



Profiles in intelligence: an interview with Tony Comer

Daniel W. B. Lomas

To cite this article: Daniel W. B. Lomas (2022): Profiles in intelligence: an interview with Tony Comer, *Intelligence and National Security*, DOI: [10.1080/02684527.2022.2090741](https://doi.org/10.1080/02684527.2022.2090741)

To link to this article: <https://doi.org/10.1080/02684527.2022.2090741>



© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 23 Aug 2022.



Submit your article to this journal [↗](#)



Article views: 1293



View related articles [↗](#)



View Crossmark data [↗](#)

Profiles in intelligence: an interview with Tony Comer

Daniel W. B. Lomas

Introduction

Until August 2020, Martin Anthony ‘Tony’ Comer was the first publicly avowed Departmental Historian of the Government Communications Headquarters (GCHQ), the UK’s cyber and signals intelligence agency. His career at GCHQ spanned thirty-seven years, both operationally and, from 2009, as the eighth Departmental Historian (‘the best job in GCHQ’, he has previously said), culminating with GCHQ’s centenary in 2019 and publication of the authorised history of the agency, authored by Prof. John Ferris.¹

Born in Langley, Greater Manchester, Tony joined GCHQ in October 1983, first, as a linguist and, then, taking a series of operational roles within ‘the department’. Over the years, he has worked on GCHQ support for the armed forces and was the UK representative on the NATO Signals Intelligence committee. The role of Departmental Historian was his first non-operational job, and, from April 2009, one that he gradually developed from a largely in-house function writing the classified history of GCHQ, to a public facing one, telling the story of GCHQ’s work and promoting the study of UK signals intelligence to a wider audience. From April 2009 to August 2020, Tony supported GCHQ’s public engagement activity by communicating with thousands – if not tens of thousands – of people and took a central role in marking the centenary of GCHQ, as well as supporting the work of the Bletchley Park Trust, commemorating the important work of GCHQ’s predecessor, the Government Code & Cipher School (GC&CS), during the Second World War. ‘For a lot of people’, Tony reflected at the end of his career, ‘I am the only member of an intelligence service they will ever meet (or at least know that they have met) – that is a terrific honour’. He was appointed OBE in the 2020 New Year’s Honours for services to International and Intelligence history.

Tony continues to write on the history of Sigint and publishes document extracts via <https://siginthistorian.blogspot.com/>, and has contributed to the Lawfare podcast and Royal United Services Institute (RUSI) Commentary. This is the first major interview with a former UK agency departmental historian, in which he discusses the work of in-house history, intelligence agency transparency and engagement, and provides insights into the Centenary of GCHQ.

What follows is an edited transcript of an interview conducted with Tony over Monday 10th and Thursday 13 January 2022.

Interview

Daniel Lomas (DL): Let me begin with asking you a question about how you arrived at GCHQ. I understand that when you first joined in 1983, GCHQ was little understood and certainly didn’t have the wider recognition it has today. Can you just set out the early part of your career before you became Departmental Historian?

Tony Comer (TC): My degree was in Hispanic Studies; some language, but mostly the literature of the Iberian Peninsula and South America. There was talk of postgraduate study, and I developed an interest in dialectology, but the idea of spending more years in an academic environment put me off. Basically, I needed a break and went to Madrid to teach English, and after a year moved to Oviedo, in

the north of Spain, where I stayed for a few more years. For various reasons, I'd decided I wanted to come back to the UK at the end of the 1982/83 school year, so wandered into the University careers office in July 1982 to ask what options might be available to somebody who was good at languages but who didn't want to be a teacher or live in London. They mentioned the Joint Technical Language Service, which, they said, was the Foreign Office's translation bureau which was collocated with its communications division in Cheltenham. Given the recent unpleasantness in the South Atlantic, they were running a campaign to recruit Spanish linguists, so I went to London in the autumn to do first tests, and in the spring for more intense tests, and an interview. I was successful in these, and the vetting process started, being completed in time for me to join GCHQ in October 1983.

I'd changed coach a couple of times in Cheltenham but had never strayed beyond the coach station. In my mental geography of the UK at the time, Cheltenham was 'down south' and 'not in London', and that's that. I knew nothing about Cotswold villages or horse racing, or about cider or skittles.

The arrest and trial of Geoffrey Prime,² and the Prime Minister's avowal of GCHQ,³ meant I knew I was joining an intelligence organisation, and a summer spent borrowing books from the local library had taught me about Chapman Pincher and Duncan Campbell, but little about what I would be doing. So, what I found out about the work when I joined was a complete surprise, but, equally, I realised within a couple of weeks that this was the place for me. I already saw myself staying at GCHQ until I retired.

DL: So, tell me about your first insights into GCHQ's history. How did you first develop an interest in its history?

TC: I had been interested in GCHQ's history since I joined, though nothing beyond *The Ultra Secret*⁴ and the first volumes of Hinsley's history⁵ were around. Actually, *Intelligence and National Security* appeared in 1984, but GCHQ didn't subscribe. When I became what would now be called the Staff Officer in the Station Management Division in 1988, the Division Head encouraged me to read the three volumes of classified post-war history – the fourth still lay in the future. They were difficult enough for somebody with, as yet, little experience of the Soviet target, and would, I guess, be near-impossible to penetrate now, so much was taken for granted in the understanding of the reader. But there were enough people around who had lived through the period from 1945 to 1963 to ask, and who wanted to take time to explain and talk about what had happened. I was also given permission to read a wide range of registry files, so I was able to follow some collection- and station-related stories through to the present.

I probably got a more skewed view of GCHQ than most headquarters staff would have had, as it was more heavily focused on the contribution of what we called 'stations', the interception sites dotted around the UK, than it would otherwise have been and, as many of the people I asked questions about what I was reading were radio grades working in Cheltenham, I gained a better understanding not just of collection and tasking, but also of the cultural issues surrounding the 'radio class'. I visited all the UK stations. In the most hierarchical part of GCHQ, and with an ambiguous grade title that indicated (wrongly) that I might be very senior one day, I was very well looked after and learned a respect for the first link of the Sigint chain, the one that linked us to our targets, which I never lost.

Later, I went to another staff officer post in the Security Division to work out what the Official Secrets Act 1989 meant for GCHQ. Part of this was the 'notification' process, according to which a small number of contractors were 'notified' that they were subject to section 1 of the Act as if they were members of staff. One of the people I had to notify was Lou Maddison. Lou had been a military cryptanalyst at Bletchley, had stayed as a civilian and had become responsible for the Archives, and for ensuring that Hinsley and his researchers had access to everything they needed for their authorised history. In chatting I revealed my interest in history, and one day I was given the tour of all tours around the archives. All the material which had been selected for permanent preservation in 1952 was in one place, reasonably well catalogued and accessible. This was the point at which the 1963–73 volume of the classified history was commissioned, and I'd started to think that history was something I'd like to do after retirement.

I could only just dabble in history for the next ten years. After a few years, we got a subscription to *INS*, and between Cheltenham Library and GCHQ's own library I accessed a lot of the books which began to flood out in the late 1980s and the 1990s. I was, however, able to use history to guide the present, particularly when I was responsible for how GCHQ supported the UK and allied military between 1999 and 2005.

DL: You earlier mentioned GCHQ's internal histories. The wartime histories are now available to researchers at The National Archives (TNA), but, for those learning about these for the first time, can you tell me a little more about them and their purpose?

TC: I think there's a lot of confusion about the wartime histories and what they represent. I would probably need to write an article to explain adequately how they were conceived, how they were written, and how useful – or sometimes how useless – they are as 'the record' of Second World War UK Sigint. But they were written from a mindset that said that 'only we have a clue about what we did, and those who follow us will be lost if we don't write it down'. The important history was Nigel de Grey's⁶ *Organisation and Evolution of British Sigint*.⁷ He completed a first draft and died soon after. Frank Birch, the Head of the Historical Section⁸ didn't like de Grey's history so it remained a draft, while Birch tried to write his own summary, but died before he could finish. I've nearly finished transcribing de Grey's draft – and the insulting comments from Birch.

GCHQ was in an odd position. It didn't need to deposit its records at the Public Records Office [now The National Archives], but records nevertheless needed to be identified and preserved. If I remember correctly, it was as the wartime history programme was finally wound up at the end of the 1950s that the question of doing something for the post-war period was addressed. Ideally, somebody who had lived through the period under review would use the retained records to chart how GCHQ had been managed, how oversight and strategic direction from Whitehall had worked, how GCHQ's overseas partnerships had developed, how target technology had evolved, and what intelligence had been produced, and what difference this had made. I think the volumes covered 1945–1948, 1948–1954, 1954–1963 and 1963–1974.

The fourth post-war volume of the classified history was completed in about 1995, and I got to read it afterwards. It was better written, and better organised than before, and was indexed and footnoted. It was Jock Bruce,⁹ however, who in 2017, as we worked with John Ferris, put his finger on why it was actually less useful than its predecessors. Its author, John Johnson,¹⁰ had had to choose between a career as an academic historian and GCHQ, and his book showed how good he could have been. But Siginters are unlikely to be able to look objectively at activities they were involved or were associated with, and the previous three volumes were actually more useful, as they were effectively guides to and précis of the records in the Archives, rather than an attempt to explain a period, which, however well-written, ended up looking a little self-referential.

DL: Tell me a little more about your path to becoming GCHQ Departmental Historian.

TC: The GCHQ Historian post was filled around 2001 by Peter Freeman after his retirement as a Division Head. Peter was supposed to write the next volume (1974–1991) of the classified History but also, with a view to the process of the release of the records of wartime Sigint, which had begun in 1994, to be the point of contact for researchers who wanted help with the material that had been released. I'd worked in Peter's division in 1988–1989 and had once – and only once – produced something new which made him stop and think: that meant that he remembered me, and we got on.

We had a couple of chats, and I became Peter's unpaid researcher. My favourite memory was him asking me to write him a note on the various draft versions of the oath of allegiance to be taken by Irish parliamentarians proposed during the Treaty negotiations which ended the Irish War of Independence. What started as a throwaway remark became an enjoyable hunt – and an interesting lesson in research. Peter didn't 'get' Ireland and was happy to have issues explained to him by someone who understood it a bit more.

He drew me into his work. He'd arranged that every new entrants' induction course should include a lecture on Sigint history – and a trip to Bletchley Park – but he, as a part time member of staff, couldn't do them all, so I became the stand-in speaker.

Peter had vaguely thought that producing his volume might take him up to 2012, when he would retire, and I'd take over from him. Nobody questioned this, and it gradually became an assumption. And then he said I'd be doing more lecturing for him as he had been diagnosed with cancer and would be undergoing serious treatments. He finished articles on John Tiltman¹¹ as well as the Zimmermann Telegram for *Cryptologia*,¹² on MI1(b) for *INS*,¹³ and a booklet about how GCHQ came to Cheltenham,¹⁴ but never really began on a new subject. The last time we met – a fortnight before he died – he asked me to be his literary executor. I had thought this referred to Zimmermann but found that it included the outline of an article about [Herbert] Yardley¹⁵ he had started, and which David Kahn had encouraged him to complete.

After his death, Peter's post was filled by Mike, whose identity has not been made public. Mike was strong in a couple of specialist areas but, given his professional background and interests, had a different focus to Peter's. He spent less time on the public-facing, helping-the-Bletchley-enthusiasts part of the post, or on the preparation for writing the next volume of the History, some bits of which Peter had done. He lectured to new entrants, expanded this commitment to lecturing existing members of staff, and doing end of career interviews of retiring members of staff. Jock Bruce and I were asked to sort through Peter's papers: box after box of interesting documents he'd collected over his career, including some recovered from the boxes of material marked as 'not for preservation' by the PRO [Public Record Office] when GCHQ began its release programme, copies of documents he had from other sources, and even some documents his father, a radar pioneer, had kept after the Second World War and which were relevant to GCHQ's early efforts in Elint.

DL: Tell me a little more about you taking over the role? What were your first thoughts?

TC: Getting the Historian job meant stepping away from career and progression, but was an opportunity to absorb myself in something I wanted to do and could develop in new and interesting ways. Family circumstances were right, so I applied; I was the only candidate, got the job, and started on 1 April 2009.

DL: There was a time when GCHQ was seen as the most secretive and least well known of the UK's agencies, so can you tell me a little more about ideas for wider engagement?

TC: Yes. This was an idea – perhaps an instinct – that our Director, Iain Lobban,¹⁶ had harboured for a while, though I'm not aware that he ever articulated it in quite such black and white terms. He was aware that GCHQ was running in a legislative context designed for the pre-Internet environment. Technology had overtaken the legislation. We were at a point at which it was not possible to deduce from the words of current law exactly how GCHQ might deploy its capabilities, the extent of which was unknown outside GCHQ, against, for example, a terrorist's mobile phone call. And while an average citizen might have thought that it was not a bad thing that the terrorist couldn't know whether his communications were being monitored or not, the more thoughtful began to think that GCHQ had to be able to demonstrate that it was trustworthy. Using our history to describe the foundation on which GCHQ was built, using a description of the techniques used up to 1945 to demonstrate how precisely GCHQ needed to manage its capabilities to avoid swamping itself; and using the intelligence produced to show how Sigint added value and made a difference was an important line of activity in his strategic plan.

This is reflected most clearly, I think, in his speech at Leeds University marking the centenary of Alan Turing's birth.¹⁷ I had the task of writing the speech, which went through several versions. He and I are almost exact contemporaries at GCHQ and I could think in his voice, as it were, and express concepts in a way that allowed him to be authentic when speaking, but more important was that we shared a vision of what GCHQ was. Before the speech, in April 2010, he'd invited the BBC's security correspondent, Gordon Corera, to GCHQ to record a documentary and interviews with some staff – including me.¹⁸

DL: What was that like, given your work – to use the old cliché – 'in the shadows' for all those years? I remember it was a big thing at the time.

TC: When I met him, I was as nervous about talking about GCHQ to a journalist. I'd expected the role to be public-facing, but the idea that there might be people with microphones and cameras recording and broadcasting was unexpected. As we abandoned the Oakley site in December 2011,¹⁹ I was told by a senior member of staff that *Points West* – a local programme – would be recording a piece. I was told I'd be taking part and asked if I had a choice. 'Yes' she replied, 'we can find another Historian' – a joke, I think.

In August 2014 we celebrated the anniversary of Scarborough as a Sigint site²⁰: the oldest continually operating Sigint facility in the world. I gave a public talk in the Spa, which was advertised for some weeks beforehand: this was another first for GCHQ. There had never been an advertised presentation by a member of staff to which any member of the public could come.

DL: Tell me a bit more about the role of a GCHQ historian. What was on the to do list after you started as Historian in 2009?

TC: The post had been established for 'pure' history, writing the next volume (1974–1991) of the classified History, but the addition of internal lecturing and conducting exit interviews took away a lot of time. Once I started doing more outside GCHQ, the pressure of balancing so many tasks meant that writing that volume had to be pushed to one side. I'd assembled at least a draft of about 15–20 per cent before I left, but it needed about 40 per cent of an FTE to write something coherent. Making notes from files could be picked up and put down but drawing them together couldn't. Given the value of the classified volumes as guidebooks for external historians in the future, my successor – and, potentially his – face an uphill task as they will be writing about a GCHQ – a way of doing Sigint – they never knew.

Some aspects of GCHQ's history are enduring – recruitment, relations with Trade Unions or a Staff Association, accounting, etc – but changes in technology have completely changed Sigint and Comsec. The classified History project has, since Frank Birch and William 'Nobby' Clarke²¹ wrote the first volume, been based on the author having worked in the era being described. How GCHQ tasked, targeted, and analysed during the two final decades of the Cold War isn't written down. And I find it difficult to understand how somebody can come to it cold and make sense of it without a guide.

I could explain why things were as they were. To give an example: the setting up of the NCSC [National Cyber Security Centre²²] was a major public event. I could give Ciaran Martin [first CEO of NCSC] as much detail he needed on the background to the Comsec mission. Little of it was of any direct relevance to what the NCSC was being set up to do, but we could show that its mission was not just founded on a solid base, but that culturally it was part of an organisation that had learned and adapted, organisationally as well as technologically, as the preceding century had developed. It meant that when HM the Queen opened the NCSC in 2017, her visit started with a display – well picked up in the press – of historical artefacts showing a continuity of the security mission.²³

DL: Is the role of GCHQ Departmental Historian any different from the role of historians elsewhere in government? Both MI5 and SIS have gone on record in saying that they have historians.

TC: Separately, I developed links with SIS and MI5 historians, and with the broader network of departmental historians in Whitehall. I became Historian towards the end of the clearance process on Christopher Andrew's *MI5*,²⁴ though GCHQ had little to comment on; I had a lot more to do with SIS's historians initially, starting with the clearance process for their authorised history.²⁵ The closer we worked, the more we learned just how different the three agencies in the UK are from each other; and the more we learned, the more we realised that the differences weren't simply a result of having been separate organisations for a hundred years, but a result of the adaptation of each of our separate missions to the way the UK had developed and changed during that period.

DL: Could you say a bit more about that?

TC: It would probably take up all of the rest of our time, and then some more, but examples are the need for a legislative framework for the existence of the agencies, and then more legislation to cover the way in which they exercise the powers given to them. Or the way in which the security mission

has changed from protecting government communications security, to protecting its information security, and has then expanded beyond government to the critical national infrastructure, and eventually you get to the NCSC offering advice to charities and small businesses, and even to the public about how to create memorable but secure passwords. Or the different ways in which the three agencies have addressed the need for a public face.

DL: Did you ever speak to historians from other allied agencies? Was your role any different to theirs?

TC: Yes. I'd developed strong links to NSA's²⁶ Center for Cryptologic History [CCH]. NSA, the last time I asked, had a dozen historians – plus support staff, and this figure doesn't include the staff in the National Cryptologic Museum. The size of the team allows them to host a Cryptologic History Symposium every second year, which gives the CCH a status within the academic community: add to this a 'Scholar in Residence' programme, and the links set up by the NCM, and it's easy to see how well entrenched Sigint history is in the US.

The other second parties had been more deliberate about grasping the value of Sigint history as a communication asset, but all were moving in the same direction and had members of staff with some responsibility for history. I also worked with colleagues in France and Germany. Part the value of agency historians comes from their ability to contribute to their agency's communications plan, so I accepted speaking invitations and agreed to interviews, and became the first member of GCHQ to appear regularly in the media, and, for a long time was the only person to do so.

DL: Departmental history is one thing, but can you tell me a little bit about how, in your role, you helped academics and others interested in GCHQ's history?

TC: Academic historians of intelligence were different, and I'm sorry I didn't have more time to talk to them. I experienced almost the full spectrum of reaction to dealing with a real-life member of an intelligence agency: 'almost', because I only once met blatant rudeness and never met flattery, but every meeting was a challenge. Most students were keen to ask questions and learn, rather than be like one or two of their teaching staff who delighted in telling me how GCHQ worked and how it wasn't very successful. I enjoyed a couple of visits to Aberystwyth. Professor Len Scott invited me to speak to and take questions from his department, followed by drinks with his postgraduate students, and then dinner with his post-docs. That was fun. But at times I faced a 'them and us' situation, as though academic integrity might be compromised by being too chummy with a representative of one of the agencies.

Despite making efforts to deal with historians, there was little take up. Few non-intelligence historians use intelligence reporting to illuminate their research, even though UK-intercepted diplomatic messages show not only what foreign diplomats were reporting to their Foreign Ministries, but also what the British Foreign Office was secretly aware of; and in some cases, the UK reports are all that has survived. I decided that I couldn't be responsible for everything. As for 'Intelligence Studies', I didn't really understand the subject, if the articles published in *Intelligence and National Security* were any sort of guide, so I never tried to develop relationships in that area. GCHQ, at least, is an intensely pragmatic organisation, and I don't think that establishing theoretical constructs around the way Sigint works connects in any realistic way to the way we work.

DL: Why do you think there was little take up?

TC: I don't know. I suspect that academic history has been very much siloed and political historians might feel that the time it would take to get to understand intelligence reporting contextually to support the work they are doing in other archives wouldn't repay them sufficiently.

DL: How would the role of a GCHQ Departmental Historian differ from the understanding of 'historian' that we have in academia?

TC: I think there are three main areas of difference. First, GCHQ's historians have to cover the whole waterfront: they can specialise a little, but that's a bonus rather than part of what GCHQ wants, and research for personal interest can never be the main focus of the post. Second, they have to be aware of what current GCHQ is doing: how can you use history to help inform current operational issues if you don't understand what they are? And, third, the teaching element – as opposed to the explanatory element – is minimal.

DL: Do you see a natural tension between being a historian of a secret intelligence agency and the issue of declassification? I'm thinking about the historians reading this who would, naturally, have ideas of material in the GCHQ archives they would love to see, but can't. And why, without saying the obvious, of course, can't GCHQ release more material?

TC: There's perhaps less of a tension than you might think; I'm a professional intelligence officer and understand both sides. The fact is that material should be released when it's safe to do so, not before. The problem is that to make that judgment you have to make sure that everybody's equities are understood and respected. This can be simple: for example, the crypties from the Five Eyes countries have agreed that there are no longer any sensitivities regarding the cryptanalysis of Second World War German electromechanical wired rotor encryption systems; there are no political sensitivities regarding the fact that the UK was at war with Nazi Germany; release of related information isn't going to compromise unrelated activity by other agencies in other parts of the forest – so we can release everything about the cryptanalysis of Enigma safely. But sometimes things are more complicated: all of the reporting from decrypted Imperial Japanese navy communications has been released, but there are some cryptographic studies that haven't. That's because they outline an approach to cryptanalysis which hasn't yet been superseded. I can't tell you how many times people have said to me 'But everyone knows that Japanese Naval codes were broken': they were, and it's fair enough that the product of breaking them is releasable. But how it's done is still sensitive.

As far as John Ferris's authorised history goes, I found a series of potential post-Second World War 'case studies': self-contained stories which would illustrate how GCHQ responded to a situation. We had to find who had equities and negotiate about what was and wasn't releasable, and, in grey areas, work out how far we could go. Palestine, *Konfrontasi*,²⁷ and the Falklands were episodes in which GCHQ had played a significant role of which enough was releasable to give a convincing picture of the contribution Sigint had made. John hasn't told the full story – he hasn't even told the full Sigint story – but has been able to tell a nuanced story about times where GCHQ has done well, and, importantly, to show where some of the limitations on Sigint are.

DL: What other roles does a GCHQ historian have?

TC: Although GCHQ, like other organisations listed in section 23 of the Freedom of Information Act, wasn't subject to the Act in the way that most government departments were, other government departments didn't know how sensitive we considered material they held which had originated from GCHQ or which referred to GCHQ. While the relevant sections could cope easily with questions about today or the recent past, I had to get involved in issues relating to earlier periods. This applied, not just to FOIA, but to all information legislation.

Similarly, plans by Five Eyes partners for release normally covered the past. At the start of my period as Historian, NSA were by far the agency keenest on release. By the time I retired we had overtaken them.²⁸ We were convinced that release was a tool we could use to support transparency and adopted a more stringent internal test that demanded that somebody opposing release should demonstrate the harm release would cause, rather than the person in favour of release having to show every mitigation of every potential risk. But it's not a release free-for-all: there are large categories of material that need to continue to remain classified.

GCHQ had never had an Archivist as such and had left the task to Information Specialists with some clerical support. It became clear that an increased number of unavoidable requests for information were coming and that there wasn't any easy way to answer some of them. In an ideal world, every single box would be catalogued down to the individual document level: that was an ideal that would never be achieved. Even the boxes holding material which will eventually be released to The National Archives are only indexed down at the file level, and it requires an insight into how files would have been named at different periods to search. I had a unique combination of attributes: I had been trained how to file, and had spent a lot of time reading files; I understood how Registry log books worked, I knew how end product serialisation worked, I understood GCHQ's history; and I cared. I should add that there is a GCHQ Archivist post now, separate from the Departmental Historian.

DL: Of course, your role changed with the onset of GCHQ's Centenary, which, I think, seems to have dominated your final years as Historian, but you also suggested that engagement had started much sooner. What types of engagement were you involved in?

TC: Dealing with the press meant looking for opportunities to sell GCHQ's history. As early as 2009 we invited a journalist from the *Gloucestershire Echo* into the museum for a piece on 'Cheltenham's Secret Museum'. This was as safe and unthreatening an introduction to dealing with the press as it was possible to have – and I nevertheless made a mistake and learned a big lesson. One of the exhibits was a list of attendees from the January and March 1939 'Cryptanalysis 101' courses offered at GC&CS for the academics who had agreed to come to join GC&CS at Bletchley in wartime. One was J.R.R. Tolkien, and when asked whether he had been at Bletchley during the war, I answered that he hadn't. Why not? Because the nation had declared war on Germany, and not Mordor. I told the journalist that the item was on display because it was a good way to make young members of staff stop and think about choices: *The Lord of the Rings* came about because Tolkien wasn't working at Bletchley, or a place like it, working 12 hours a day, six days a week.

Of course, my attempts to broaden cultural horizons among junior members of staff wasn't what got into the published article, but the glib joke about not declaring war on Mordor was. I was phoned a couple of days later by a journalist, who asked a couple of questions and then sold the story on to *The Daily Telegraph*, when it hit the Internet and then the world.²⁹

DL: So how were you eventually outed as 'the Historian'?

TC: Well, when I first started talking to the Press, the rule from GCHQ's Press Office was that I didn't use my surname. It was odd, but this was the first time somebody from GCHQ was being publicly identified, and it was felt that it would make things more secure for me. It was uncomfortable, and it was hard to believe that anybody who really wanted to know couldn't find out my surname. In October 2012, a group of us went to the Manchester Science Festival. We had an Enigma machine and a Twitter link to Bletchley Park and the Bombe Rebuild team there and a narrative. The *Manchester Evening News* came to report on our visit, but instead of picking out the symbolism of the transformation of information processing chose, instead, to focus on the fact that a local boy had done well for himself, writing in its article: 'Manchester-born Tony Comer, who has worked for the agency for the last 30 years, but couldn't reveal his surname'.³⁰ They changed the online article after GCHQ pointed it out, but, by then, two or three comments had been added, and it didn't make sense to try and hide my surname anymore and, to be fair, I was relieved.

DL: And was this you developing the role of historian further, or was there an organisational push for wider engagement?

TC: In Iain Lobban's era, a Press Office had developed his thinking about public engagement and had started thinking about how GCHQ was portrayed in the media and making links to the journalists. Looking back, it's hard to imagine just how daring it seemed, and just how uncomfortable it made many colleagues feel. GCHQ was beginning a process of transformation: from being a secret intelligence agency to being a public agency that produced secret intelligence.

The first steps were difficult, and then came Snowden, and a period where GCHQ faced a flood of revelations which were inaccurate and damaging: damaging, mainly to the mission, but also to GCHQ's reputation. *The Guardian*, at the time GCHQ's house journal ironically, started a campaign which left a lot of us feeling as though we were being personally targeted as being either people who consciously broke the law, or, if not, the dupes of those that did.

I could help out a bit and increased the number of talks I did, and felt a different mood to the one portrayed in the papers: an appreciation by the public for what they thought the intelligence services were doing for them, in particular 'keeping us safe'. As the only avowed member of an intelligence agency most of them would ever meet, I found warmth, not hostility, and at times had to provoke difficult questions at the Q&As which followed my talks.

It would be hard to exaggerate the difference made to GCHQ by the introduction of Andy Pike as Head of Comms and Engagement.³¹ Here was a media professional who saw the need to refresh an exhausted Press Office, and to widen GCHQ's communications. Andy decided that I could be part of

that offering and looked to me to sharpen up my visitor briefing act, making sure that my history talk, or museum visit, would chime with the reason for the visitor being in GCHQ. He saw the value of bringing in people who would reach beyond the normal round of senior military and politicians, and brought in ‘influencers’, people who might, with a decent introduction, become strong interlocutors for GCHQ.

I got comfortable with radio, less so with television. I got to meet a lot of the VIP visitors to GCHQ during my time, and this was one of the most enjoyable parts of my job. I had few nerves: I was on my own territory and had something interesting to say that the visitors didn’t know. Word got out and visit plans had sometimes to be changed to add more time to museum stops, or to include them when visitors asked for them.

I met most of the Royal Family, countless politicians, stars of stage and screen and journalists. And separate from the VIPs, I got to meet the great British public. Whether at GCHQ family days, which welcomed the families of staff into the building, or the public events to which we took a few artefacts, always including an Enigma machine that people would be allowed to use, I met and talked to thousands – tens of thousands – of people.

DL: Dealing with the public and explaining GCHQ’s role and history was clearly important. But as an agency historian, can you tell me more about the problems of public engagement?

TC: Other than simply showing artefacts, ‘Dealing with the Public’ covered lots of relationships, from answering questions after a public talk, answering letters sent to GCHQ, to chatting to non-academics interested in Sigint. The latter comprised a surprisingly large number of people, mainly interested in Second World War Sigint, and covered what I once described – trying to be polite – as a broad range of acquaintance with the historical facts: from seriously knowledgeable experts at one end, to ‘Alan Turing invented the fifth wheel on the Enigma machine’ at the other. ‘Enigmaniacs’ was my label for the people obsessed with Enigma machines to the exclusion of interest in any other encryption system. They weren’t collectors, because they couldn’t afford the six figures a halfway decent machine would cost, but they liked to touch them when permitted – they were harmless.

The biggest problem I dealt with was the ‘Bletchley Myth’ which you might summarise as ‘a small group of – mainly eccentric – boffins at Bletchley Park broke Enigma, and the Ultra material produced was a significant factor in the Allies winning the war’. Sometimes it was the higher tosh: for example, raising the importance of the Battle of Cape Matapan³² up to that of Trafalgar; sometimes it was the lower tosh: for example, the belief that everybody at Bletchley was a brilliant chess player – but it was all tosh. I wanted to correct this but was unsuccessful. The only area in which I managed to hold a line was in GCHQ’s own publications and social media, though, in spite of there being a rule that nothing could be posted or tweeted about Sigint history without my approval, some howlers got through. The rule seems to have been abandoned after my retirement, and before my successor could set up himself, with increasing amounts of myth – junk history – appearing under the GCHQ brand.

DL: As I suggested earlier, it’s fair to say that the Centenary dominated the second half of your time as Historian – and, I think, it’s a period of immense interest to readers. How did planning for 100 years of GCHQ start?

TC: Iain Lobban was the first person to raise the question of the Centenary with me. About 2011 he wanted to know whether we’d be celebrating 2014 – the creation of Room 40 – or 2019 – the creation of GC&CS. I was in the 2019 camp, and I doubt that he even mentioned it to anybody else. He must have known that he wouldn’t still be Director in 2019, but the experience of the MI5 and SIS celebrations in 2009 was fresh. So, there it lay, but I started to think of how we might do our centenary differently. We could be different for two reasons, one good, one bad. The good reason was that we had a lot more we could share about the people who have worked in British Sigint, and talk more about how and why GCHQ intercepts communications, without giving away details of the successes we had had. The bad reason was Snowden.

Iain would have a centenary to celebrate. He set a colleague and I to come up with a plan for a memorial and its inauguration at the National Memorial Arboretum (NMA), Staffordshire, to mark the hundredth anniversary of the institutional founding of Sigint in 1914. He set the bounds for what he wanted, gave us a budget, told us on what issues he wanted to be consulted, and set up a reporting mechanism to ensure that things were progressing.

This gave us a lot of scope: a colleague liaised with the NMA itself and got from them a location and a suggested designer, examples of whose work we could see. I told the stonemason that we wanted something globe shaped and with two ribbons cut into it diagonally to the stand on which it would be placed (symbolising satellite orbits), on one of which GCCS was spelled out in morse, on the other seven, three, eight and seventeen in binary (G-C-H-Q are the seventh, third, eighth and seventeenth letters), so that we covered the whole span of 100 years of a global Sigint and Security mission, analogue and digital, terrestrial and in space, and with a caption saying 'To commemorate all British and Allied personnel whose work with Signals Intelligence and Communications Security has supported HMG in war and peace since 1914' to be inclusive of both military Sigint and our international partnerships.

The Prince of Wales inaugurated the memorial on one of the wettest days I can ever remember. He also inaugurated the memorial to the Parachute Regiment on the same day: we had resolved potential problems with the organisers of the much bigger event by hiring a marquee for our guests and reserving the chapel against the possibility of rain. We stayed dry while many hundreds of elderly gentlemen, veterans of the Second World War, were drenched.³³

DL: We suggested earlier that a lot of engagement was shaped by Iain Lobban's view that GCHQ needed more of a public profile, but one issue that readers will be interested in is the impact of Edward Snowden, especially his revelations about GCHQ. I fully understand reservations about discussing Snowden, yet it's clear that, whatever the pros and cons of what he did, newspaper claims about GCHQ surveillance certainly turbocharged the process of openness. Would you say that's correct?

TC: The only thing I'm going to say about Snowden is that the black cloud of the publicity given to the information he stole, which made some of GCHQ's targets disappear from view, had a silver lining: it brought forward change to the legislative framework in which GCHQ operated, and it changed the nation's relationship with GCHQ, which had to earn its 'licence to operate' by being more open.

Snowden really accelerated a process started earlier. GCHQ was opening up, was taking soundings about new legislation, and was becoming proactive with the media from the time Iain had become Director: the pace quickly became frenetic. GCHQ's history wasn't in itself a reason to trust GCHQ or give it more powers, but it helped reinforce the case the twenty-first century organisation was making by illustrating it with a century's worth of examples of legal activity producing secret intelligence that had contributed to allied victory in two world wars and myriad smaller operations, had contributed to the defeat of terrorists, and had helped prevent armed conflict by providing HMG with the best possible insight into what other powers were thinking.

DL: And what impact, if any, did it have on your plans for GCHQ's 100th anniversary?

TC: Iain had asked whether we should commission an authorised history to coincide with our centenary. I said no: why not be different and do a massive release of records, accessible to anyone who wanted to write about UK Sigint history? He wasn't really convinced but, I think, decided to leave this to his successor. With hindsight, I think he was right, and that anyway the two options were not mutually exclusive. It would have been pointless to do a release without an explanation of what the material being released was, and what it meant, and from that to a fully-fledged Authorised History is a small step. And anyway, Iain's successor, Robert Hannigan,³⁴ wasn't inclined to argue: we were going to have an authorised history.

Iain arranged that Robert, before becoming Director, should spend time in GCHQ with the teams that produced the Department's outputs. I saw Robert in June 2014 when we met at Bletchley Park, where the Duchess of Cambridge was opening the new Visitor Centre. Iain had arranged that I would drive Robert back to Cheltenham so that we could talk about GCHQ's history, as well as about 'History in GCHQ'.

I had a session with Robert in February 2015, once he had settled in and he gave me his outline thinking for me to develop a plan: by 1 November 2019 there would be new legislation, and a new framework in which GCHQ would be operating, and so we'd have a public exhibition, curated by the Science Museum Group,³⁵ an Authorised History written by John Ferris, and a series of events. I spent the rest of that year bringing together a plan for approval by the Board in December. I scoped out what the history and the Science Museum exhibition should cover and outlined a plan for a national campaign: royal visits; a formal celebration with the military; something at Bletchley; something in Cheltenham; a TV documentary highlighting GCHQ's presence across the whole of the UK during its hundred years; another highlighting technology; a history documentary on Radio 4; the National Memorial Arboretum on 1 November itself; and something in London. I also proposed that we could get staff buy-in with a large-scale family day and by allowing them to design and market centenary souvenirs. Most of the Board members, led by Ciaran Martin, were enthusiastic, particularly from the transparency point of view, but with hindsight I recognise that the garden wasn't as uniformly rosy as it felt at the time.

In April 2016 Iain Blatchford, Director, and Mary Archer, Chair of Trustees of the Science Museum Group visited GCHQ. We had selected a range of artefacts, items in the main that had never been seen in public before. What most attracted their attention was a transportable shipping container which had housed an intercept operation in Afghanistan. I had a vision of a small 'intercept site': equip the container with a couple of HF receivers, linked to aerials on the Science Museum roof, and build a small, automated HF DF network with sites at Bude, Scarborough, Bletchley and if possible, at the Science Museums in Manchester and Edinburgh. It would have been a perfectly legal and safe way of showing exactly how collection, DF and TA had worked for most of the history of Sigint; it would have given us the opportunity of highlighting women in technology as a matter of fact during the Second World War, when networks exactly like the one we wanted to build were being operated by women across the UK; and would have offered us the opportunity to show how STEM subjects are intertwined in GCHQ.

Working with the Science Museum was a career highlight. The exhibition was theirs: it would go beyond the fact of our centenary and explore wider issues of privacy and security. Luckily, I was able to agree a basic shape to the exhibition quite early, while the Centenary was still my responsibility, and have a focus on transparency. Few people in GCHQ have any idea how much information about Sigint is available in the public domain, and not many more know how much reasonable discussion is going on in the area of privacy and security. Our target was to match what some of GCHQ and the NCSC were doing elsewhere: presenting privacy and security, not as alternatives but as joint goals, and as goals not just for the state but for citizens too.

We announced the Centenary – the Science Museum exhibition and the authorised history – in a Twitter Q&A in February 2017.³⁶ But Robert announced early in 2017 that he would be leaving. Jeremy Fleming,³⁷ his successor, came into post after Easter. During the Interregnum, responsibility for the Centenary was given to the Comms and Engagement Team, and over a few months the scope of what would be included as 'official Centenary' was narrowed; I was still involved, but 'History' became just one of the inputs. If you like, the centenary changed from being history-focused, with a strong comms element, to being a series of focused comms events, drawing on GCHQ's history.

DL: Turning to the other major output of the Centenary, the authorised history by John Ferris, can you tell me a little bit about your first thoughts on what was planned?

TC: The authorised history was separated from the rest of Centenary and left with me. The original plan called for another couple of books to follow John's, which I would write: a picture book accompanied by a longish essay in which a twenty-first century cryptologist would reflect on GC&CS in the Second World; and a second, provisionally called *Secrets from the GCHQ Archives*, which would take advantage of my knowledge of individual documents and folders in GCHQ's Archives that might not actually be classifiable as records but which told fascinating stories: something aimed at a broader audience than John's and that would tell stories, some of which went back to the First World War. I was looking forward to this as a retirement project, but in the end, I think they decided that one history book was enough.

DL: Obviously, the authorised history comes – as John Ferris acknowledges – with caveats. Was there any hesitation about GCHQ joining MI5 and SIS (up to 1949) with a history drawing on the archives?

TC: I don't think so. The precedent of the other two books meant that it was very unlikely that anybody would object.

DL: Tell me about the writing process. The methodology behind GCHQ's history seems very different to that of MI5 and SIS with Christopher Andrew and Keith Jeffrey, where they were allowed, they tell us, to access the archive itself. Why did you take a different approach with John Ferris? And what were the advantages?

TC: There were various reasons why John shouldn't be allowed full access to the Archives. For a start, it was hard to see how he, a Canadian, would get access to a full UK clearance. Second, if his access to information was limited to material GCHQ was prepared to release, it meant that he could only publish about British Sigint in the future after GCHQ had checked his drafts. And the vetting process takes time, and we were faced with a project that would be difficult to complete even in the time we had.

So, our plan was for John to have a fully cleared British researcher, Jock [Bruce], who had worked for the department, and was somebody we trusted, who could have the access to material that John couldn't, and who could negotiate, with me, what material could be shown to John. We agreed some broad areas that were releasable, and some that weren't.

We particularly wanted to address the 'So what?' question: where UK Sigint had made a difference since the Second World War. We chose the case studies; Palestine, *Konfrontasi*, the Cuban Missile Crisis were all subjects it was easy to release material on, and they told a rounded story. And the first files used by John started to reach TNA in January 2022, the first files on Palestine. And there's more files being released into the HW 92 series.³⁸

There was a purely practical problem about moving large quantities of still-classified-but-releasable material between the archives and the room John used, but we solved this in a meeting with GCHQ's Senior Security Officer and we decided to make the process work without imposing a wall of the bureaucracy on it.

DL: So, you mentioned the dreaded wall of bureaucracy and alluded to some things not being releasable. What couldn't be mentioned?

TC: I'm afraid I'll have to say 'no comment' on why some areas were left out of the book, but it would be wrong to blame bureaucracy. Continuing sensitivity was the issue.

DL: And, finally, how had the post changed by the time you finished? What was it like to leave?

TC: The subordination of the Historian post changed at around the same time as I was finishing in post. It had been decided that the post didn't belong to Directorate to which it had been moved after a reorganisation in 2016. It was decided to make it part of the Comms and Engagement Team. I argued that this was wrong: CET was a customer for Sigint History, but a lot of the Historian's time was taken up by things that had nothing to do with either comms or engagement. But that would be my successor's problem.

I retired during the COVID lockdown in August 2020. Jeremy Fleming was on leave in my last week but before I left he gave me an opportunity for a long chat so that I could say a few things about GCHQ's future, something I care a lot about. I had spent the last couple of months emptying my cupboards into archive boxes and sorting soft copy files and emails into the EDRM system, so the last day itself was mundane. I set up a 'Tony has left the building and it's all Dave's now' out-of-office message on high- and low-side systems, handed in my secure phone and secure laptop, and returned my phone locker key, and looked at the comments on the last blog I had written on the internal social media system. I had handed in all of my passes and identity cards except for the one that got me into the Doughnut a couple of days previously so simply had to hand that one into the security guard on the gate as I left for the last time, thirty-seven years after arriving. I drove home, made a cup of tea, and started the next chapter.

DL: Tony, thank you.

Notes

1. Ferris, *Behind the Enigma: The Authorised History of GCHQ, Britain's Secret Cyber-Intelligence Agency*.
2. Geoffrey Arthur Prime. Prime had been trained as a Russian linguist in the 1960s before joining the London Processing Group and GCHQ in 1968. He left the department in 1977. In 1982 he was arrested for a series of sexual assaults on young girls in the Cheltenham area. It was only after Prime's arrest that he confessed to spying for the Soviet Union, revealing he started giving information to the Soviets 'partly as a result of a misplaced idealistic view of Soviet Socialism which was compounded by basic psychological problems. He first made contact with Soviet intelligence while stationed in Berlin in January 1968 and continued to provide the Soviets with information on UK sigint alerting them 'to the state of our knowledge of certain important aspects of Russian defence arrangements and to the ways in which that knowledge was obtained'. He was sentenced to 38 years in prison in November 1982, with details of his case, and security lapses, reported by the Security Commission in May 1983 (see Cmnd. 8876, *Report of the Security Commission*, May 1983).
3. Hansard, HC. Deb, 20 July 1982, vol. 28, cols. 211–5; and Hansard, HC. Deb, 11 November 1982, vol. 31, cols. 669–78.
4. Winterbotham, *The Ultra Secret*.
5. F.H. Hinsley, *British Intelligence in the Second World War, Volume 1: Its Influence on Strategy and Operations* (1979); F.H. Hinsley, *British Intelligence in the Second World War, Volume 2: Its Influence on Strategy and Operations* (1981); F.H. Hinsley, *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume 3, part 1* (1984); F.H. Hinsley, *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume 3, part 2* (1988); F.H. Hinsley, *British Intelligence in the Second World War: Vol. 4, Security and Counterintelligence* (1990); and Michael Howard, *British Intelligence in the Second World War: Vol. 5, Strategic Deception* (1990). On the origins and writing of the history see Herman, "The Rush to Transparency."
6. De Grey had been recruited to the British Admiralty's Room 40 in 1915, becoming part of a team that, in early 1917, broke the Zimmerman Telegram, the offer of a German – Mexican alliance in return for the US states of Arizona, New Mexico and Texas. He was recalled to GC&CS in 1939 and remained in what became GCHQ in 1946, retiring in 1951. A year before his retirement, De Grey worked in the Historical Section and wrote the internal history of Bletchley, now archived in the HW 43 series at The National Archives (TNA).
7. The National Archives (TNA): HW 43/75 – 78, Allied Sigint Policy and Organisation by Nigel de Grey.
8. Birch joined Room 40 to work on German naval ciphers in 1916 and went on to complete a comprehensive internal history with William 'Nobby' Clarke titled 'A Contribution to the History of German Naval Warfare, 1914–1918'. Having left intelligence to pursue a career as an academic and later actor and producer, Birch joined GC&CS in 1939 joining the Naval Section, going on to become the head of the historical section of GCHQ post-war.
9. Researcher and part of the historical team.
10. Johnson went on to publish *The Evolution of British SIGINT, 1653–1939*.
11. Erskine and Freeman, "Brigadier John Tiltman," 289–318.
12. Freeman, "The Zimmerman Telegram Revisited," 98–150.
13. Freeman, "MI1(b) and the origins of British diplomatic cryptanalysts," 206–228.
14. *How GCHQ came to Cheltenham*, GCHQ, 2005.
15. Herbert O. Yardley, chief of MI-8, the first US peacetime cryptographic organisation. With the disbandment of MI-8 in 1929, Yardley went on to publish the now infamous *The American Black Chamber*, revealing the extent of US sigint success, later working for the Canadian and Chinese governments.
16. Sir Iain Robert Lobban KCMG CB, Director GCHQ, 2008–2014.
17. "Director GCHQ makes speech in tribute to Alan Turing," 4 October 2012.
18. "GCHQ: cracking the code," 4 April 2010.
19. When GCHQ moved to Cheltenham between 1952 and 1954, activities were divided between Benhall to the west of Cheltenham and Oakley to the east. Operations at Oakley ceased in December 2011, with all activity moved to the Benhall site and the now iconic headquarters referred to as the Doughnut, occupied by GCHQ since 2003. See Freeman, *GCHQ Buildings since 1914*, pp. 17–22; and Knibbs, "A final look at GCHQ's top secret Oakley site."
20. "Prince of Wales' visit for Scarborough's GCHQ station."
21. William F. 'Nobby' Clarke joined Room 40 in 1916 and, with Birch, compiled a multi-volume history of German naval warfare at the end the First World War, staying to become head of GC&CS's Naval Section. He was succeeded by Birch in 1941 and side-lined to Naval Section Co-ordinator for Neutral Countries, retiring from GC&CS in 1945.
22. NCSC was established under GCHQ in 2016, absorbing GCHQ's information security arm, CESG and other functions across government. Still a part of GCHQ, NCSC's role is to support the public sector, industry, SMEs and general public in mitigating cyber threats. For more, see Hannigan, *Organising a Government for Cyber*.
23. "Britain enters a new era of online opportunity with opening of the National Cyber Security Centre," 14 February 2017.

24. Andrew, *Defence of the Realm*.
25. Jeffery, *MI6: The History of the Secret Intelligence Service, 1909–1949*.
26. US National Security Agency.
27. Konfrontasi (1963–66). Conflict started by Indonesia’s President Sukarno following the creation of the Federation of Malaya, consisting of Singapore, Malaya, Sarawak and North Borneo, which saw British and Commonwealth forces supported by GCHQ sigint conduct both defensive and cross-border raids against Indonesian forces.
28. For a guide, see “Records created or inherited by Government Communications Headquarters (GCHQ)” <https://discovery.nationalarchives.gov.uk/browse/r/r/C156>.
29. “JRR Tolkien trained as British spy,” *The Telegraph*, 16 September 2009.
30. “Spying a secret agent: GCHQ eavesdroppers inspire youngsters at Manchester Science Festival,” *MEN*, 29 October 2012.
31. Pike had joined GCHQ as the first ever Director of Communications and Engagement, February 2015 – August 2017, having moved from the Foreign & Commonwealth Office. He went on to work as Director of National Security Communications (August 2017 – February 2020) and Director of Communications in the Northern Ireland Office (February 2020 – October 2021).
32. Royal Navy victory over the Italian Regia Marina in March 1941. It was the timely use of Italian naval decrypts that allowed the Royal Navy’s Mediterranean Fleet to intercept an Italian fleet, resulting in the sinking of three cruisers and two destroyers.
33. “Prince Charles unveils sculptures at Staffordshire Memorial Arboretum,” *BBC News*, 13 July 2012.
34. Robert Peter Hannigan CMG, Director GCHQ 2014–2017.
35. The exhibition, *Top Secret: From Ciphers to Cyber Security*, opened at the London-based Science Museum in July 2019, before moving after a Covid related delay to Manchester (May 2021) and Bradford (February 2022). See *Science Museum Explores 100 Years of Codebreaking*.
36. Lomas and Murphy, “GCHQ – a new authorised history.”
37. Sir Jeremy Ian Fleming KCMG CB, Director GCHQ, 2017 – present.
38. Government Code and Cypher School and Government Communications Headquarters (GCHQ): Records Used in the Writing of ‘Behind the Enigma: The Authorised History of GCHQ, Britain’s Secret Cyber Intelligence Agency’ <https://discovery.nationalarchives.gov.uk/details/r/C17549165> In time, the file series will contain records consulted and used on GCHQ’s authorised history, including files on the organisation and management of GCHQ and documents on Palestine, Konfrontasi and the Falklands.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributor

Daniel W. B. Lomas is author of *Intelligence, Security and the Attlee Governments, 1945 – 1951* published by Manchester University Press (2016), teaching on intelligence and security at Brunel University London. He is a member of the Brunel Centre for Intelligence & Security Studies (BCISS). His research looks at intelligence, security and policymaking in Britain.

Bibliography

The National Archives (TNA)

Hansard

Secondary Sources

- Andrew, C. *Defence of the Realm: The Authorised History of MI5*. London: Allan Lane, 2009.
- “Britain Enters a New Era of Online Opportunity with Opening of the National Cyber Security Centre.” February 14, 2017. <https://www.gchq.gov.uk/news/britain-enters-new-era-online-opportunity-opening-ncsc>
- Cmnd. 8876. *Report of the Security Commission*, May 1983.
- “Director GCHQ Makes Speech in Tribute to Alan Turing.” October 4, 2012. <https://www.gchq.gov.uk/speech/director-gchq-makes-speech-in-tribute-to-alan-turing>
- Erskine, R., and P. Freeman. “Brigadier John Tiltman: One of Britain’s Finest Cryptologists.” *Cryptologia* 27, no. 4 (2003): 289–318. doi:10.1080/0161-110391891928.
- Ferris, J. *Behind the Enigma: The Authorised History of GCHQ, Britain’s Secret Cyber-Intelligence Agency*. London: Bloomsbury Publishing, 2020.
- Freeman, P. *How GCHQ Came to Cheltenham*. Cheltenham: GCHQ, 2005.
- Freeman, P. “The Zimmerman Telegram Revisited: A Reconciliation of the Primary Sources.” *Cryptologia* 30, no. 2 (2006a): 98–150. doi:10.1080/01611190500428634.

Freeman, P. *GCHQ Buildings since 1914*. Cheltenham: GCHQ Cheltenham, 2006b.

Freeman, P. "MI1(b) and the Origins of British Diplomatic Cryptanalysts." *Intelligence & National Security* 22, no. 2 (2007): 206–228. doi:10.1080/02684520701553550.

"GCHQ: Cracking the Code." April 4, 2010. <https://www.bbc.co.uk/programmes/b00rmssw>

Government Code and Cypher School and Government Communications Headquarters (GCHQ): Records Used in the Writing of 'Behind the Enigma: The Authorised History of GCHQ, Britain's Secret Cyber Intelligence Agency' <https://discovery.nationalarchives.gov.uk/details/r/C17549165>

Hannigan, R. "Organising a Government for Cyber: The Creation of the UK's National Cyber Security Centre." Organising a Government for Cyber: The Creation of the UK's National Cyber Security Centre | Royal United Services Institute. February 27, 2019. rusi.org

Herman, M. "The Rush to Transparency: Releasing Wartime Codebreaking Secrets." In *Intelligence Power in Practice*, edited by M. Herman and D. Schaefer, 21–87. Edinburgh: Edinburgh University Press, 2022.

Hinsley, F. H., E. E. Thomas, C. F. G. Ransom, and R. C. Knight. *British Intelligence in the Second World War, Volume 1: Its Influence on Strategy and Operations*. London: HMSO, 1979.

Hinsley, F. H., E. E. Thomas, C. F. G. Ransom, and R. C. Knight. "British Intelligence in the Second World War." In *Volume 2: Its Influence on Strategy and Operations*. London: HMSO, 1981.

Hinsley, F. H., E. E. Thomas, C. F. G. Ransom, and R. C. Knight. *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume 3, Part 1*. London: HMSO, 1984.

Hinsley, F. H., E. E. Thomas, C. A. G. Simkins, and C. F. G. Ransom. *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume 3, Part 2*. London: HMSO, 1988.

Hinsley, F. H., and C. A. G. Simkins. *British Intelligence in the Second World War: Vol. 4, Security and CounterIntelligence*. London: HMSO, 1990.

Howard, M. "British Intelligence in the Second World War: Vol. 5, Strategic Deception." 1990.

HW 43/75 – 78. Allied Sigint Policy and Organisation by Nigel de Grey.

Published Primary Sources

Jeffery, K. *MI6: The History of the Secret Intelligence Service, 1909 – 1949*. London: Bloomsbury, 2010.

Johnson, J. *The Evolution of British SIGINT, 1653 – 1939*. Cheltenham: HMSO, 1997.

"JRR Tolkien Trained as British Spy." *The Telegraph*, September 16, 2009.

Knibbs, S. "A Final Look at GCHQ's Top Secret Oakley Site in Cheltenham." *BBC News*, December 21, 2011. A final look at GCHQ's top secret Oakley site in Cheltenham - BBC News >.

Lomas, D., and J. M. Christopher. "GCHQ – A New Authorised History." *History & Policy*, March 16, 2017.

"Prince Charles Unveils Sculptures at Staffordshire Memorial Arboretum." *BBC News*, July 13, 2012.

"Prince of Wales' Visit for Scarborough's GCHQ Station." *BBC News*, July 30, 2014.

"Records Created or Inherited by Government Communications Headquarters (GCHQ)." Accessed June 27, 2022. < <https://discovery.nationalarchives.gov.uk/browse/r/r/C156>

Science Museum Explores 100 Years of Codebreaking. "Science Museum Explores 100 Years of Codebreaking in Major New Exhibition | Science Museum >."

"Spying a Secret Agent: GCHQ Eavesdroppers Inspire Youngsters at Manchester Science Festival." *MEN*. October 29, 2012. < <https://www.manchestereveningnews.co.uk/news/greater-manchester-news/spying-a-secret-agent-gchq-eavesdroppers-801318>

Winterbotham, F. W. *The Ultra Secret*. London: Weidenfeld & Nicholson, 1974.