarded as a threat by its sister organisations in the intelligence arena. This conclusion sets out the key research findings and seeks to assess the extent to which MI9 was able to fulfil its role as the organisation responsible for escape and evasion despite the challenges which it undoubtedly faced: in essence, was it really 'too little, too late' as Langley wrote? It considers the extent to which the mapping programme, as described in this thesis, contributed value to that role and places that programme in the wider context of British military mapping.

³¹⁴ Langley. *Fight Another Day*, p.252.

Maps as geo-political artefacts

The first of the findings of studying the MI9 mapping programme is undoubtedly the role played by military maps as geo-political artefacts. It was envisaged from the beginning of the study that a key outcome of the research would be the creation of as full an inventory as possible of all the escape and evasion maps that were produced between 1939 and 1945. Discovering the sheer size and scope of the MI9 mapping programme was, however, never anticipated. The individual maps discovered and identified have been documented in the nine appendices produced as an integral part of this thesis. Where possible, full carto-bibliographic records have been produced and the location of extant copies of the maps, wherever possible without breaching confidences, has been provided, largely in publicly accessible repositories. No such comprehensive record has survived, either in The National Archives or elsewhere, and no previous attempt to reconstruct it has ever been made, so far as this researcher and the custodians of leading map collections in this country are aware. This carto-bibliography thus stands as a statement of the map research contributed by this thesis. It should also prove to be a valuable resource in the future, enabling librarians, researchers and students of historical cartography to identify precisely what it is they hold or subsequently discover.

There is no doubt that maps were important in reflecting and demonstrating both nationalism and imperialism, as well as acting as exemplars of educational standards and national ideals. It is, therefore, worthwhile exploring briefly the extent to which the escape and evasion mapping programme of World War II tells us anything about this country's culture and outlook. Heffernan has written a number of interesting and arguably relevant papers concerning 'the map as a geopolitical artefact'.³¹⁵ However, these related largely to the early years of the twentieth century and to the First World

³¹⁵ Heffernan, Michael, 'The Politics of the Map in the Early Twentieth Century', *Cartography and Geographical Information Science*, Vol.29 No.3, (2002), pp.208-226.

War, exploring persuasively the relationship between maps and politics. Others have attempted a similar exploration during World War II. Balchin, in particular, was commissioned by the Royal Geographical Society (RGS) in 1985 to record the role played by geographers in World War II.³¹⁶ He considered the maxim that ‘Geography had always been vital to the prosecution of war’ and the extent to which it was ‘the intelligent use of geographical knowledge that outwits the enemy and wins wars.’ The value of training in geography had been realised during the First World War. Geography was deemed vital to the successful prosecution of war in three ways, namely in intelligence, logistics and action. This awareness had resulted in the rapid development of the subject in universities and schools during the inter-war period.

It is an interesting aspect of Balchin’s findings that at no point did he mention MI9 or its escape and evasion mapping programme in his report to the RGS. And yet, he must have been aware of it since Foot and Langley’s definitive account of the organisation is included in the list of references accompanying the report. He certainly considered the role of maps and even mentioned the value of terrain analysis. The evolution of European topographic mapping services was mentioned, as were the responsibilities of the Geographical Section General Staff in the War Office: even the role of geographers in SOE is covered in detail. Of the MI9 mapping programme, however, there is absolutely no mention. Since Balchin relied heavily on interviewing those geographers who were still alive and ready to recount their experiences, the single reason for that omission can only be the exclusion of any geographers from direct involvement in MI9’s mapping programme until the war was well progressed. The reason for that, in turn, was arguably attributable to Hutton’s single-mindedness in the way in which he drove his section’s programme and simply never communicated with

³¹⁶ Balchin, W.G.V. ‘United Kingdom Geographers in the Second World War: a Report.’ *The Geographical Journal*, Volume 153, Number 2 (July 1987), pp.159-180.

those in the War Office who could have offered detailed technical and, not least, cartographic production support.

Collier has written that ‘Ultimately, it was the Allied capacity for the mass production of maps, together with the weapons of war, that was to prove decisive.’³¹⁷ He was writing about the development of air survey techniques and their use in producing and updating mapping. What he wrote, however, was arguably as applicable to MI9 escape and evasion maps as it was to the operational coverage produced by D.Survey. It is this lacuna in the historiography of cartography in World War II which this research has sought to bridge.

Heffernan has highlighted the extent to which, on the eve of World War I ‘the largest, privately held map collection in London was maintained by the Royal Geographical Society (RGS)’ and the extent to which the RGS worked closely with the Geographical Section of the General Staff (GSGS) to produce the maps of Europe, North Africa and the Middle East required to support the operational strategy of the WO at that time.³¹⁸ And yet barely 20 years later, there is no mention in the extant records and secondary sources of any role played by the RGS in World War II. Why is that? Is it attributable to characters such as Hutton who appeared to have had little awareness of the extent to which MI4/GSGS/D.Survey could help in his endeavours? Had the relevance of mapping taken on a different perception among the military intelligentsia? There is little doubt that MI4’s absence from London at a critical time may be part of the explanation. Thus the distance of the department responsible for the cartographic

³¹⁷ Collier, Peter. ‘The Work of the British Government’s Air Survey Committee and its Impact on Mapping in the Second World War.’ *The Photogrammetric Record*. Volume 21. Issue 114. (June 2006). pp.100-109.

³¹⁸ Heffernan, Michael. ‘Geography, Cartography and Military Intelligence: the Royal Geographical Society and the First World War’, *Transactions of the Institute of British Geographers*, New Series, Vol. 21, No.3, (1996), pp.504-533.

revision of operational mapping from aerial reconnaissance from the centrality of military awareness and operations between 1939 and 1942 undoubtedly took its toll: quite how much is open to discussion and interpretation. The fact that Hutton, apparently oblivious of the importance of that absence from the equation, overcame the challenges presented, without any real awareness of the true nature of those challenges, is an interesting aspect of the situation. Evidently, without ever realising that organisations existed within Government Service (indeed, in the same Ministry) who could have rendered his job very much easier, Hutton nevertheless managed to identify individuals and companies who could progress his strategy. Even so, by excluding the operational mapping organisation from the start and by being oblivious to the existence of commercial companies with considerable expertise in map production and printing, Hutton certainly created challenges for himself and his organisation that need never have existed. Time consuming activities and significant costs were undoubtedly incurred which could have been avoided or, at least, contained. It can, therefore, be argued that Hutton succeeded with the mapping programme despite his own lack of awareness of those organisations which might have helped him more promptly, more immediately and, arguably, at less cost.

It can also be argued that MI9's escape and evasion mapping programme was not about making national statements or an attempt at prestigious symbolism; rather the maps were produced as practical, problem-solving items. Indeed, access to a map that depicted the area through which they must travel to reach a safe haven after escaping incarceration was quite literally the prisoner's 'get out of jail' card: as revealed in earlier chapters, many of the maps were despatched inside Monopoly boards or in playing cards. Whilst Hutton cannot be regarded, at least initially, as cartographically literate, those officers who received the maps, copied them and used them successfully as the prime escape aid, most certainly were. Unlike Hutton, they belonged to a new

generation which had been educated between the wars and had apparently benefited from what Balchin described as the upsurge in the teaching of geography, a direct result of the hard-won experience of World War I. For many of them, reading maps and navigating routes with the aid of maps was second nature. They belonged to the '*Boy's Own*' and the Boy Scout generation and were products largely of the public school system which had taught them very effectively the importance of team skills and service to King and country.³¹⁹

Hutton's role and his focus on the mapping programme

The research has also revealed the extent to which the mapping programme was an essential aspect of MI9's entire endeavours and it was Christopher Clayton Hutton, universally known as 'Clutty', who was the key personality involved directly and who seems to have been the initiator of the mapping programme. Hutton proved to be a very enigmatic personality. He was variously described by those who knew and worked with him as both an eccentric and a genius. In reviewing the various members of Crockatt's team, Foot and Langley described Hutton as 'the joker in the pack', wayward yet original, with an apparently limitless supply of both enthusiasm and ingenuity, and possessing no regard for either rules or officialdom.³²⁰ He clearly was an eccentric character and was apparently left by Crockatt very much to his own devices. Taken ill during the war, it seems that he left MI9 on health grounds and there is some later indication that he suffered a mental breakdown.³²¹ The detail of the letter he wrote from his hospital bed in February 1943 to Victor Watson in the Waddington Company contained a rather strange request. He asked that he be sent a list of all the 'pretty

³¹⁹ *The Boy's Own Paper* was a British popular publication aimed at teenage boys, published from 1879 to 1967. Robert Baden-Powell, the founder of the Boy Scout movement, was a regular contributor.

³²⁰ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, p.37.

³²¹ TNA: TS28/581, Air Ministry minute AM 1/17380 dated 21/5/51.

pictures' (his coded phraseology for maps) and the amounts which had been paid to the Company for the work. The letter ended:

.....with my kindest regards and many thanks for the troubles you all took to help us over a very high stile I am a broken spirit at being here and doubt if I shall ever be back but cannot tell and don't much care.³²²

Watson realised the inappropriateness of Hutton's request and responded that he could not meet the request, but was happy to send a Waddington game. In a further letter, Hutton acknowledged his misguided behaviour and apologised. Hutton had left MI9 but appeared to recover sufficiently from his illness by February 1944 to apply to SOE for possible employment. The vetting form in the file noted his previous employment with MI9, but was stamped 'NOT TO BE EMPLOYED' owing to 'traces'.³²³ The precise nature of the traces and concerns was not recorded, possibly his health and state of mind, but his attempt to return to the intelligence world, unsurprisingly, met with failure.

After the war, Hutton ran into further difficulty with the authorities when he tried to publish his own story about MI9 and also embark on a lecture tour of the United States. He was keen to highlight the role he had played in MI9's escape and evasion programme and earn some money at the same time. Insights into what transpired were offered by a contemporary file of the Treasury Solicitor.³²⁴ The first book which Hutton published appeared under a pseudonym (Charles Connell) and there is discussion by, and exchanges of correspondence with, the Treasury Solicitor in the file.³²⁵ It appeared at one stage that Hutton was likely to be prosecuted under the Official Secrets Act if he proceeded with publication, and a case against him was certainly being documented for the Director of Public Prosecutions. There was clearly some negotiation with the

³²² British Library Maps C.49.e.55, enclosure 341.

³²³ TNA: HS 9/771/4, enclosure dated 15-2-44.

³²⁴ TNA: TS 28/581

³²⁵ Connell. *The Hidden Catch*.

publisher and, with the inclusion of some agreed wording and the omission of (unspecified) sections, publication went ahead in 1955. After publication, Hutton apparently threatened his publisher (Elek) with legal action for including revised wording some of which he regarded as libellous. In May 1957, the Treasury Solicitor was informed that the action had been settled out of court and a discontinuance notice had been served.³²⁶

The second book he published appeared in 1960 and is the one most commonly associated with him.³²⁷ The final chapter of the book described the various personal and professional challenges that he encountered. Hutton appeared to have been a troubled soul. It is certain he caused himself and MI9 more challenges than were necessary. He appeared to have an almost obsessive personality which led him to pursue his objective with single-minded focus and total self-belief. He appeared to have complete conviction and self-assurance, and it may well have been the complexities of his personality that caused his eventual illness and hospitalisation, and the end of his career with MI9. He certainly caused considerably more difficulties and costs than should have been encountered, and arguably would have been encountered had he sought to involve the military map-makers from the start. It is, however, the case that all who knew Hutton, and those who wrote about him, appeared to agree that he was the right man for the job. For all his undoubted weaknesses, it appears to be the case that Hutton, virtually single handed, managed to mount and sustain the detailed map production programme, and the fact that he managed to do so without the help of those best placed to make his life easier, arguably makes his feat the more impressive.

³²⁶ TNA: TS 28/58.

³²⁷ Hutton. *Official Secret*.

A new and inexperienced intelligence organisation

Before considering just how successful MI9 can be judged to have been, it needs to be accepted that any objective judgement should to be set in the context of the wartime crisis and against the backdrop of individual and departmental rivalries. Petty rivalries and jealousies apparently persisted despite the popular assumption that they were held in abeyance. It is clear that the newly formed organisation took time to find its feet. In the early days of its existence, this was due largely to a lack of staff. It took time to recruit and staff the various sections, especially when the country was already at war and soon sustaining heavy losses and defeats. As Head of the fledgling service, Crockatt was also aware from the beginning that:

..... secret and semi-secret services like to work in a dense fog of security, in which the germs of inter-secret-service jealousy breed fast.³²⁸

It should be remembered that in 1939 the Foreign Office had wanted MI9 established under its direct control. The reason for that is not stated in the records of the time but is very likely to have been so that SIS could exert direct control and influence on its work from the beginning. As it was, the Foreign Office's opposition was overruled and, throughout its existence, MI9 was an integral part of the War Office where it met the needs of all three Services. It became clear from the post-war published works of those who were directly involved with MI9 at the time, especially both Neave and Langley, that SIS sought to undermine Crockatt, at every opportunity, and control much of his Branch's work.

Sir Stewart Menzies had been appointed Chief of SIS, a post generally referred to as C (the Chief's code name after Sir George Mansfield Smith-Cumming KCMG CB who was the first director of what would later become SIS and who always initialled papers he read, C.) Menzies' appointment followed the death of Admiral

³²⁸ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, p.40.

Quex Sinclair in November 1939 and occurred barely a month prior to the creation of MI9 and Crockatt's appointment. Menzies' Assistant Chief was Colonel (later Sir) Claude Dansey. Dansey was older (63 years old at the outbreak of war) and it was sometimes felt that Menzies deferred to him. Dansey appeared to be regarded as, and apparently preferred to be, something of an *eminence grise*, rather than the man in charge. As Foot and Langley put it 'He could have broken Crockatt, or anyone else in MI9 ... and Crockatt knew it'.³²⁹ Certainly Crockatt kept his organisation relatively small and tight, and appeared to avoid any direct confrontation with SIS, even when he was aware of the absence of its support from his section's work. Crockatt was, however, very clear about SIS's role and thinking, and the extent to which they were motivated by their history and experience during World War I. At the end of the war, he wrote:

The oft repeated statement that Nurse Edith Cavell, who apparently worked for SIS during the last war, had been discovered through assisting a prisoner of war seemed to dictate the whole attitude of SIS towards the Section. They were determined to prevent escapers and evaders from involving them in any way. This attitude may have been correct from their own security aspect, but it was a terrific handicap to those trying to build up an organisation.³³⁰

Crockatt sought at every stage not to cross SIS's path. He encouraged his staff to 'take it quietly and remember we are playing very much a lone hand'.³³¹ SIS had clearly not forgotten that in October 1915 Edith Cavell had been shot by the Germans for hiding British soldiers in her clinic in Brussels and helping them to escape to neutral territory. Whilst Crockatt understood their approach, he clearly regarded it as detrimental to the work of MI9. He was supported in that view by both Langley (who worked for SIS but

³²⁹ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, pp.42-43.

³³⁰ TNA: WO 208/3242, Section 9, p.95.

³³¹ Langley. *Fight Another Day*, p.138.

within MI9) and by Neave (who worked alongside Langley in MI9). SIS never realised that an increase in support for MI9 was needed:

Their rather negative form of support continued to the last and had the inevitable effect of restricting the scope of the Section's work in every country with which it was concerned.³³²

Neave expressed his view very clearly in the second book he wrote. The cynical belief of the other intelligence branches appeared to him to be that airmen shot down by the Germans were a matter of minor importance but he felt strongly that was indeed their view, describing their actions as ‘this negative campaign.’³³³ He was convinced that MI9 was simply not taken seriously enough, that it lacked influence and was afforded the lowest possible priority with the Air Ministry.

MI9 had no direct representation in the War Cabinet, whereas SIS did. Menzies knew well before Crockatt did, by July 1940, of the intention to create the Special Operations Executive (SOE). Menzies resented the creation of this subversive organisation, independent of SIS’s control. Together with Dansey, he viewed the establishment of the SOE as undermining their long held monopoly of the control of undercover work in enemy territory. They supposed that SOE would likely subvert, or at least hinder, their work of obtaining intelligence. It is very probable that this was the un-stated reason for Menzies and Dansey’s offer to Crockatt in August 1940, when they proposed to set up an escape route for MI9 from Marseilles into Spain. Crockatt accepted the offer and the details of the new organisation were arranged by Dansey. He chose Donald Darling, code name ‘Sunday’, to establish the escape route to run from Marseilles to Barcelona and Madrid, and then via Lisbon or Gibraltar to London. Darling’s cover was as Vice-Consul, responsible for refugees. He also placed Jimmy Langley in MI9, who had been recruited to SIS on his successful escape and return to

³³² TNA: WO 208/3242, Section 9, p.95.

³³³ Neave. *Saturday at MI9*, p.152.

the UK, as the main interface between the two organisations. SIS, effectively, had control of MI9's escape lines in Western Europe and how they operated. Langley, later joined by Neave, was effectively SIS's Trojan horse inside MI9, although it never quite worked out in that way. Langley later recalled his view of Dansey, that he needed courage to face up to Dansey as he always reduced him to 'a petrified jelly'.³³⁴ That was quite an admission from a man who had escaped from a hospital in Dunkirk with a suppurating amputation wound and had successfully escaped through France to Marseilles and then back to London. Langley also recognised that, 'as a late arrival in the intelligence community escape and evasion was very much at the tail end of queue'. It was necessary to find men and women who could move around in France to help get the escapers and evaders to safety. SIS was firmly resolved that their agents would not be involved and were equally resolved that they would ensure that they were in a position to control all the main escape routes.

SIS was not, however, the only branch of Government service which wanted to control MI9. In 1943 the Air Ministry proposed that Crockatt be replaced by a senior RAF officer and that all MI9's responsibilities should be placed under their jurisdiction. It was rumoured that the debate went to the highest levels of the War Cabinet and that Churchill himself ruled that MI9 should remain under WO control.³³⁵ The fact that there were competing players seeking to control MI9 probably made it doubly difficult for SIS ever to mount a successful take-over. It must also have made life for Crockatt far from comfortable, working daily in the knowledge that others were seeking to exert influence and control over his every move. Dansey determined that SIS's valuable agents should never be used on what he regarded as 'a thoroughly unproductive clandestine pastime' or that nothing should ever be allowed to interfere with SIS's work

³³⁴ Langley. *Fight Another Day*, p.170.

³³⁵ Langley. *Fight Another Day*, p.188.

to collect intelligence information ‘from all possible sources, by every feasible means, the world over’.³³⁶ The fact that MI9 was also producing valuable intelligence must have rankled with SIS and was certainly not something which SIS was ever ready openly to acknowledge. When the history of British intelligence during World War II came to be written by Hinsley and others in a ten year period from 1979, it was written very much from SIS’s perspective, and made very little mention of MI9, its role or contribution, throughout the five volumes.³³⁷ Although Hinsley and his collaborators did make some limited mention of SIS’s relationship with SOE, there is no mention of SIS’s view of MI9, and yet, as this research has shown, MI9 was a source of extremely valuable intelligence and could get answers to some vexing operational questions. SIS was on standard distribution for the receipt of all such reports emanating from this source, and yet that fact is not even hinted at in Hinsley’s ‘official’ and very detailed review of the story of British intelligence in World War II. It was as if there was a conscious decision to write the fledgling escape and evasion organisation out of the history books. The record was certainly corrected by Foot and Langley when they wrote the book which has come to be regarded as the definitive history of MI9 and in which Crockatt’s personal leadership role and the challenges he faced are openly discussed and acknowledged.³³⁸ Their book was published in the same year that the first volume of Hinsley’s history appeared.

Neave shared a view of SIS similar to Langley’s. He clearly disliked Dansey’s behaviour towards MI9, spoke of the ‘battles with Uncle Claude’ and described Crockatt as a remarkable man.³³⁹ It is telling that Crockatt chose to retire to private life very soon after the cessation of hostilities and left the winding down of MI9 to Sam

³³⁶ Langley. *Fight Another Day*, p.140 and p.154.

³³⁷ Hinsley, F.H. *British Intelligence in the Second World War*. Five volumes. HMSO. London. 1979-1990.

³³⁸ Foot & Langley. *MI9 Escape and Evasion 1939-1945*, Chapter XII.

³³⁹ Langley. *Fight Another Day*. Introduction.

Derry, the organiser of one of the escape lines (from Italy). However, as a way of keeping in touch with those who had worked in MI9 or MI19, Crockatt did establish the 919 dining club, in much the same way that SOE established the Special Forces Club.³⁴⁰ Sadly, Crockatt's club folded soon after his death in 1956, whereas SOE's club survives in London to this day.

Despite detailed and lengthy searches through the records, the date of the formal closure of MI9 has not been identified, although there is every indication that it started as early as July 1945 and its officers were demobilised in 1946.³⁴¹ Certainly, the Branch remained active long enough to ensure that the many prisoners of war returning from the camps in both Europe and Asia were required to complete a short questionnaire in an attempt to learn lessons about escape experiences which might prove valuable in any future war and to identify any collaborators for possible prosecution. It also organised a lengthy exercise to get aid in the form of food to those who had helped on the escape routes and to identify those who should receive honours for the support they had given to escapers and evaders, recognising the extent to which they had placed their own lives in mortal peril. The task was eventually completed by the Air Ministry and they decided to fund the RAF Escaping Society, which continued in existence into the 1990s, ensuring that those who been directly involved with MI9, their families, dependents and descendants, received the support they needed long after the war had ended.

Contacts with other secret departments, such as SOE, were arguably not made early enough, although a useful and mutually beneficial relationship was eventually

³⁴⁰ MI19 was originally part of MI9 and responsible for German prisoners of war. It became a separate intelligence branch during the war.

³⁴¹ Langley. *Fight Another Day*. Chapter 16.

created.³⁴² Neave provided very specific evidence of this when he described MI9's support to Operation Frankton (popularly known as the Cockleshell Heroes), SOE's daring Commando raid on German shipping on the River Gironde in Bordeaux in December 1942. He indicated that, after the success of the raid, two of the survivors made for Ruffec and the escape route which had been pre-planned with MI9:

With the aid of special maps and compasses with which they had been supplied by MI9 they continued marching until, at dawn on December 18th, weak and hungry, they reached Ruffec. They had walked nearly a hundred miles.³⁴³

In his own end-of-war summary, Crockatt indicated his own awareness of the sensitivity which attached to MI9's relationship with SIS.³⁴⁴ He knew that SIS senior officers hated SOE since the turmoil and unrest fomented by SOE made life for SIS agents in area 'awkward'. Whether or not SIS was aware of MI9's support for SOE is not known, but had they done so, it would likely have confirmed their worst fears. Similarly escapers, evaders and their local helpers were 'anathema to SIS officers of the old school'. Potentially MI9 might disrupt their work of obtaining intelligence. The fact that the simmering internecine hostilities which existed between SIS and MI9 never actually broke out into open warfare was almost certainly due to Crockatt's low-key behaviour. There appeared to be no structures in place, however, to minimise the tribalism and perhaps frictions were inevitable. It is certain that personalities also played a part, as highlighted by both Neave and Langley in the case of Dansey. In the Conclusion to his postgraduate thesis, Thomas Keene made some very pertinent remarks about the lamentable frictions which existed between SOE and SIS.³⁴⁵ He has

³⁴² TNA: WO 208/3242, p.79.

³⁴³ Neave. *Saturday at MI9*, p.199.

³⁴⁴ TNA: WO 208/3242, p.42 and p.95.

³⁴⁵ Keene, Thomas Edward. 'Beset By Secrecy and Beleaguered by Rivals: the Special Operations Executive and Military Operations in Western Europe 1940-1942 with special reference to Operation Frankton', unpublished University of Plymouth PhD thesis, 2011.

also highlighted the extent to which the clash of interests and lack of clarity in the demarcation between the two organisations was never resolved, as it should have been. The same situation was also commented on by Leo Marks who indicated the extent to which SIS resented SOE since it threatened its monopoly: he described the mutual antipathy as having ‘the growth potential of an obsession’.³⁴⁶ Those same views can be applied to SIS and MI9 as precisely the same situation undoubtedly also existed between those two organisations. Since there was never any overall control of the two organisations by a single Minister of Cabinet rank, only Churchill could have resolved the matter. It is clear that Churchill had a particular interest in the work of MI9, reflected in the personal letter sent to the prisoners of war, hidden inside cigars, a letter clearly designed to help sustain morale in the camps.³⁴⁷ The extent to which the Prime Minister’s personal support, in the same way he supported the role of Bletchley Park, could have proved to be Crockatt’s saviour is not known and does not appear to be reflected in the records. It might have made Crockatt’s task the easier, had the Prime Minister sought rather to ensure that inter-departmental conflict was stopped by clearer means of demarcation. In the final analysis, the various secret organisations should have been demonstrating a vested, joint and coordinated national interest in winning the war, rather than in fighting internal battles, which they clearly were.

Did MI9 meet its remit?

Any judgement of MI9’s success, or failure, needs to be set against this background in which it was forced to operate. In seeking to make a judgement, it is fair to be reminded of the principal objectives with which they had been charged in 1939 and which have been described in detail in Chapter 1. They fell under three broad headings, namely morale of prisoners of war, the acquisition of intelligence, and escape and evasion.

³⁴⁶ Marks. *A Code Maker’s War*, p.41.

³⁴⁷ TNA: WO 208/3242, enclosure 3A, dated August 3, 1941.

In terms of morale, certainly the all-pervading philosophy of escape-mindedness which Crockatt and his staff tried to inculcate seemed to have improved the morale of the prisoners of war. The camp histories make much of the extent to which the involvement of the camps in the activity of planning escapes contributed to the maintenance of a mood of optimism.³⁴⁸ The time spent in planning and executing escapes kept the prisoners of war occupied through the many days, months and, in some cases, years of captivity. They felt that, despite their captivity, they were still actively contributing to the war effort. Many prisoners of war were aware that their camp was in covert contact with the War Office, although how and when communications occurred was known only to the relatively few coded letter writers or to those using the radios. News sent via the coded letters and, later on in the war, via the wireless contacts, encouraged them in their endeavours. They received news of what was happening, especially after the Allies had landed in Normandy, and started to push back the German front.

Those at home had their morale boosted with the return of the successful escapers and evaders. This was expressed by Neave in his Introduction to Langley's book:

It was the sudden reappearance of airmen reported lost, at RAF Stations, that had so deep an impact. When the great raids on Germany began, and losses began to mount, these miraculous returns from the unknown encouraged the whole RAF. They knew that, even if wounded, they had a chance of avoiding capture. The lectures and escape aids of MI9 increased their confidence. More than once we took an airman back to his Station.....the joy with which he was greeted made all our efforts worth while.³⁴⁹

³⁴⁸ Four camp histories have been identified to date. These are:- TNA: WO 208/3270 Marlag and Milag Nord Westertinke, TNA: AIR 40/2645 Stalag Luft III Sagan, TNA: WO 208/3288 Oflag IVC Colditz and TNA: WO 208/3281 Stalag XXA Thorn.

³⁴⁹ Langley. *Fight Another Day*. Introduction.

Similarly, the families of the captured military personnel, both officers and other ranks, were alerted by MI9 to the extent to which their sons were able to continue to contribute to the war effort despite their incarceration behind barbed wire.

Another key responsibility given to MI9 from the beginning was to collect information from British prisoners of war through maintaining contact with them during captivity and after successful repatriation, and disseminate the intelligence obtained to all three Services and appropriate Government Departments. Perhaps one of the most surprising aspects of this research has been the discovery of the extent to which MI9 was able to establish coded contact with the camps and use it, not only as a crucial link in supporting escape activity, but also as the means to encourage the camps to provide whatever intelligence they could to support the war effort. The coded letter system was often used to seek answers to some very specific enquiries about Allied losses and the state of the German war machine. The camps proved to be a remarkable fifth column and one which, to date, has received little or no recognition in the published literature.

In terms of the escape and evasion activity itself, the sheer output of the production of escape aids, leaving aside the mapping programme for the moment, was impressive. Between 1st January 1942 and 25th August 1945, MI9 apparently arranged for the production and despatch of 423,075 escape packs, 275,407 purses, over 1,700,000 compasses and related devices, and 434,104 miscellaneous items, including such items as gramophone records and other leisure items, all previously described in Chapter 3.³⁵⁰ The list is impressive enough and becomes even more so if the whole of the escape and evasion mapping programme, totalling in excess of two million maps by the end of the war, is added to it.

³⁵⁰ TNA: WO 208/3242, p.12.

The success of MI9's mapping programme

A core objective of the research reported in this thesis was to investigate as fully as possible the escape and evasion mapping programme undertaken by MI9. Until now, a thorough exploration of the maps that were made, how they were produced, and the quantities that were printed, has been lacking. It is now possible, for the first time, to reveal an estimate of the numbers of escape and evasion maps which MI9 actually produced. A conservative figure would be that 234 individual items were produced and in excess of two million copies were printed.³⁵¹ Approximately half of the two million copies produced were of three of the sheets [Series 43] covering Western Europe which it is believed were printed as operational cover prior to the D-Day landings. Despite this, a cautious assessment of the total printed for escape and evasion purposes would still be in excess of one million copies. (As already noted previously, full details of the scope, variety and numbers of the mapping programme are contained in the appendices.)

A critically important further finding revealed in this research has been the sheer scale of the covert involvement of commercial companies by MI9 in order to mount such levels of cartographic production in a wartime situation. By any measure, this appears to have been a quite remarkable effort, the more so when one takes account of the self-inflicted production challenges which resulted from Hutton's own insularity and lack of cartographic awareness, experience or training. If numbers are an indicator of success, then certainly the programme can be deemed to have been successful. Whilst a significant proportion of the print volume took place after D.Survey became involved, and probably reflected an awareness of the value of fabric maps in an operational

³⁵¹ TNA: WO 208/3242, p.92 indicates that over two million maps were issued in the years 1942- 45 inclusive. The independent figure recorded by the author in researching various aspects of the print record was arrived at by a manual count of the print runs listed in the appendices: it is remarkably similar to that recorded in the WO file.

situation, it is by any standard an impressive record of map production. It is also worthwhile considering the numbers of escapers and evaders who managed to return to the UK before victory was declared. Over 35,000 are reported to have returned, numbers which equate to the size of three Army divisions.³⁵²

Epitaph

Despite the scale of activity, Langley indicated that the only epitaph he could find for the work of Crockatt, Neave, Darling and himself was that ‘it was too little, too late’.³⁵³ Whilst arguably he should have known from his own experience just how true, or not, that description was, there is much to indicate that his judgement was far from balanced. Perhaps he was too close to offer an objective and dispassionate judgement. As an escaper himself, he identified very closely with the fate of those who were required to spend months and often years of their young lives as guests of the Third Reich. His judgement was probably also being coloured by his understandable desire to help as many as possible to freedom. He confessed that he blamed no-one for the shortcomings of MI9 and certainly not ‘Uncle Claude’ and SIS. He felt that the fault, such as it was, lay ‘in the inability of anyone to see that the apparently impossible was possible’.³⁵⁴ For Langley, it was the lack of foresight and even of imagination, which resulted in the failure to grasp the considerable potential of organised escape and evasion which he personally regarded as so self-evident. He believed that, had MI9 been granted the same freedoms and status as SOE, much more could have been achieved. It is clear that he experienced anger and frustration at what he regarded as MI9’s failures. Much of his

³⁵² TNA: WO 208/3242, Appendix K lists the numbers of successful escapers & evaders in Western Europe to 30th June 1945 as 28,349 British & Commonwealth + 7498 Americans = total of 35,847. AIR 20/6805, sheet 4 shows the number of successful escapes in Europe as a total of British + US + Dominion = 35, 606. The two figures are remarkably similar.

³⁵³ Langley. *Fight Another Day*, p.252.

³⁵⁴ Langley. *Fight Another Day*, p.252.

thinking appeared, however, to reflect the loss of life on the escape lines of those members of the French, Belgian and Dutch resistance who were captured and executed by the Gestapo or who died in the concentration camps.

Crockatt himself wrote an interesting epitaph of his own in the historical record of MI9's work which he penned. His short section on 'lessons learned' spoke volumes of his own view about the task MI9 had been set and the extent to which its personnel had had to deal with unexpected obstacles. He set out the ways in which any future escape and evasion organisation might benefit from MI9's experience with the very particular recommendation that 'an adequate staff for planning purposes of obtaining information likely to help escapers and evaders is allowed at the outset.'³⁵⁵ It was acknowledged by all three Services and the USA that MI9 had made 'an important contribution to the war effort.'³⁵⁶ Many owed their life and liberty to equipment devised and issued by Section Z. What had really been needed, and it is acknowledged in the record, is that experts and its own workshop to experiment in devising and making new equipment would have proved a valuable addition to the organisation.

A recurring aspect of the research which underpins this thesis is the continuing search for files in The National Archives. Foot and Langley were afforded special access in the late 1970s to produce their seminal work. Foot anticipated, in the author's discussion with him in 2012, that many of the previously closed files would by now be open. Certainly many more than he was able to access are now available. However, identifying the files can often be testing since they are not all amongst the War Office files, especially WO 208, which was where Foot anticipated they would be, and some carry titles and descriptions which do not readily indicate that they relate to the work of MI9. Such shortcomings in cataloguing may well result from the dispersal of files at

³⁵⁵ TNA: WO 208/3242, Section X, p.80.

³⁵⁶ TNA: WO 208/3242, Section 9, p.94.

the time MI9 was being wound up at the end of the war. Even now, the researcher is still faced with closed files. This researcher's experience of just one request under the Freedom of Information (FOI) legislation for the opening of a file led to a wait of over three months because the request reportedly raised 'complex public interest considerations'. Government departments generally respond to FOI requests within 4 weeks (20 working days). This particular FOI request was made on 8th May 2013 and the file was only finally opened on 15th August 2013, a period of over 3 months. Moreover, significant segments of the released file had been redacted and the closure dates of some of the redactions had been further extended to 2030. The imagination can run amok, thinking about what possible secrets need to be withheld for 85 years after the end of World War II.

This research has uncovered not only an immensely significant episode in the history of British military mapping, but has also shed light on a hitherto largely unacknowledged aspect of British intelligence activity in World War II. The thesis has detailed for the first time a remarkable chapter in the production, use and application of military mapping on silk (and other fabrics) and, moreover, it has shown the extent to which the maps contributed to the mission of aiding escapers and evaders upon which MI9 embarked in 1939. To make this contribution to the history of twentieth century cartography, it has been necessary to look closely at MI9 and its role, and to understand the dynamics of escape from prisoner of war camps. It is for others to progress the story through wars which have occurred since 1945, as further files in The National Archives become available, and possibly through the systematic exploration of the extent to which the Germans were aware of, and sought to counteract, the programme. History exists only in retrospect and can be written from different perspectives in different contexts at different times. It needs to be written with an objective and dispassionate view which, arguably only comes with the benefit of hindsight and access

to evidence. In the case of MI9 and its mapping programme, this thesis has sought to reveal its history as comprehensively and as accurately as possible, but it is of course acknowledged that other scholars who follow may in future uncover new details and insights that add further to what is known about the subject.

In the final analysis, the manner in which MI9 executed its escape and evasion mapping programme, for the benefit of those thousands of men captured and imprisoned by Hitler's regime, has proved to be a quite outstanding cartographic feat and one which needed to be told. It has proved to be one of the unrecognised triumphs both of this nation's military mapping history and its military intelligence capability operating in a wartime scenario. Who knows what further triumphs might have been accomplished had Crockatt and his team been allowed to proceed unhindered by inter-departmental politics, adequately staffed and funded, and directly supported by the undoubtedly experience and expertise of the nation's military mapping organisation.

Appendices

Introduction to Appendices 1-9

A detailed description of each of the various escape and evasion series/groups of maps produced by MI9 in the period 1939-45 is contained in Chapter 2. The following appendices have been compiled to identify the individual sheets in each series. Each appendix lists the sheets identified from the various historical records investigated and from archives around the country which have been visited in the course of the research. Bibliographic details are provided for each sheet. Production details are included wherever possible and the various collections holding extant copies of the sheets are identified. Brief and tailored introductions are provided at the beginning of each appendix. The detail provided in the individual introductions is a condensed version of the detail contained in Chapter 2 of the main body of the thesis. This approach will allow the appendices to stand alone as a ready reference and valuable aid for researchers and map librarians/archivists in the future.

In all, a total of 227 individual maps have been identified in 8 publicly accessible record repositories and museums and 4 private collections, and it is estimated that over 1,800,000 copies were printed in the five years from the early months of 1940 until production was halted in 1945. The total number of printed copies was clearly boosted by the large numbers of Series 43 (in excess of one million) which were apparently printed for operational rather than escape and evasion purposes in the run-up to D-Day. Notwithstanding that, it is clear than in excess of three quarters of a million copies of the MI9 maps were apparently produced for escape and evasion purposes.

The orthography of the original maps is retained in the bibliographical entries which follow.

Introduction to Appendix 1

Fabric maps based on Bartholomew originals + maps with similar numbering system: extant copies identified

The maps listed in Appendix 1 are an amalgam of those escape and evasion maps which are believed to have been based directly on the maps of John Bartholomew & Son Limited of Edinburgh, together with some maps which utilised a similar numbering system but which are clearly not based on Bartholomew maps. They have been combined in one appendix for ease of reference. Part 1 of the appendix contains a detailed geographical description of each map. The entries are tabulated under the column headings, sheet number, geographical co-ordinates, date, geographical coverage, scale, dimensions (length x width), detail (of colours), and notes. Where an entry appears in square brackets, such as the title of sheet A4 [Danzig], this indicates that the entry does not appear on the map itself, but has been derived from an alternative source, such as the print record. The few dates which appear have been taken from the date of the boundary information in the map legend: in general, however, the escape and evasion maps not dated and do not carry their own production details.

Part 2 of the appendix contains details of the production information. The first column shows the sheet number and indicates whether it was produced singly or in combination with another sheet. The second column indicates the medium on which the map was printed. The first part of the entry denotes the actual medium of the extant copies, tissue, silk or MMF (man-made fibre): this has been ascertained by viewing the extant copies. The second part of the entry denotes the information derived from the print record, paper or fabric. The third column indicates the size of the print run and

the fourth column indicates the print or despatch date. In all cases, this detail has been derived from the print record. The final column indicates the location of extant copies of the sheet. The codes for the various repositories are:

1. Defence Geographic Centre (DGC): this is the nation's record collection of military maps and is destined for deposit in The National Archives.
2. The National Archives (TNA).
3. British Library Map Library (BL).
4. Intelligence Corps Museum (ICM).
5. Royal Air Force (RAF) Museum.
6. Macclesfield Silk Museum.
7. Cumberland Pencil Museum.
8. National Library of Scotland.
9. Private collections.

For reasons of confidentiality and security, no detail about private collections has been disclosed. Further detail about the maps is contained at Chapter 2 of the main body of the thesis.

APPENDIX 1

Fabric maps based on Bartholomew originals + similar numbering system: extant copies identified

Part 1: geographical description of the maps

Sheet Number	Geographical Co-ordinates	Date	Geographical Coverage	Scale	Dimensions Length x Width	Detail	Notes
A	5°40'-17°+E 46°30'-55°+N		Germany, Poland, Austria, Czechoslovakia + parts of Switzerland, Italy, Yugoslavia, Denmark, Sweden, Holland, Belgium & France.	1:2M	516mm x 479mm 20" x 19"	black + red roads + green international boundaries: some copies have blue water plate.	Bartholomew print number 311 appears in SW corner of some copies. Some copies have no sheet number.
A1			German-Swiss frontier area, section of the Schaffhausen salient in the region of Schleitheim.	2.5" = 5 miles (c.1:126,720)	250mm x 190mm 10" x 7.5"	black detail, red boundary + pylons green woods, blue water.	
A2			Denmark & Baltic seaboard to Swiss border + Holland/ Belgium/France borders + parts of Austria, Poland & Czechoslovakia.	1:4M	255mm x 255mm 10" x 10"	3 colours: black, red, grey/green.	
A4			Port of Danzig at mouth of River Vistula.	(c.1:16,000)		black detail & blue water plate.	Known also to exist at larger scale with no sheet number.
A6		June 1943	German-Swiss frontier & eastern end of Lake Konstanz, mouth of Rhine + Liechenstein.	3" = 10 miles (c.1:210,000)	380mm x 310mm 15" x 12"	black detail, blue water, red roads, green boundary & woods.	Contains 2 ground photos and a sketch map.

Sheet Number	Geographical Co-ordinates	Date	Geographical Coverage	Scale	Dimensions Length x Width	Detail	Notes
BL2 (also marked B2 in top margin)	6° - 7°50' E 50°35' - 51°40'N		SE Holland, E Belgium + adjacent parts of Germany.	1:600,000	215mm x 255mm 8.5" x 10"	3 colours: black, red, grey/green.	
BL3	7°40' - 9°55'E 50°40' - 51°45'N		Area of Germany centred on Kassel.	1:600,000	215mm x 255mm 8.5" x 10"	3 colours: black, red, grey/green.	
C	+ 4°W - 8°+E 47°30' - 54° +N		France north of Loire, Luxembourg, Belgium, Holland & W Germany: no detail over GB except extreme SE.	1:2M	435mm x 537mm 17" x 21"	black detail + red roads + green international boundaries.	
(as C above but no sheet number)	(sheet is almost identical to C above, but detail is shown over GB to N & W extent of sheet)						
D	3°W - 8°+E 42° - 47°+N		France south of the Loire and east to Switzerland.	1:2M	434mm x 523mm 17" x 21"	4 colours:- black detail + red roads + blue lakes + yellow international boundaries.	
F	- 4°- 36°+E -60°70'+N	(1939 & 1940)	Northern part of Scandinavia + inset of North Sea Connections.	1:3M (also produced at 1:2M with smaller geographical coverage).	485mm x 589mm 19" x 23"	3 colours: black, red, green.	Bartholomew's print number A40 appears in NW corner of some copies.
G	- 6°-30°+E - 54°- 60°+N	(1939 & 1940)	Southern part of Scandinavia & the Baltic Sea.	1:3M (and 1:2M)	485mm x 589mm 19" x 23"	3 colours: black, red, green.	Bartholomew's print number 392 in SW corner of some copies.

Sheet Number	Geographical Co-ordinates	Date	Geographical Coverage	Scale	Dimensions Length x Width	Detail	Notes
H	+ 9°W - 3°+E - 35° - 42°+N		SW France, Portugal, most of Spain, part of Balearics + adjacent N.Africa. Inset of Balearics & Canary Islands.	1:2,571,000	504mm x 578mm 20" x 23"	3 colours: black, red, green.	
H2	+ 8°W - 9°+E - 36° - 44°+N		Iberian peninsula, S.France, NW Italy, Corsica, Sardinia, Balearics + adjacent part of N. Africa.	1:3M	399mm x 599mm 16" x 24"	3 colours: black, red, green.	
J3	7° - 15° +E 40° - 46° +N		N. Italy + larger scale inset of Swiss frontier & inset of Rome.	1:1,378,000	628mm x 521mm 25" x 21"	4 colours: red,blue, black, green. Not Bart's specification. Based on native Italian maps.	J3 &J4 also known to exist with geographical areas reversed, scale reduced to 1:1,500,000 & different insets i.e.
J4	13° - 18°+E 37° - 42° +N		S.Italy with same scale inset of Sicily.	1:1,378,000	394mm x 482mm 16" x 19"	Italian, French & English language legend.	J3 with insets of Sicilia & Sardegna, J4 with inset of part of Corsica.
J5	14°30'-16°15'E 39° - 40°10' N		NW part of Sardinia.	1:275,000	517mm x 570mm 20.25" x 22.5"	Not Bart's specification. Full topography with contour plate.	
J6	8°6' - 9°52'E 40°- 44°10'N		Sardinia, Gulf of Poleso & area south of Naples.	1:275,000	517mm x 570mm 20.25" x 22.5"	English language legend.	

Sheet Number	Geographical Co-ordinates	Date	Geographical Coverage	Scale	Dimensions Length x Width	Detail	Notes
J7	2°15' - 2°55'E 37°45' - 38°10'+N based on Rome meridian, 12° 27°7-1" East Greenwich.		Sicily, area of Mt. Etna.	1:110,000	510mm x 615mm 20" x 24.25"	Not Bart's specification. Full topography with contour plate. Red, black, blue colours. English legend.	
J8	1°28' - 2°15'E 37°40' - 38°05' +N based on Rome meridian.		Sicily.	1:110,000	510mm x 615mm 20" x 24.25"		
K	19° - 33°E 28°- 36°N		Cyrenaica & Crete (no coverage of Cyprus).	1:1,657,000	502mm x 587mm 20" x 23"	3 colours: black, red, grey/green.	
K1	details identical in all respects to K above.						
K2	- 0° - 24°+E 12° - 37° +N		partial overlap with K/K1, extending W & S.	c 1:6M	491mm x 551mm 20" x 22"	3 colours: black, red, green.	
K3	+ 20°W - 4°+E 12° - 36° +N		Morocco, Algeria, Tunisia, Italian Libya, & Spanish Rio do Oro. Partial overlap with K2, extending W to Atlantic Ocean with Canary & Madeira Islands.	1:6M	526mm x 469mm 21" x 19"	3 colours: black, red, green.	
K4	+ 15°W - 5°+E - 0° - 15°+N		Partial overlap with K3, extending S to Gulf of Guinea.	1:5M	526mm : 469mm 21" x 19"	3 colours: black, red, green.	
K5	- 0°- 15°+E - 0°- 20°+N		Partial N/S overlap with K2 extending S + partial E/W overlap with K4 extending E.	1:5M	593mm x 465mm 24" x 19"	3 colours: black, red, brown.	relief shown by hachures.
K6	8° - 28° +E + 8°S - 6°+N		Overlaps with K5, extending south.	1:4M	593mm x 465mm 24" x 19"	3 colours: black, red, grey/green.	

Sheet number	Geographical co-ordinates	Date	Geographical coverage	Scale	Dimensions (length x width)	Details	Notes
ME/01/F	- 34°- 54°+E 28° - 42°N		E Mediterranean east to Iran + N Persian Gulf north to Black & Caspian Seas.	1:4,500,000	443mm x 505mm 18" x 20"	6 colours: black, red, green, orange, blue, purple.	relief shown by layers.
MP1	96° - 110°E - 2° - 20°N		Laos, Cambodia, S Thailand, Malay Peninsula & N. Sumatra.	1:4M	638mmx 513mm 26" x 21"	3 colours: black, red, green.	
N	- 36°- 43°+E 12° - 18° +N		Eritrea extending E across Red Sea to Yemen.	1:2M	465mm x 471mm 19" x 19"	2 colours: black, red.	
O	- 35°- 42°E 4° - 12° N		Abyssinia.	1:2M	550mm x 466mm 22" x 19"	2 colours: black, red.	
P	42° - 51° +E 4° - 12° N		Somaliland.	1:2M	476mm x 583mm 19" x 23"	2 colours: black, red.	
Q	- 38°- 47°+E 2°S - 3° +N		Kenya Colony & Juba River.	1:2M	476mm x 583mm 19" x 23"	2 colours: black, red.	
R	20° - 31° E - 39°- 48°+N	(1938 - 1940)	Balkans & adjacent areas.	1:2M	607mm x 454mm 24" x 18"	3 colours: black, red, green	
R1	identical in all respects to R above.						
R2	- 26°- 38°+E - 46°- 60°+N		W USSR & adjacent parts of E Europe N to Leningrad & Gulf of Finland.	1:3M	589mm x 501mm 24" x 20"	3 colours: black, red, green.	
R3		1939- 1940	3 maps:- 1. Denmark & S. Sweden. 2. Baltic States, Poland Czechoslovakia, adjacent areas. 3. N.Norway, N.Sweden, Finland, part of USSR, Baltic States.	1:3M	589mm x 501mm 24" x 20"	3 colours: black, red, green.	

Sheet Number	Geographical Co-ordinates	Date	Geographical Coverage	Scale	Dimensions Length x Width	Detail	Notes
S1	14° - 22° +E 40° - 48° +N	1938-1940	S Italy, NW Greece, Albania, Austria, Yugoslavia, Hungary, & parts of Rumania, Bulgaria, Czechoslovakia.	1:2M	602mm x 460mm 24" x 18"	3 colours: black, red, green.	
S2	19° - 29° +E 35° - 42° +N	1938 - 1940	Greece, Albania + parts of Yugoslavia, Bulgaria, Turkey. Inset of Crete at same scale.	1:1,750,000	530mm x 622mm 21" x 25"	3 colours: black, red, green.	
S3	10° - 30° +E 36° - 48° +N		Sicily, Italy, Greece, Crete, Turkey, Bulgaria, Yugoslavia, Albania + parts of Rumania, Austria, Hungary, Switzerland.	1:3M	530mm x 622mm 21" x 25"	3 colours: black, red, grey/green.	
T1	26° - 36° +E 34° - 48° +N		W part of Black Sea, S to Asiatic Turkey & Cyprus + parts of Rumania, Sea of Marmara, E.Aegean, & E. Crete.	1:3M	605mm x 455mm 24" x 18"	3 colours: black, red, green	
T2	42° - 60° E 38° - 48° +N		Caspian Sea and surrounding area.	1:3,200,000			
T3	28° - E 28° - 38°+N		E Mediterranean, east to cover Syria & Iraq + parts of Egypt & Cyprus.	1:3M	463mm x 611mm 19" x 24"	3 colours: black, red, green.	
T4	44° - 62° E 28° - 38° +N		Iran N of Bushire & adjacent border areas.	1:3M	463mm x 611mm 19" x 24"	3 colours: black, red, green.	

Sheet Number	Geographical Co-ordinates	Date	Geographical Coverage	Scale	Dimensions Length x Width	Detail	Notes	
T7	no known details							
T8	no known details							
U6	no known details							
U7	no known details							
U8	no known details							
W	- 32°- 44°+E 28° - 38°+N		Egypt, Cyprus, Asiatic Turkey, Syria, Transjordan, Iraq + parts of Iran & Arabia.	1:3M	533mm x 600mm 21" x 24"	3 colours: black, red, green.		
W1	identical in all respects to W above.							
W2	- 46°- 62 +E - 26°- 38°+N		Arabia, Iraq, Persian Gulf, Iran, Afghanistan, S.W. USSR.	1:3,750,000	518mm x 585mm 21" x 23"	3 colours: black, red, grey/green.		
X			Map from Spittal in Austria to Mojstrana in Jugoslavia. Inset of whole route from Oflag VIIc in Salzburg to Mojstrana.	1:100,000 1:1,350,000	560mm x 524mm 22" x 21"	4 colours: black, red, green, blue.	Contains detailed goings information to guide escapers across border into Jugoslavia.	
Y			Map of Schaffhausen Canton with goings information to aid PoWs escaping to Switzerland from Germany.	1:100,000			Contains detailed goings information to guide escapers across the border into Switzerland.	
Y2			2 maps:- 1. Schaffhausen & S.Germany. 2. S.Germany.	1:350,000		3 colours.		
Y3	no known details							

Sheet Number	Geographical Co-ordinates	Date	Geographical Coverage	Scale	Dimensions Length x Width	Detail	Notes
Z	12° - 19° +E 53° - 57° +N		N.Germany, N.Poland, Bornholm, E.Denmark, S. Sweden.	1:1M	470mm x 504mm 19" x 20"	3 colours.	
(no sheet number shown) General Map of Ireland			N. area on one side + S.area on reverse.	1:633,600	440mm x 552mm 18" x 22"	4 colours: blue, black, red and orange for boundaries of 6 Ulster counties.	

Total = 58 sheets

(15 of which are not Bartholomew's specification).

Part 2: production details and location of extant copies

Produced singly/combination	Print medium	Print runs	Print/despatch date	Location of extant copies
A	tissue silk fabric	10,000	15.7.42	1,5 1,5*
A1	tissue			5
A2	tissue			7
A4	silk fabric paper	150 150	5.10.42 5.10.42	4
A6	tissue			5
A/C	fabric fabric fabric tissue MMF	20,000 550 1000	30.6.42 1.12.42 21.12.42	5
A/G				
BL2	tissue			7
BL3	tissue			7
C	tissue silk fabric	10,000	8.7.42	3,5 5
C/D	MMF	25,000	21.8.42	5
C/H2		10,000	21.8.42	
D	tissue	10,000	17/20.7.42	5

Produced singly/combination	Print medium	Print runs	Print/despatch date	Location of extant copies
D/H2	MMF	7,500	24.7.42	1,4,5
		10,000	21.8.42	
		25,000	20.5.43	
		10,000	21.6.43	
		10,000	6.7.43	
		5,000	29.7.43	
		5,000	9.8.43	
F	tissue			3
F/G	MMF fabric	5000	7.10.42	1,5
H	tissue silk			1,5 1
H2	tissue paper/fabric	2,000	15.7.42	1,5
H2/K2	MMF fabric	2500	12.11.42	
H2/K3	MMF fabric	5,000	31.7.42	5
		22,330	7.9.42	
		15,000	27.4.43	
J3	tissue paper	2000	7.1.42	5
	MMF fabric	5000	7.1.42	
J3/J4	MMF fabric fabric	8000	7.1.42	1,5,6
		10,000	23.6.42	
		5,000	2.6.43	
J4	fabric paper	5000	7.1.42	1,4,5
		2000	7.1.42	
J4/K1	MMF			5
J5/J6	MMF	350	11.6.43	1,4

Produced singly/combination	Print medium	Print runs	Print/despatch date	Location of extant copies
J7/J8	MMF	350	8.6.43	1,4
K				
K/W	MMF			
K/W1	MMF			1,5
K1	tissue paper MMF fabric	1,000 1,000	23.6.42 "	
K1/K2	MMF fabric fabric fabric	10,000 22,500 500 15,000	1.7.42 7.9.42 8.10.42 20.5.43	1,4,5,6
K2	tissue paper MMF fabric	1,000 1,000	23.6.42 "	1,5,6
K3	paper MMF fabric	1000 1000	8.7.42 15.7.42	
K3/H2	MMF	15,000	27.4.43	1,4
K3/K4	MMF			1,4
K5/K6	MMF			1,4,5
K6	MMF			1
ME/01/F	silk		6.10.42	1
MP1	silk			1,5
N	tissue paper/fabric MMF paper/fabric	1,000 1,000	24.7.42 "	
N/O	MMF			

Produced singly/combination	Print medium	Print runs	Print/despatch date	Location of extant copies
O	tissue paper/fabric MMF "	2,000 2,000	24.7.42 "	1,5 1
P	tissue paper/fabric MMF "	2,000 2,000	23.6.42	
P/Q	MMF fabric			1,5
Q	tissue paper/fabric tissue "	2,000 2,000	23.6.42 "	
R	tissue			
R1	tissue paper/fabric MMF "	2,000 2,000	23.6.42 "	1,5
R1/S1	MMF			1,5
R2/R3	MMF			1,4,5
R3	silk			
S1	tissue paper/fabric	2,000	23.6.42	1,5
S2	tissue			
S2/S3	MMF	1,500 10,000	2.9.42 27.4.43	1,4,5
T1	tissue paper MMF fabric	100 45	29.1.43 29.1.43	
T1/T2	MMF			

Produced singly/combinatio	Print medium	Print runs	Print/despatch date	Location of extant copies
T1/T3	MMF			1,4,5
T2	paper fabric	1000 1000	23.3.42 23.6.42	
T2/T4				5
T3	tissue paper MMF fabric	100 45	29.1.43 29.1.43	
T3/T4	MMF			1,5
T4	silk paper/fabric tissue MMF	145	23.6.42	4
T7	fabric	50	22.1.43	
T8	fabric	50	22.1.43	
U6	fabric	50	22.1.43	
U7	fabric	50	22.1.43	
U8	fabric	50	22.1.43	
W	silk			1,5
W1/W2	MMF			1,5
W2	silk			1,5
X	silk			1,3
Y	silk			3
Y2/9Y3 ^^	MMF paper			1,5 3

Produced singly/combinatio	Print medium	Print runs	Print/despatch date	Location of extant copies
Y3	RL	1000	23.6.42	
Z	silk			1,5
General Map of Ireland	silk			1

* this copy is not marked A but is identical in all other respects to those which are so marked.

Assumed to be the sheet called Double Eagle in the records.

^^ refer to Appendix 8 for details of this map.

Total numbers of copies produced = 346,920

Introduction to Appendix 2

These are maps which are assumed to have been produced based on Bartholomew maps but for which neither extant copies nor related records have ever been found. They represent either gaps in a sequential numbering system, sheets which are mentioned on adjacent sheet diagrams or, in one case, a sheet which was seen at an Antiques Fair but details were not noted. In cases where the sheet number has the prefix 9 followed by an alphabet letter, it could be that these are identical or similar to sheets which carry simply the alphabet letter and are listed at Appendix 1. It has not, however, proved possible to prove this hypothesis to date.

APPENDIX 2

Fabric maps presumed to be based on Bartholomew originals: no extant copies identified

Sheet number	Known details	
E	Europe 1/2M	
H3	none	
J	believed to cover Italy	
L1	none	"
M	covers Darfur	
T7	none	
T8	none	
U6	none	
U7	none	
U8	none	
Y3	none	
9B	1/2,350,000 Germany	*
9C	1/2,350,000 France	*
9D	1/2,350,000 France (SECRET)	*
9F/G	20miles/1" = 1/1,267,200 Norway/Sweden	*
9H	20 miles/1" = 1/1,267,200 Spain/Portugal	*

Total = 16 sheets

" reported as sighted at map fair but no other details noted

* probably minor variants of sheets listed under only alphabet letter at Appendix 1.

Introduction to Appendix 3

Fabric Maps based on Series GSGS 3982 originals

[Europe Air] 1:500,000 GSGS 3982 [Fabric]

Escape and evasion versions were produced of 73 sheets in the Europe Air, 1:250,000 scale, series GSGS 3982. They were, however, reduced to 1:500,000 scale and were, therefore only one quarter the sheet size of the original series: as such, they were often referred to as ‘miniatures’ or ‘handkerchief maps’. With the exception of the scale factor, no other details were changed. As a result, the font size of place and feature names appears very small, although still legible, and the detail is dense. The sheets were produced sometimes singly and sometimes in combination, but it has not proved possible to identify the various combinations. Additionally, one sheet, N33/9, was produced at 1:375,000 scale. Four irregular sheets were also produced at the scale of 1:420,000 in a block centred on Arnhem: these do not carry sheet numbers but are rather marked as sections 1-4.

The following Appendix provides the individual sheet details including sheet number, sheet title, geographical extent, some limited information on compilation dates, print runs and print dates. The final column indicates the location of the extant copies of the sheets which have been found. The codes for the various repositories are:

1. Defence Geographic Centre (DGC): this is the nation’s record collection of military maps and is destined for deposit in The National Archives.
2. The National Archives (TNA).

3. British Library Map Library (BL).
4. Intelligence Corps Museum (ICM).
5. Royal Air Force (RAF) Museum.
6. Macclesfield Silk Museum.
7. Cumberland Pencil Museum.
8. National Library of Scotland.
9. Private collections.

For reasons of confidentiality and security, no detail about private collections has been disclosed. Further detail of this series is contained at Chapter 2 in the main body of the thesis.

APPENDIX 3

Fabric Maps based on Series GSGS 3982 originals

[Europe Air] 1:500,000 Series GSGS 3982 [Fabric]

Sheet number	Sheet title	Geographical extent	Compiled & drawn in the War Office	Print runs	Print dates	Location of extant copies
K32/3 "	Florence "	10-12°E/43-44°N "		45 fabric + 100 paper 100 fabric (1 side only)	20.10.42 6.5.43	
K33/1 "	Ancona "	12-14°E/43-44°N "		45 Fabric + 100 paper 100 fabric (1 side only)	9.10.42 6.5.43	
K33/4 "	Terni "	12-14°E/42-43°N "		45 fabric + 100 paper 100 fabric (1 side only)	16.10.42 6.7.43	
K33/8 "	Foggia "	14-16°E/41-42°N "		45 fabric + 100 paper 100 fabric (1 side only)	16.10.42 6.5.43	
K33/11 "	Naples "	14-16°E/40-41°N "		45 fabric + 100 paper 100 fabric (1 side only)	20.10.42 6.5.43	3
K33/12 "	Táranto "	16-18°E/40-41°N "		45 fabric + 100 paper 100 fabric (1 side only)	20.10.42 6.7.43	
L32/1 "	Basle "	6-8°E/47-48°N "		45 fabric + 100 paper 100 tissue	10.7.42 13.10.43	4,9
L32/2 " " "	Konstanz " " "	8-10°E/47-48°N " " "		45 fabric + 100 paper 100 paper 100 tissue 500 paper	24.7.42 24.3.43 13.10.43 1.3.44	9

Sheet number	Sheet title	Geographical extent	Compiled & drawn in the War Office	Print runs	Print dates	Location of extant copies	
L32/3	Innsbruck	10-12°E/47-48°N		45 fabric + 100 paper 100 tissue 500 paper	21.8.42 13.10.43 1.3.44	9	
"	"	"					
"	"	"					
L32/5	St Gotthard	8-10°E/46-47°N		45 fabric + 100 paper 100 fabric (1 side only) 50 paper 500 fabric 500 paper	21.7.42 6.5.43 27.7.43 4.10.43 1.3.44	3,4,5,9	
"	"	"					
"	"	"					
"	"	"					
L32/6	Bolzano	10-12°E/46-47°N	1940	45 fabric + 100 paper 100 paper	24.10.42 30.4.43 6.5.43 4.10.43 1.3.44	4,5,9	
"	"	"					
"	"	"					
"	"	"					
L32/7	Turin	6-8°E/45-46°N	1939	100 fabric (1 side only) 500 fabric	21.10.42 6.7.43 4.10.43	4,5,9	
"	"	"					
"	"	"					
L32/8	Milan	8-10°E/45-46°N	1938	45 fabric + 100 paper 100 fabric (1 side only) 50 paper 500 fabric	21.10.42 6.5.43 27.7.43 4.10.43	4,9	
"	"	"					
"	"	"					
"	"	"					
L32/9	Verona	10-12°E/45-46°N		550 fabric	22.10.43		
L32/10	Cúneo	6-8°E/44-45°N	1939	45 fabric + 100 paper 100 fabric (1 side only) 500 fabric	21.10.42 6.5.43 4.10.43	4,5,9	
"	"	"					
"	"	"					

Sheet number	Sheet title	Geographical extent	Compiled & drawn in the War Office	Print runs	Print dates	Location of extant copies
L32/11	Genoa	8-10°E/44-45°N	1939	45 fabric + 100 paper 100 fabric (1 side only) 500 fabric	9.10.42 6.5.43 4.10.43	4
"	"	"		550 fabric	22.10.43	
"	"	"		45 fabric + 100 paper 100 tissue 500 paper	25.9.42 13.10.43 1.3.44	
L32/12	Bologna	10-12°E/44-45°N				
L33/1	Salzburg	12-14°E/47-48°N				
"	"	"		500	M of S tissue	7/8.44
"	"	"		500	M of S tissue	7/8.44
L33/2	Graz	14-16°E/47-48°N				
L33/3	Sopron	16-18°E/47-48°N				3
L33/4	Údine	12-14°E/46-47°N	1939	45 fabric + 100 paper 100 fabric (1 side only) 550 fabric 500 paper	30.9.42 6.7.43 15.10.43 1.3.44	4
"	"	"		45 fabric + 100 paper 100 tissue	6.10.42 13.10.43	
"	"	"		100 fabric (1 side only) 550 fabric	29.4.43 20.10.43	
"	"	"		550 fabric	22.10.43	
L33/5	Klagenfurt	14-16°E/46-47°N	1939	100 fabric + 200 paper	29.10.42	4
"	"	"		100 paper	13.10.43	
L33/7	Venice	12-14°E/45-46°N				
"	"	"		45 fabric + 100 paper 100 paper 100 tissue	10.7.42 24.3.43 13.10.43	
L33/10	Ravenna	12-14°E/44-45°N				
M31/3	Antwerp	4-6°E/51-52°N				
M31/6	Brussels	4-6°E/50-51°N				
"	"	"		45 fabric + 100 paper 100 paper 100 tissue	10.7.42 24.3.43 13.10.43	
M32/1	Essen	6-8°E/51-52°N	1936	45 fabric + 100 paper 100 paper 100 tissue 200 MLS	10.7.42 8/9.9.43 13.10.43 8.1.44	4,9
"	"	"				
"	"	"				
"	"	"				

Sheet number	Sheet title	Geographical extent	Compiled & drawn in the War Office	Print runs	Print dates	Location of extant copies
M32/2	Kassel	8-10°E/51-52°N	1936	45 fabric + 100 paper 100 tissue 200 MLS	31.7.42 13.10.43 8.1.44	4,9
"	"	"				
"	"	"				
M32/3	Halle	10-12°E/51-52°N		45 fabric + 100 paper 100 tissue 500 paper	21.8.42 13.10.43 1.3.44	
"	"	"				
"	"	"				
M32/4	Cologne	6-8°E/50-51°N	1936	45 fabric + 100 paper 100 paper 100 fabric 200 MLS	10.7.42 30.4.43 4.10.43 8.1.44	4,9
"	"	"				
"	"	"				
"	"	"				
M32/5	Frankfurt	8-10°E/50-51°N	1936	100 fabric + 200 paper 100 tissue	29.10.42 13.10.43	
"	"	"				
M32/6	Erfurt	10-12°E/50-51°N		500 ML tissue	3.44	
M32/7	Saarbrücken	6-8°E/49-50°N		45 fabric + 100 paper 100 tissue 200 MLS	10.7.42 13.10.43 8.1.44	4,9
"	"	"				
"	"	"				
M32/8	Mannheim	8-10°E/49-50°N		500 ML tissue	3.44	
M32/9	Nürnberg	10-12°E/49-50°N		500 ML tissue	3.44	
M32/10	Strasbourg	6-8°E/48-49°N	1937	45 fabric + 100 paper 100 tissue	10.7.42 13.10.43	4,9
"	"	"				
M32/11	Stuttgart	8-10°E/48-49°N		500 ML tissue	3.44	
M32/12	Munich	10-12°E/48-49°N		45 fabric + 100 paper 100 tissue	29.12.42 13.10.43	
"	"	"				
M33/1	Leipzig	12-14°E/51-52°N		45 fabric + 100 paper 500 paper 100 tissue	31.7.42 7.9.42 13.10.43	9
"	"	"				
"	"	"				

Sheet number	Sheet title	Geographical extent	Compiled & drawn in the War Office	Print runs	Print dates	Location of extant copies
M33/2	Görlitz	14-16°E/51-52°N		150 fabric (1 side only) 150 paper 100 tissue	29.10.42 29.10.42 13.10.43	1
"	"	"				
"	"	"				
M33/3	Breslau	16-18°E/51-52°N		45 fabric + 100 paper 100 tissue 500 paper	25.9.42 13.19.43 1.3.44	
"	"	"				
"	"	"				
M33/4	Chemnitz	12-14°E/50-51°N		45 fabric + 100 paper 100 tissue	25.9.42 13.10.43	
"	"	"				
M33/5	Prague	14-16°E/50-51°N		45 fabric + 100 paper 100 tissue	11.8.42 13.10.43	9
"	"	"				
M33/6	Schweidnitz	16-18°E/50-51°N		45 fabric + 100 paper 100 tissue	25.9.42 13.10.43	
"	"	"				
M33/7	Plzeň	12-14°E/49-50°N		500 M of S tissue	7/8.44	
M33/8	Jihlava	14-16°E/49-50°N		500 M of S tissue	7/8.44	
M33/9	Brno	16-18°E/49-50°N		500 M of S tissue	7/8.44	
M33/10	Passau	12-14°E/48-49°N		500 M of S tissue	7/8.44	
M33/11	Linz	14-16°E/48-49°N		500 M of S tissue	7/8.44	3
M33/12	Vienna	16-18°E/48-49°N		500 M of S tissue	7/8.44	
M34/1	Lódź	18-20°E/51-52°N	1941	45 fabric + 100 paper 100 tissue	14.8.42 13.10.43	4, 9
"	"	"				
M34/4	Gleiwitz	18-20°E/50-51°N		500 ML tissue	3.44	
N32/5	Flensburg	8-10°E/54-55°N		500 ML tissue	3.44	3
N32/6	Kiel	10-12°E/54-55°N		500 ML tissue	3.44	3
N32/7	Groningen	6-8°E/53-54°N	1936	45 fabric + 100 paper 100 tissue	11.8.42 13.10.43	4, 9
"	"	"				

Sheet number	Sheet title	Geographical extent	Compiled and drawn in the War Office	Print runs	Print dates	Location of extant copies
N32/8 "	Hamburg "	8-10°E/53-54°N "	1936	45 fabric + 100 paper 100 tissue	21.8.42 13.10.43	4, 9
N32/9 " " " "	Lübeck " " " "	10-12°E/53-54°N " " " "		100 fabric + 200 paper 50 paper 100 tissue 200 tissue MLS	22.10.42 27.7.43 13.10.43 8.1.44	
N32/10 "	Osnabrück "	6-8°E/52-53°N "	1936	100 fabric + 200 paper 100 tissue	22.10.42 13.10.43	4
N32/11	Hanover	8-10°E/52-53°N		500 ML tissue	3.44	
N32/12	Magdeburg	10-12°E/52-53°N		500 ML tissue	3.44	
N33/4 "	Stralsund "	12-14°E/54-55°N "		45 fabric + 100 paper 100 tissue	20.9.42 13.10.43	
N33/5 "	Kolberg "	14-16°E/54-55°N "		45 fabric + 100 paper 100 tissue	30.9.42 13.10.43	
N33/6 "	Stolp "	16-18°E/54-55°N "		45 fabric + 100 paper 100 tissue	30.9.42 13.10.43	
N33/7	Neustrelitz	12-14°E/53-54°N		500 ML tissue	3.44	
N33/8 " " " " " "	Stettin " " " " "	14-16°E/53-54°N " " " " "		45 fabric + 100 paper 1000 paper 50 paper 100 paper 100 tissue 500 paper	11.8.42 8.10.42 27.7.43 8/9.9.43 13.10.43 1.3.44	9
N33/9#	Schneidemühl	16-18°15'E/53-54°10'N		[paper]		3

Sheet number	Sheet title	Geographical extent	Compiled & drawn in the War Office	Print runs	Print dates	Location of extant copies
N33/10	Berlin	12-14°E/52-53°N	1938	45 fabric + 100 paper 100 tissue 200 paper MLS	31.7.42 13.10.43 8.1.44	4, 9
"	"	"				
"	"	"				
N33/11	Landsberg	14-16°E/52-53°N		500 ML tissue	3.44	
N33/12	Poznań (Posen)	16-18°E/52-53°N		500 ML tissue	3.44	
N34/4	Danzig	18-20°E/54-55°N	1938	45 fabric + 100 paper 100 paper 100 tissue 200 MLS	31.7.42 8/9.9.43 13.10.43 8.1.44	1, 4, 9
"	"	"				
"	"	"				
"	"	"				
N34/5	Konigsberg	20-22°E/54-55°N		500 ML tissue	3.44	
N34/7	Marienwerder	18-20°E/53-54°N		500 ML tissue	3.44	
N34/10	Plock	18-20°E/52-53°N		500 ML tissue	3.44	
N34/11	Warsaw	20-22°E/52-53°N		45 fabric + 100 paper 100 tissue	14.8.42 13.10.43	9
"	"	"				

sheet N33/9 is identical in specification to sheets in GSGS 3982 but does not carry the series number. Its scale is 1:375,000 and it is of marginally greater geographical extent than the other sheets in this series.

Total number of map sheets : 74

Total number of copies printed = 35,100

		Geographical extent	Print runs	Print dates	Location of extant copies
Dutch Girl	Section 1,2,3,4 scale 1"= 6.56 miles (approximately 1:420,000)		4400	6.42	
1		4°5'-7°E/51°21'-52°40'N	985	2.43 - 8.44	4
2		4°5'-6°50'E/50°-51°21'N	794	2.43 - 8.44	4
3		6°40'-9°40'E/51°20'-52°40'N	1050	2.43 - 8.44	4
4		6°50'-9°40'E/50°-51°20'N	992	2.43 - 8.44	4

ML tissue = Mulberry Leaf paper

MLS = Mulberry Leaf Substitute

RL = Rag Litho

Total number of copies printed = 8221

Introduction to Appendix 4

Fabric Maps of Norway 1:100,000 based on the pre-war GSGS Series 4090

Escape and evasion versions of 33 sheets of Norway, 1:100,000 scale, series GSGS 4090, were produced on silk. Thirty one sheets were monochrome and two were printed in four colours. The original maps were based on the Oslo meridian and the conversion factor to Greenwich was, therefore added to the operational series. The sheets are in a block to the north of Oslo and adjacent to the Swedish border. They are all single-sided: none appears to have been produced in combination. The following Appendix provides individual sheet details, sheet number, sheet title, geographical extent, date of the original Norwegian map, print date of the GSGS paper series and sheet dimensions. The final column indicates the location of the extant copies of the sheets which have been found. No details of the volume of the print runs have ever been discovered. The codes for the various repositories are:

1. Defence Geographic Centre (DGC): this is the nation's record collection of military maps and is destined for deposit in The National Archives.
2. The National Archives (TNA).
3. British Library Map Library (BL).
4. Intelligence Corps Museum (ICM).
5. Royal Air Force (RAF) Museum.
6. Macclesfield Silk Museum.

7. Cumberland Pencil Museum.
8. National Library of Scotland.
9. Private collections.

For reasons of confidentiality and security, no detail about private collections has been disclosed. Further detail is contained at Chapter 2 of the main body of the thesis.

APPENDIX 4

Fabric Maps of Norway 1:100,000 based on the pre-war GSGS Series 4090

Sheet number	Sheet title	Geographical values (based on Oslo meridian)	Date of original Norwegian map	Print date of GSGS 4090 paper series	Dimensions (length x width)	Location of extant copies
14D	Kristiania	0°6'E-0°43'W/59°40'-60°N	1900	1940	475 x 510mm/19 x 20"	1,5
15C	Fet	0°5'W-0°54'E/59°41'-59°59'N	1914	1940	475 x 510mm/19 x 20"	1,5
15D	Setskog	0°53'-1°40'E/59°41'-59°59'E	1901	1940	475 x 510mm/19 x 20"	1,5
19B	Hønefoss	0°44'W-0°5'E/59°59'-60°17'N	1917	1940	475 x 510mm/19 x 20"	1,5
19D	Gran	0°45'W-0°4'E/60°17'-60°35'N	1920	1940	475 x 510mm/19 x 20"	1,5
20A	Nannestad	0°5'-0°53'W/59°59'-60°18'N	1912	1940	475 x 510mm/19 x 20"	1,5
20B	Kongsvinger	0°53'-1°42'E/60°18'-60°18'N	1913	1940	475 x 510mm/19 x 20"	1,5
20C	Eidssvoll	0°4'-0°53'E/60°18'-60°36'N	1910	1940	475 x 510mm/19 x 20"	1,5
20D	Søndre Solør	0°53'-1°42'E/60°18'-60°36'N	1934	1940	475 x 510mm/19 x 20"	1,5
25B	Gjøvik	0°46'W-0°3'E/60°35'-60°54'N	1919	1940	475 x 510mm/19 x 20"	1,5
25D	Lillehammer	0°47'W-0°3'E/60°54'-61°12'N	1923	1940	475 x 510mm/19 x 20"	1,5
26A	Hamar	0°17'-0°53'E/60°36'-60°54'N	1912	1940	475 x 510mm/19 x 20"	1,5
26B	Nordre Solør	0°53'-1°42'E/60°35'-60°54'N	1939	1942	425 x 577mm/17 x 24"	1,5
26C	Aamot	0°3'-0°52'E/60°54'-61°12'N	1888	1940	475 x 510mm/19 x 20"	1,5
26D	Søndre Osen	0°17'-0°53'E/60°54'-61°12'N	1933	1942	425 x 577mm/17 x 24"	1,5
31B	Gausdal	0°48'W-0°2'E/61°12'-61°30'N	1904	1940	475 x 510mm/19 x 20"	1,5
E32	Hemsedal	2°30'-1°30'W/60°40'-61°N	1925	1940	490 x 335mm/20 x 13"	1,5
E33 East	Tunhovd	1°30'-2°W/60°20'-60°40'N	1923	1940	490 x 335mm/20 x 13"	1,5
E33 West	Dagali	2°-2°30'W/60°20'-60°40'N	1923	1940	490 x 335mm/20 x 13"	1,5
E34 East	Nore	1°30'-2°W/60°-60°20'N	1936	1940	490 x 335mm/20 x 13"	1,5
E34 West	Maar	2°-2°30'W/60°-60°20'N	1936	1940	490 x 335mm/20 x 13"	1,5
E35 East	Tinnsjö	1°30'-2°W/59°40'-60°N	1931	1940	490 x 335mm/20 x 13"	1,5
E35 West	Rjukan	2°30' - 2°W/59°40'-6°N	1930	1940	490 x 335mm/20 x 13"	1,5
F31 East	Synnfjell	0°30'-1°W/61°-61°20'N	1935	1940	490 x 335mm/20 x 13"	1,5
F31 West	Nordre Etnedal	1°-1°30'W/61°-61°20'N	1932	1940	490 x 335mm/20 x 13"	1,5

Sheet number	Sheet title	Geographical values (based on Oslo meridian)	Date of original Norwegian map	Print date of GSGS 4090 paper series	Dimensions (length x width)	Location of extant copies
F32 East	Nordre Land	0°30'-1°W/60°40'-61°N	1930	1940	490 x 335mm/20 x 13"	1,5
F32 West	Aurdal	1°-1°30'W/60°40'-61°N	1930	1940	490 x 335mm/20 x 13"	1,5
F33 East	Sperillen	0°30'-1°W/60°20'-60°40'N	1918	1940	490 x 335mm/20 x 13"	1,5
F33 West	Flaa	1°-1°30'W/60°20'-60°40'N	1918	1940	490 x 335mm/20 x 13"	1,5
F34 East	Tyristrand	0°30'-1°W/60°-60°20'N	1919	1940	490 x 335mm/20 x 13"	1,5
F34 West	Sigdal	1°-1°30'W/60°-60°20'N	1935	1940	490 x 335mm/20 x 13"	1,5
F35 East	Eiker	0°30'-1°W/59°40'-60°N	1919	1940	490 x 335mm/20 x 13"	1,5
F35 West	Flesburg	1°-1°30'W/59°40'-60°N	1935	1940	490 x 335mm/20 x 13"	1,5

Introduction to Appendix 5

Escape and Evasion maps produced on fabric in 1943 [Series 43]

Like many other escape and evasion series produced by MI9, this series carried no title or individual sheet names. Whilst based on the existing maps of the International Map of the World (IMW) of the European area, the ten basic sheets were all produced by panelling together sections of existing IMW sheets to produce irregular size sheets, all of which were printed on man-made fibre. The sheets are all at 1:1,000,000 scale, with 3 of them carrying larger scale insets of border areas. The sheets are all prefixed 43, followed by an alphabet letter. The following Appendix provides details of the sheets, scale, geographical coverage, dimensions, the combinations produced, the size of the print runs, the print dates and the production suspension dates. This was the first series which appears to have been printed in substantial numbers, probably for operational use as well as for escape and evasion purposes. The final column indicates the location of the extant copies of the sheets which have been found. The codes for the various repositories are:

1. Defence Geographic Centre (DGC): this is the nation's record collection of military maps and is destined for deposit in The National Archives.
2. The National Archives (TNA).
3. British Library Map Library (BL).
4. Intelligence Corps Museum (ICM).

5. Royal Air Force (RAF) Museum.
6. Macclesfield Silk Museum.
7. Cumberland Pencil Museum.
8. National Library of Scotland.
9. Private collections.

For reasons of confidentiality and security, no detail about private collections has been disclosed. Further detail is contained at Chapter 2 of the main body of the thesis.

APPENDIX 5

Escape and Evasion maps produced on fabric in 1943 [Series 43]

Sheet number	Scale	Geographical coverage	Dimensions (length x width)
43 A	1:1 000 000 insets 1:500 000	NW France, W & C Belgium, part of Holland + 2 insets of Pyrenees	734 x 736mm/29 x 29"
43 B	1:1 000 000 inset 1:300 000	SW France, N Spain + inset of German-Swiss frontier	734 x 736mm/29 x 29"
43 C	1:1 000 000	Holland, C & E Belgium, NE France, W & C Germ	732 x 739mm/29 x 29"
43 D	1:1 000 000 1:250 000	SE France, SW Germany, NW Italy, Switzerland Belgium/German frontier area	732 x 739mm/29 x 29"
43 E	1:1 000 000	N Germany, Bohemia, Moravia, Slovakia, Poland, N Hungary	779 x 875mm/31 x 35"
43 F	1:1 000 000	W & C Croatia, W Montenegro, S Slovakia, S Germany, N & C Italy, E Switzerland	779 x 875mm/31 x 35"
43 G	1:1 000 000	S Slovakia, S Poland, SE Hungary, Romania, Serbia NC & E Bulgaria, E Croatia, E Montenegro, N Albania	761 x 917mm/30 x 37"
43 H	1:1 000 000	Greece, Albania, S Bulgaria, parts of Turkey + inset of Crete	761 x 917mm/30 x 37"
43 K East	1:1 000 000	SW France, NE Spain	522 x 605mm/21 x 24"
43 K West	1:1 000 000	N Portugal, NW Spain	522 x 605mm/21 x 24"

Combinations produced	Print runs	Print dates	Production suspended	Location of extant copies
43 A/B	350,000	1943, 1944	25.4.45	1,5
43 C/D	300,000	1943, 1944	11.5.45	1,5,6
43 C/E	60,000	1944. 1945	25.4.45	5
43 D/F	10,000			1
43 E	4,500			
43 E/F	35,000	1943, 1944	11.5.45	1,3,5
43 F/G	15,000		11.5.45	1,5
43 G/H	35,000	1943, 1944	25.4.45	1,3,5
43 K E/W	350,000	1943, 1944	11.5.45	1

Total number of sheets produced = 10

Total number of copies printed = 1,159,500

Introduction to Appendix 6

Escape and Evasion maps produced on fabric in 1944 [Series 44]

Identical in specification to [Series 43] were the 18 sheets, produced in 9 set combinations, of the Far East area. Again they were based on the existing IMW sheets, were small scale and all were produced on man-made fibre. They appear also to have been produced for both escape and evasion and operational purposes. The sheets are all prefixed 44, followed by an alphabet letter. The following Appendix provides details of the sheets, scale, geographical coverage, dimensions, the 9 set combinations, the size of the print runs, print dates and production suspension dates. The final column indicates the location of the extant copies of the sheets which have been found. The codes for the various repositories are:

1. Defence Geographic Centre (DGC): this is the nation's record collection of military maps and is destined for deposit in The National Archives.
2. The National Archives (TNA).
3. British Library Map Library (BL).
4. Intelligence Corps Museum (ICM).
5. Royal Air Force (RAF) Museum.
6. Macclesfield Silk Museum.
7. Cumberland Pencil Museum.

8. National Library of Scotland.

9. Private collections.

For reasons of confidentiality and security, no detail about private collections has been disclosed. Further detail is contained at Chapter 2 of the main body of the thesis.

While a detailed investigation into the actual employment of this particular group of maps lies beyond the scope of the present enquiry, future research on the practical uses made of them by the South East Asian Command in its campaigns against Japan might prove to be a highly worthwhile undertaking.

APPENDIX 6 Escape and Evasion maps produced on fabric in 1944 [Series 44]

Sheet number	Scale	Geographical coverage	Dimensions (length x width)
44A	1:1,000,000	NW Burma + part of India	975 x 623mm/39 x 25"
44B	1:1,000,000	NE Burma & N Siam + parts of French Indo-China & China	975 x 623mm/39 x 25"
44C	1:1,000,000	S Burma, W&C Siam + part of French Indo-China	619 x 970mm/25 x 39"
44D	1:1,000,000	S Burma + S Siam	970 x 619mm/39 x 25"
44E	1:1,000,000	N Sumatra + part of Siam	980 x 633mm/39 x 25"
44F	1:1,000,000	Part of Siam, Malaya & E Sumatra	980 x 633mm/39 x 25"
44G	1:1,000,000	S Sumatra + NW Java	627 x 967mm/25 x 39"
44H	1:1,000,000	3 insets: 1) SW Borneo 2) E Java 3) W Java	627 x 967mm/25 x 39"
44J	1:1,000,000	C French Indo-China + E Siam	634 x 987mm/25 x 39"
44K	1:1,000,000	S French Indo-China, part of Thailand + inset in SE corner to complete coverage of land area	634 x 987mm/25 x 39"
44L	1:1,000,000	Parts of S China and NE French Indo-China	971 x 621mm/39 x 25"
44M	1:1,000,000	Part of SW China + N French Indo-China	971 x 621mm/39 x 25"
44N	1:1,000,000	Part of mainland China + Hong Kong & Taiwan	851 x 1081mm/34 x 43"
44O	1:1,000,000	Part of C mainland China	851 x 1081mm/34 x 43"
44R	1:1,000,000	Part of mainland China	839 x 1039mm/34 x 42"
44S	1:1,000,000	Korea	1039 x 839mm/42 x 34"

44T	these two sheets were apparently in production in 1945 but were)		
44U	cancelled at proof stage and not printed)		
44V	1:1,000,000	S Japan + insets A & B to complete coverage of land areas	853 x 1028mm/34 x 41"
44W	1:1,000,000	N Japan + inset to complete coverage of land area	853 x 1028mm/34 x 41"

Combinations produced	Print runs	Print dates	Production suspend	Location of extant copies
44A/44B	60,000	21.4.44	21.8.45	1,5
44C/44D	10,000	13.3.44		1,5,6
	20,000	?6.44	21.8.45	
44E/44F	15,000	17.3.44	21.8.45	1,5,6
44G/44H	20,000	11.7.44	31.8.45	1,5
44J/44K	20,000	7.6.44	21.8.45	1,5
44L/44M	10,000	7.6.44		1,5
44N/44O	20,000	25.4.45		1,5,6
44R/44S	5068	22.9.45		1,5,6
44V/44W	5000	4.10.45		1,5

Total number of sheets produced = 18
 (in 9 set combinations)

Total number of copies produced = 185,000+

Introduction to Appendix 7

Escape and Evasion maps on fabric of northern Europe and Scandinavia [Series FGS]

This series comprises 5 sheets, produced singly and in various combinations, and again based on the existing IMW series at small scale, either 1:1,000,000 or 1:1,250,000. All were produced on man-made fibre. The sheets are all prefixed FGS, followed by an alphabet letter. The significance of FGS is not known. The following Appendix provides details of the sheets, scale, geographical coverage, the 9 combinations produced, the size of the print runs, which vary considerably from as small as 250 copies to as many as 15,400, and the print dates. . The final column indicates the location of the extant copies of the sheets which have been found. The codes for the various repositories are:

1. Defence Geographic Centre (DGC): this is the nation's record collection of military maps and is destined for deposit in The National Archives.
2. The National Archives (TNA).
3. British Library Map Library (BL).
4. Intelligence Corps Museum (ICM).
5. Royal Air Force (RAF) Museum.
6. Macclesfield Silk Museum.
7. Cumberland Pencil Museum.

8. National Library of Scotland.

9. Private collections.

For reasons of confidentiality and security, no detail about private collections has been disclosed. Further detail is contained at Chapter 2 of the main body of the thesis.

APPENDIX 7 Escape and Evasion maps on fabric of northern Europe and Scandinavia [Series FGS]

Sheet number	Scale	Geographical coverage
FGS A	1:1,000,000	Inset 1: S.Norway & adjacent Sweden
	1:1,000,000	Inset 2: C.Norway & adjacent Sweden
FGS B	1:1,000,000	S.Norway & adjacent Sweden
FGS C	1:1,250,000	N.Sweden,N.Finland,adjacent USSR
FGS D	1:1,250,000	C.& N.Norway + adjacent Sweden
FGS E	1:1,000,000	Inset 1: N.Norway & adjacent Sweden, Finland, USSR.
	1:1,000,000	Inset 2: S.Sweden,Denmark, N.seaboard of Germany.

Combinations produced	Print runs	Print dates	Location of extant copies
FGS A	250	Fabric	16.11.42
FGS A/B	250	Paper	16.11.42
	6,500	Fabric	21.12.42
	10,000	Fabric	24.2.43
	10,000	unspecified	29.5.43
	6,000	unspecified	29.7.43
FGS A/E	15,400	Fabric	1,3,5
	10,000	unspecified	21.4.44

Combinations produced	Print runs	Print dates	Location of extant copies
FGS B	250	Paper	16.11.42
FGS C	250	Paper	1.12.42
FGS D	250	Paper	1.12.42
FGS C/D	6,750	Fabric	23.12.42
	250	Fabric	1.12.42
	10,000	Fabric	24.2.43
	10,000	unspecified	29.5.43
FGS E	1,000	unspecified	13.4.43
FGS E/9CA*	15,000 rayon fabric 3,000	25.4.43 ?4.43	4 5

* refer to Appendix 8 for details of sheet 9CA

Total number of sheets produced = 5

Total number of copies produced = 105,150

Total number of combinations identified = 9

Introduction to Appendix 8

Miscellaneous Maps

This Appendix comprises a group of 16 miscellaneous maps which have been identified, either through mention in the records or by discovering extant copies. In some cases, it is clear that these were produced, initially at least, for inclusion in MI9's Bulletin as well as for further operational purposes. The following Appendix lists the sheets and shows, at Part 1, the often limited details which are known of them in terms of sheet number or title, scale, geographical coverage, dates, dimensions or other identifying detail. Part 2 shows production details, specifically whether they were produced singly or in combination, the print runs and print dates. The final column indicates the location of the extant copies of the sheets which have been found. The codes for the various repositories are:

1. Defence Geographic Centre (DGC): this is the nation's record collection of military maps and is destined for deposit in The National Archives.
2. The National Archives (TNA).
3. British Library Map Library (BL).
4. Intelligence Corps Museum (ICM).
5. Royal Air Force (RAF) Museum.
6. Macclesfield Silk Museum.

7. Cumberland Pencil Museum.
8. National Library of Scotland.
9. Private collections.

For reasons of confidentiality and security, no detail about private collections has been disclosed. Further detail is contained at Chapter 2 of the main body of the thesis.

APPENDIX 8 Miscellaneous Maps

Part 1

Sheet number/title	Scale	Geographical coverage	Date	Dimensions	Notes
AL1					
AL2					
AL3					
CD/A					
CD/B					
CD/C					
CD/D					
9CA					
9J3	0.5" = 10 miles	Title = Northern Italy. Extends N to Switzerland & E to Yugoslavia.	Magnetic variation at 1941	505mm x 590mm 20" x 23.25	Monochrome map marked ADI (Maps) Air Ministry No.7331
9J4	1:2,250,000	Title = Southern Italy. Extends to cover Sicily plus inset of Sardinia at same scale.	Magnetic variation at 1941	505mm x 590mm 20" x 23.25	Monochrome map marked ADI (Maps) Air Ministry No.7332
9S	0.5" = 10 miles	Title = Greece	Magnetic variation at 1941	610mm x 480mm 24" x 19"	Monochrome map marked ADI (Maps) Air Ministry No.7334
9T	1:2,000,000	Title = Bulgaria - Roumania		610mm x 480mm 24" x 19"	Monochrome map marked ADI (Maps) Air Ministry No.7317

Sheet number/title	Scale	Geographical coverage	Date	Dimensions	Notes
9U	1:3,000,000	Covers Holland, Belgium, Luxemburg, Switzerland, Austria, Poland, Hungary, E to Russian border & N to Copenhagen	Legend shows boundaries at 1939 & 1941	380mm x 480mm 15" x 19"	Monochrome map marked ADI (Maps) Air Ministry No.7330
9V	1" = 47 miles	Title = Stalag locations in northern France		310mm x 305mm 12.25" x 12"	Monochrome map marked MI9B and SECRET.
Norway	1" = 30 miles	Legend indicates map shows in red east & west zones garrisoned by German troops		410mm x 310mm 16.25" x 12.25"	Marked Appendix A & AD Maps AM No. 414/2A
Zones of France					

Part 2

Combinations produced	Print runs	Print dates	Location of extant copies
A.L.1	100 tissue 100 200 MLS	12.4.42 .4.43 15.12.43	
A.L.2	100 tissue 100 200 MLS	12.4.42 .4.43 15.12.43	
A.L.3	100 tissue 100 200 MLS	12.4.42 .4.43 15.12.43	
CD/A	not known	22.7.43	
CD/B	"	"	

Combinations produced	Print runs	Print dates	Location of extant copies
CD/C	not known	22.7.43	
CD/D	"	"	
9J3	100 tissue	1.2.43	
9J4	100 tissue	1.2.43	
9J3/9J4	silk		1
9S/9T	10,000 fabric	12.4.43	
	2000 fabric	21.5.43	
	silk		1
9U	silk		1,6
9V	silk		1
Norway	silk		1
Zones of France	550 bank paper	14.1.42	
	550 fabric	14.1.42	
	550 bank paper	23.1.43	
9CA/9U	5000 fabric	9.4.43	

Total number of sheets identified = 16

Total number of copies produced = 20,050

Introduction to Appendix 9

Maps produced for the Bulletin

The final Appendix comprises a group of 8 maps which were initially produced for inclusion in the Bulletin and, as such, were printed on standard printing paper. It is believed that the maps were subsequently re-produced on silk or tissue for use in escape and evasion. However, there are known to be some key differences, not least in the sheet numbering. At least one of the maps in the Bulletin carries the same number as a very different map produced for escape and evasion. Additionally, there are maps in the Bulletin for which extant copies of the escape and evasion versions have not been identified, although there is ample evidence to confirm that they were produced. It is, therefore useful to cross compare entries in this Appendix with the same sheet numbers in Appendix 1 or the same sheet titles in Appendix 8. Further detail is contained at Chapter 2 of the main body of the thesis.

APPENDIX 9

Maps produced for the Bulletin

Sheet number	Sheet title	Scale	Geographical coverage	Dimensions (length x width)	Detail	Notes	Bulletin details
A1	Schaffhausen Salient (West)	1:100,000	German/Swiss border area in region of Schleitheim.	147 x 175mm/ 6" x 7"	Red frontier & pylons, black railways, blue water, green woods, hachures relief.	Identical in all respects to A1 at Appendix 1.	Map No.4 Chapter 15 Germany.
A2	Schaffhausen Salient (East)	1:100,000	German/Swiss border area in region of Ramsen & Engen.	200 x 147mm/ 7.75 x 5.75"	Red frontier & pylons, black railways, blue water, green woods, hachures relief.	Not same map as A2 at Appendix 1.	Map No.5 Chapter 15 Germany. Ground photo also shown.
A3	Danzig Docks	(c 1:20,000)	Port of Danzig at mouth of River Vistula.	172 x 380mm/ 7 x 15"	Black detail, blue water.	Similar to A4 at Appendix 1 but less detail & smaller scale.	Plan No.1 Chapter 15 Germany.
A10	Gdynia Docks	n/s	Docks at Gdynia.	175 x 205mm/ 7 x 8"	Monochrome. Black paths, tree symbols.	No similar map identified as E & E version.	Plan 2 Chapter 15 Germany.
	Stettin	1:25,000	Stettin & adjacent area with insets of Freihaven and location map of area.	395 x 280mm/ 15.5 x 11"	Extract of native large scale map with red numbers added to key.	No similar map identified as E & E version.	Plan No.3 Chapter 15 Germany.
	Lübeck	n/s	Lübeck and adjacent area.	217 x 270mm/ 8.5 x 10.5"	Extract of native large scale map.	No similar map identified as E & E version.	Plan No.4 Chapter 15 Germany.

Sheet number	Sheet title	Scale	Geographical coverage	Dimensions (length x width)	Detail	Notes	Bulletin details
	Norway Military Zones	(c 1:2,000,000)	Norway south of Trondheim to Swedish border showing E & V Military Zones.	330 x 250mm/ 13 x 9.75"	Black & red detail. Dated March 1943.	Similar to Norway at Appendix 8.	Marked SECRET Appendix C Map B.
	Northern Norway	1:600,000	Norway north of Trondheim in sections, central & north.	430 x 465mm/ 17 x 18.5"	Black & red detail. Dated March 1943.	No similar map identified as E & E version.	Marked SECRET Appendix C Map C.

Total number of maps = 8

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Waddington Company Archive (4 volumes) = Maps C.49e.55

D.Survey World War II print record = Maps UG-9-152-H

Defence Geographic Centre

File Svy 2/6330

Macclesfield Silk Museum

Brocklehurst Whiston Amalgamated Board Minute Books 1935-1947

National Library of Scotland

Bartholomew Archive = Accession 10222

Royal Air Force Museum

Documents B3227 and DB319

The National Archives

Air Ministry files

AIR 14/353 – 361 (9 files) RAF personnel taken prisoner: aids to escape,
conduct etc

AIR 14/461 – 464 (4 files) Prisoners of war instructions and methods of
escape

AIR 20/2328	Escape aids policy for prisoners of war (file missing)
AIR 20/9165	Allied prisoners of war: escape aids policy
AIR 20/6805	RAF personnel: evasion and escape equipment
AIR 40/2645	Stalag Luft III(Sagan):camp history
AIR 40/2457	MI9: escape and evasion: post war policy 1944-1946
AIR 51/260	Intelligence Section escape aids
AIR 76/247/127	Officers service records of RAF 1 Jan 1918-31 Dec 1919

Cabinet Office files

CAB 79/15/30	MI9 War establishment
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Special Operations Executive files

HS 9/771/4	Personnel files 1 Jan 39 – 31 Dec 46
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Air Ministry and Ministry of Defence papers accumulated by the Air Historical Branch

III 50/1/7 (A)	Prisoners of war allied escape aids policy
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Maps and Plans

MF1/2	Maps and plans of NW Europe extracted from files for flat storage
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Domestic records of the Public Record Office

PRO 219/1448	Advice to prisoners of war in 1944
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Treasury Solicitor files

- TS 28/580 Advice of litigation arising from publication of material detailing the invention and manufacture of gadgets 1950-1956
- TS 28/581 Advice of litigation arising from publication of material detailing the invention and manufacture of gadgets 1 Jan 1951-31 Dec 1960

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- WO 78/5814 Second World war escapers' maps on fabric
- WO 165/39 MI9 war diaries
- WO 169/24879 Records of MI9 organisation and activity
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- WO 208/3242 Historical record MI9 1 Jan 39 – 31 Dec 45
- WO 208/3243 Historical record MI9 1 Mar 42 – 28 Feb 46
- WO 208/3244 Reports by RAF prisoners of war in Germany
- WO 208/3245 Reports by RAF prisoners of war in Germany
- WO 208/3246 History of IS9: Western Europe
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WO 208/3281	Stalag XXA Thorn: camp history
WO 208/3288	Oflag IVC Colditz 1940-45: camp history
WO 208/3297	The Escapers' Story: a compilation of various escape reports 1940-41
WO 208/3298 – 3327	(30 files) Escape and evasion reports
WO 208/3328 – 3340	(13 files) Liberation reports
WO 208/3431	Lectures to units by escaped prisoners of war June-Aug 1942
WO 208/3445	MI9 lectures on conduct if cut off from unit or captured
WO 208/3450	MI9 Establishment 1939-42
WO 208/3501	Marlag and Milag Nord escaper and evader coded letter traffic
WO 208/3502	Oflag VIIC coded letter traffic
WO 208/3503	Oflag XIIB coded letter traffic Jan 43-Apr 45
WO 208/3512	Distribution of MI9 reports May – Nov 1940
WO 208/3554	MI9 special equipment: requirements, approval and supply
WO 208/3566	English/German coded dictionary
WO 208/3569	IS No 9 West Europe area: history
WO 208/3572	MI9 re-organisation
WO 208/3574	Inter-service escape and evasion training: A19 lecture papers
WO 344/260/2	Liberated prisoners of war interrogation questionnaires

Private Papers and Interviews

Parliamentary Archives

Accession number 1907 deposited 1979

Archive catalogue reference code AN = Airey Neave's personal papers

General files AN 598 – 627

Business files AN 628 – 637

Literary files AN 638 – 671

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Second World War Experience Centre

Reference SWWEC RN/Pryor J. = John Pryor's coded letters to his parents.

Imperial War Museum

Miscellaneous Document 2744 = Typescript of the original draft for Foot and Langley

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Professor M.R.D.Foot

January 2012

Stephen Pryor

2012 -2013 (various dates)

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