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Dummies on the British Home Front:
Decoys that Protected the UK during World War II

A Senior Thesis Submitted to
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It's one of the great untold stories of the Second World War - a battle conducted in the shadows of East Anglia that saved thousands of lives. It was a top secret operation involving both deception and astonishing bravery but 60 years later those who fought it have largely been forgotten. They are the 'Decoy Men' - perhaps the only servicemen during the war who were actively trying to get the enemy to bomb them.¹

- "Matter of Fact: The Decoy Men," BBC Press Office, February 28, 2002.

British citizens feared the deadly threat of bombing during World War II, especially those who lived in heavily populated areas. This was due to the Battle of Britain: the German campaign to bomb Britain in order to either claim lives or impede the British war effort. Cities, factories, and airfields were the main targets for German bombers to attack. Because most of the population lived in these or surrounding areas, almost all citizens faced the risk of bombing. From 1940 to 1941, some methods for stopping bombers existed, such as anti-aircraft weapons and blackout techniques meant to hide the lights of the cities. However, in 1940 these tactics could not stop the German planes from flying over Britain and wreaking havoc. Instead of focusing on the impossible task of stopping the bombers, the government tasked Colonel John Turner (later Sir John Turner) with deceiving the bombers.

Colonel Turner was in charge of a large operation to create decoys. Each major city or airfield had at least one decoy defending it. Turner produced the decoys in the studios of a film company before arranging the dummies on farmlands or hills. The decoys contained lights and fake props so that from above they would look like cities, air bases or factories. Scientists and artists cooperated to create illusions with enough technical sophistication and artistic realism to fool the enemy. The blending of the arts and sciences created a sort of interdisciplinary warfare that took advantage of all talents. The decoys mimicked the Germans' intended targets, which in fact were covered in darkness miles away. Deceived German pilots dropped 2221.13 tons of

¹ Paul Dunt, prod., "Matter of Fact: The Decoy Men," transcript, BBC TWO, February 28, 2002, http://www.bbc.co.uk/pressoffice/pressreleases/stories/2002/02_february/28/matteroffactdecoy.shtml.

bombs on the countryside and hills instead of cities.² There were four main types of decoys, to imitate four different types of target. About 1100 of these decoys were built in the United Kingdom, scattered among 797 sites, as multiple types of decoys occupied some of the sites.³ Military historians interested in technology usually focus on the development of weapons in the evolution of war. However, in the more recent wars science, art, and non-lethal technology played a significant role in shaping the outcome of battles. I will argue that Colonel Turner's decoys are one of the integral but overlooked innovations that protected vulnerable citizens in World War II.

Because of the intense secrecy surrounding the decoys, very little was written about them until after the 1970s, when the British government gradually declassified information and documents. The late release of the information caused the decoys to miss surges of scholarship into World War II history. There are hundreds of books, articles, and television programs on World War II deception. Many nations involved in the war used decoys, most notably Germany and the United States (see Appendix 1, Timeline). This paper focuses on the decoys used to protect the British Home Front because they receive less attention even though there are a wealth of relatively unexamined personal stories and government documents. This is especially true for Operation Bodyguard, an overarching strategy that included all the efforts and smaller operations to disguise the D-Day Landing in Normandy, France. Out of all of the resources on the operation, very few were published late enough to include the fact that Colonel Turner's Department was involved in Operation Bodyguard as well. However, there are a few secondary sources who devote care and effort into telling the story of the decoys.

² UK Air Ministry and Ministry of Defense. Air Historical Branch: Narratives and Monographs. AIR 41/3 - Decoy and Deception. 1950. Accessed September 26, 2015. <http://www.discovery.nationalarchives.gov.uk/details/r/C509272>.

³ Colin Dobinson, *Fields of Deception: Britain's Bombing Decoys of World War II* (London: Methuen, 2000), preface.

Discovery of and renewed interest in these sites has resulted in a couple of scholarly works. Dr. Colin Dobinson's *Fields of Deception: Decoy Sites of World War II* (2000) is the most comprehensive work on Colonel Turner's department. Dobison is a freelance historian from England who studied at York and Cambridge. In 1994 English Heritage commissioned this book as part of its effort to preserve and remember sites of military remains. The book also meant to uncover the extent and complexities of Colonel Turner's Department because the decoy aspect of the Home Front had very little written on it previously. Dobinson uses mostly archival work, and is exhaustive in his discussion of the technology that went into the decoys, as well as the thought processes and deliberations that went into their development. English Heritage hired Dobinson to write a series of books describing the military landscape of Britain; this is the only book that features the decoys. Dobinson also appears on numerous smaller publications by English Heritage and Council for British Archaeology listed as the "Historical consultant."⁴ Though his work is lengthy and detailed, he does not take advantage of the stories of the decoy men, making his work more clinical.

Other more recent histories of the decoys are chapters in larger works, such as Peter Forbes' *Dazzled and Deceived: Mimicry and Camouflage*, (2009) and *Deception in War* (2003) by Jon Latimer. Those two are key to this paper, because they focus on non-lethal techniques that relied on the arts and sciences. Peter Forbes works mainly in biology and chemistry, but much of his scholarship focus on the intersection of art and the sciences. While my paper is largely about the arts and sciences I plan to also include the human element of Turner's decoys. Forbes' gives the decoys their own chapter while also weaving them into his larger discussion of naturally occurring camouflage in nature, as well as how biological camouflage and deception inspired

⁴ A. J. Schofield, *Modern Military Matters: Studying and Managing the Twentieth-century Defence Heritage in Britain: A Discussion Document* (York: Council for British Archaeology, 2004), p. ix, accessed September 25, 2015, http://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-284-1/dissemination/pdf/cba_op_024.pdf.

tactics used in warfare. He discusses the link between the Air Ministry and major film studios, “the masters of illusion” in creating the decoys.⁵ Latimer was a historian based in Wales who focused on military history and strategy. His book’s emphasis is on the technology and trickery of the decoys. The language in his book encourages readers to enjoy the wild story of fake cities being built in the middle of nowhere to fool the enemy. Many nations involved in the war used decoys, most notably Germany and the United States (see Appendix 1, Timeline). This paper focuses on the decoys used to protect the British Home Front because they receive less attention even though there are a wealth of relatively unexamined personal stories and government documents.

A similar example is *Wings Across the Border: A History of Aviation in North Wales and the Northern Marches* (2005) by Derrick Pratt and Mike Grant. This is a series covering all aviation history in North Wales and the Northern Marches.⁶ Volume three specifically covers aviation during World War II. The decoys have a sizable section in this volume because Pratt and Grant consider them an important part of Royal Air Force (RAF) history. The authors hold that the decoys had impressive success in drawing bombs away from cities.⁷ Pratt and Grant take note of the difficulty in documenting the decoys today: “the location of decoys was shrouded in such secrecy and subject to a smoke-screen of disinformation so dense that, half a century later, it is virtually impossible to discover anything concrete about them.”⁸

The British government gradually released information on the decoys mostly around 1971 and 1974, which was just after a large surge of research into World War II. Because the decoys missed that surge, there are no articles on the decoys published in scholarly journals.

⁵ Peter Forbes, *Dazzled and Deceived: Mimicry and Camouflage* (New Haven: Yale University Press, 2009), p. 143.

⁶ The Northern Marches are the counties bordering England and Wales; the name is from the medieval period.

⁷ Derrick Pratt and Mike Grant, *Wings Across the Border: A History of Aviation in North Wales and the Northern Marches*, vol. 3, *Wings Across the Border* (Wrexham: Bridge Books, 2005), p. 20.

⁸ Pratt and Grant, *Wings Across the Border*, p. 105.

However, there are many about the Battle of Britain, which was the German campaign to bomb England. This campaign is frequently called “The Blitz” for the blitzkrieg style of warfare invented during World War II. One article referenced in this paper is Geoffrey Field’s “Nights Underground in Darkest London: The Blitz, 1940-1941,” published in *International Labor and Working-Class History* (2002). Field's journal article focuses on the working class and their reactions to the Blitz. This article tells the story of fearful civilians while also detailing the steps taken to protect them. An important part of the article is Field’s coverage of the mental state of Londoners during the Blitz. He discussed numerous signs of stress, such as “anxiety attacks, extreme fatigue, eating disorders, apathy .. ulcers, coronary symptoms.”⁹ The panic and helplessness was something most people in England or the United States today are not familiar with. The Blitz was a terrifying time where people in cities heard bombs exploding above them almost every night for two years. This article does not discuss the decoys, but it provides a powerful background on how dangerous the bombing was, as well as the lengths Great Britain would go to to protect its people.

The most valuable historian to this paper is Huby Fairhead. His first book on the decoys is *Decoy Sites: Wartime Deception in Norfolk and Suffolk*, (1996). This self-published book uses some archival work, but mostly it was written based on the stories he collected from veterans of the decoy sites. Before the decoy men passed away, he hosted annual reunions for them at the Aviation Museum of Norfolk and Suffolk. In this book Fairhead includes helpful diagrams and detailed accounts for each nearby site. His second book is purely a collection of memoirs and interviews from the surviving decoy men. That book is *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain* (1997). He has also written

⁹ Geoffrey Field, "Nights Underground in Darkest London: The Blitz, 1940-1941," *International Labor and Working-Class History* 62 (Fall 2002): p. 15, <http://0-www.jstor.org.wncln.wncln.org/stable/27672803>.

two articles on the decoys, one in *FlyPast Magazine* (1999), and one in *Aeroplane* (1996).

Fairhead is the creator of an exhibit on the decoys in the formerly mentioned Aviation Museum of Norfolk and Suffolk.

There exist some documentaries of the decoys, including one made by the BBC: *Strategic Starfish Site -- Whixall Moss*, (2013). It is only a brief two-minute production, but it includes an overview of the decoy's purpose and background, then discusses how it has been preserved as a tourist site today.¹⁰ Preservationists recreated the fire baskets (see Appendix 4) used in the war and now occasionally light the baskets to remember how the decoy protected the city. This illustrates not only the technical aspect of the Starfish Site, but also the modern-day preservation movement.

There are two main sides to research into the decoys. There are the nationwide, state-sponsored works, which are often done as part of the preservation movement. Dobinson's comprehensive book is an example of this. The other side of the research includes the amateurish and local attempts to discover the purpose and effectiveness of the decoys that are nearby. Fairhead's collections of memoirs are closer to this side, because he engaged with local history and people. There are many blogs and internet resources dedicated to telling the story of a nearby site and to present images of what the site looks like today.¹¹ While these sources are not scholarly, they illustrate the curiosity many people felt when coming across the remains of the sites. The fascination still held for the decoys shows the reverence citizens have for the sites that protected their families. This paper attempts to be a synthesis of both halves by drawing on both the scholarly, nationally sponsored side, and the side of local memory and history. Because the

¹⁰ *Strategic Starfish Site -- Whixall Moss*, prod. BBC, Youtube.com, September 3, 2013, <https://www.youtube.com/watch?v=n6HUtb5cIUc&index=8&list=WL>.

¹¹ "World War II Bombing Decoy on Fobbing Marshes," Unlocking Essex's Past, accessed February 9, 2016, http://unlockingessex.essexcc.gov.uk/uep/custom_pages/monument_detail.asp?content_page_id=89&monument_id=31870&content_parents=48%2C79.

human side of the decoys was kept secret for so long, the decoy men's involvement in the war is not well known. Thanks in a large part to Huby Fairhead, many of the men's stories are preserved. This paper hopes to tell some of those stories while also first providing the larger context of innovation and administrative processes behind the decoys.

An example from the local side of the research is a site called LancashireAtWar.co.uk and is run by "The Brothers B." These two brothers set up a comprehensive and thorough site with pictures and information on military remains around the area of Lancashire. They constantly update their site with new material, and they work with local museums to bring authenticity and exciting news to their readers. Lancashire At War features several of Turner's decoys. The Brothers B feel that preservation efforts, specifically listing the sites as official monuments, are "very welcome,"¹² and hope to raise awareness of all military remains in the area.

The affection British citizens feel for the decoys is not mirrored in the scholarship, where there is an unfortunate gap due the previous secrecy. Almost no scholarly authors have tried to show the human element of the decoys, preferring to focus more on either the strategy or government deliberations. The technical side is critical to understanding the department's story, but that the story is not complete without the words of the decoy men. There have been a few attempts to document the memories of decoy men. One is a short pair of memoirs from two decoy men - Geoff Hall and Doug Feary (1996). The second attempt was for a short documentary (2015) by a film company with the help of a local elementary school and supported by the Heritage Lottery Fund.¹³ The website for the Blackdown dummy features four interviews from people who worked on or observed the site. Finally, Huby Fairhead compiled the largest number of personal accounts, with close to one hundred individual stories. It is disappointing that

¹² The Brothers B, "Decoy Sites," Lancashire At War.co.uk, accessed October 13, 2015, <http://www.lancashireatwar.co.uk/decoy-sites/4575224154>.

¹³ The Heritage Lottery fund allocates the national lottery income to projects meant to preserve the nation's history.

the larger works on the decoys, in particular Dobinson's thorough history, did not make use of this large human element. It is those stories that make the decoys an extraordinary part of World War II history. This paper is meant to be an examination of non-lethal dummy tactics and large-scale deception operations; an examination that pulls from multiple aspects of the decoys. Turner's Department required all of its functioning pieces, which included the technical aspects, the government support, and the decoy men. This paper draws on both scholarly and local sources in order to show how the decoys managed to divert bombs from claiming lives and billions of pounds of damage.

The Battle of Britain was a frightening time for the United Kingdom. In the early years, 1939-41, this fear combined with a sense of helplessness because the German planes were unstoppable. In 1939, the German Air Force (the Luftwaffe) was a powerful force. Germany had not stalled to increase its air power like many other countries, and instead put resources into making it the most current and devastating force. The United Kingdom recognized this, and knew it would take time to build up an air force as big and to train enough pilots.¹⁴ In the meantime, the RAF hoped that decoys and blackout measures could protect the vital targets. Commonly associated with the Blitz is the Blackout. The Blackout refers to a time of strict precautions against air raids by the Luftwaffe. Families in brightly lit cities would try to cover the lights of their homes at night with heavy, dark curtains, or cardboard and paint. To hide outdoor lights, such as street lamps and traffic signals, citizens turned them off, dimmed them, or shielded lights with hoods so that they deflected downward. The British government imposed blackout measures on cities every night, even in the absence of clear threat, until 1944. 1939 was also the time that young children loaded onto trains and shipped out to the countryside, where Germans were less likely to bomb because of the lack of cities or industrial developments. The

¹⁴ Field, "Nights Underground in Darkest London," p. 12.

mentality was that no matter what defensive measures were in place, “the bomber will always get through.”¹⁵ The British government did not have any illusions about preventing the Luftwaffe from bombing, so instead they needed to figure out how to protect themselves from the bombs that would fall.

Before any bombs fell on the United Kingdom, there were already discussions about creating decoys to divert the eventual bombs. The Royal Air Force (RAF) asked twice-retired Colonel John Turner to lead this program. With years of experience with the RAF and engineering, Turner’s qualifications were “impeccable,” and his “knowledge of airfield planning was unrivaled.”¹⁶ The program to create decoys was eventually referred to simply as “Colonel Turner’s Department.” This was mostly to provide a vague title, but it also hints at the department’s detachment from other RAF operations. To begin making the decoy airfields, Turner needed to create hundreds of convincing dummy airplanes quickly, but also with a budget in mind. Turner had different manufacturers submit examples of dummies in order to decide which was most convincing from the air, and also was able to be manufactured quickly and cheaply. Engineering companies, aircraft manufacturers, and film companies (including Warner Brothers) tried to gain contracts.¹⁷ It was Sound City Films, with its creator Norman Loudon who proved to have the most convincing decoy for the cost it came with. Sound City Films was located in Surrey, England, at Shepperton Studios, the latter name is the one most used when referring to decoy production and camouflage training in primary sources from the decoy men. Shepperton Studios eventually became Turner’s headquarters, and the main training ground where all the

¹⁵ Stanley Baldwin, United Kingdom, House of Commons, “The Bomber Will Always Get Through” (London, November 10, 1932), accessed October 14, 2015, http://www.emersonkent.com/speeches/the_bomber_will_always_get_through.htm.

¹⁶ Dobinson, *Fields of Deception*, 19.

¹⁷ Dobinson, *Fields of Deception*, 24.

future decoy men went to learn about camouflage, deception, and electrical wiring. This was certainly an untraditional sort of headquarters for an untraditional department.

British weather is typically rainy, foggy, and grey. This made film studios and indoor sets essential to the production of films. Loudon founded Sound City Film Producing and Recording Studios in 1932. This was a clever time to take such a risk, because the British government had just created the Cinematograph Films Act of 1927, which required film exhibitors to show a certain amount of British-made films.¹⁸ This was designed to save British film companies from collapse due to Hollywood's output. This led to the infamous "Quota Quickies," cheap, quickly made films designed to meet the required need. As infamous as these quickies were, Sound City took advantage of the quota and turned films out as fast as possible. Sound City engineers and designers had to be skilled at creating and dismantling sets quickly. This was a main reason for Turner's choice of headquarters. "What lay behind this improbable convergence between a Royal Engineer colonel and a film studio was Turner's immediate admiration for Sound City's technicians, ... and for their general manager, Norman Loudon."¹⁹ The technical side of the decoy operation is the first example of evidence discussed in this paper. As mentioned previously, the German Luftwaffe was an unrivaled, unstoppable force. The advanced technology required similar innovation on the British side. This is present in Turner and Loudon's decoy sites.

Not all military advancements were hugely destructive; Colonel Turner's Department is a key example of how art and camouflage saved civilian lives. Evidence of this is found in primary sources from that period, ranging from journals and memoirs from the men involved, correspondence between Colonel Turner and other generals, to pictures showing the elaborate

¹⁸ Cinematograph Films Act, 1927, 17 Geo. 5, c. 29.

¹⁹ Dobinson, *Fields of Deception*, 25.

“sets” made by Sound City Film Studios. In all the experiments and trials for the decoys, there was the ever-present reality that this had not been attempted on such a large scale. Engineers constantly thought of new ways to create more convincing and attractive targets for Germans to bomb. The early types of decoys Turner used were in fact proposed in World War I, but that discussion was shut down with little consideration.²⁰ This refusal was possibly a symptom of the unfortunate way militaries clung to the practice of trench warfare in the first World War I. Perhaps the immediate decision to begin work on decoy sites in 1939, the very beginning of World War II for Britain, was a reaction to the extreme loss of life caused by a stubborn reliance on trench warfare in the previous war. World War II departed from the rigid tactics of World War I by frequently combining the arts and sciences to develop creative tactics that, hopefully, the enemy could not see through. Turner’s decoys are the perfect example of interdisciplinary warfare; art and science combining to make something new. To save itself from the Luftwaffe, “Britain was forced to adopt any scheme that might give her even the slightest advantage.”²¹ Fortunately, the unconventional idea of decoy cities was a sound one.

Turner’s Department used four types of decoy sites, all with different targets they had to protect. In order of their invention, the first sites were called “K,” then “Q,” “QL,” and then “Starfish.” At the start of the Blitz, it was clear that the Luftwaffe’s targets were military bases, specifically airfields. At this point in 1939 the Germans had not begun bombing civilian targets.²² Discussions of K and Q sites began at least sixteen months before any hostilities from Germany reached Britain. Four days after Britain officially entered the war, the Air Ministry gave the signal to activate the decoys arrangements on September 8, 1939.²³ K sites were

²⁰ Dobinson, *Fields of Deception*, 1.

²¹ Jon Latimer, *Deception in War* (New York, NY: Overlook Press, 2003), p. 185.

²² Pratt and Grant, *Wings Across the Border*, p. 105.

²³ Dobinson, *Fields of Deception*, p. 16.

daytime decoys made to look like airfields. The dummy airfields came with wrecked planes, “(derelict) cars, dummy roads, real smoke from dummy chimneys, and all the other necessary trimmings, including dummy aircraft [built by Sound City Studios].”²⁴ Decoy men moved the dummies around throughout the day, and drove trucks to and from the site so it appeared to be active. It did not take long for Turner to realize the need for another type of decoy when the frequency of daytime bombing raids decreased, in favor of night raids. Q sites, like K sites, also protected airfields, but they were nighttime decoys that used diversified types of lighting to mimic a real airfield at night. These night decoys also capitalized on the ongoing Blackout; while the real site was dimmed and hidden, the decoy lit up as a tempting target. As one decoy man wrote, “Upon receiving a warning, one of us would rouse the others including the gun crews, while the other would start up the engine which powered a generator ... [a searchlight on top of the shelter] had to be moved about by means of a long handle to make it look as if a plane was coming in to land.”²⁵ At the end of the war, the US Department of Defense reported that K and Q sites drew at least 440 raids, compared to 430 raids on real targets; “more than half of the Luftwaffe’s exertions were aimed at the products of Turner’s imagination.”²⁶ Many of the Q sites were so convincing that there are multiple accounts of both German and British planes mistaking them for airfields and then crash landing onto the site. Ken Wallis was a wing commander in World War II, and he wrote about his dangerous crash landing onto a Q site, while praising the decoy:

The ingenuity of those who designed the decoys making best use of such materials as were available in a time of total war, and the bravery of the small numbers who operated them were well repaid. I can certainly vouch for the effectiveness of a “Q” Site, with its flarepath (sic) seemingly welcoming my tired

²⁴ “Red Herrings for Luftwaffe,” *Flight*, November 29, 1945, accessed September 29, 2015, <https://www.flightglobal.com/FlightPDFArchive/1945/1945%20-%202328.PDF>.

²⁵ Geoff Hall and Doug Feary, *The Dummy Airfield “K” Site* (Spilsby, 1996), p. 5.

²⁶ Latimer, *Deception in War*, p. 185.

and battered “Wellington” bomber, on return from a bombing sortie to a blacked-out East Anglia. We recognized it as a decoy site only at the last moment, as we were crossing the threshold of a flarepath. Our downward identification light signals eventually got the lights of a real airfield to appear from the black-out!²⁷

The other two types of decoy sites were both made for civilian protection. QL sites, like Q sites, were for nighttime attacks; however, they protected bright cities and factories. As the war went on, the Luftwaffe continued to bomb military targets while also switching to aim for civilian areas. QL sites used several methods of lighting in order to simulate a factory or a poorly blacked out city. This included lights that looked like a cracked door, curtains not all the way closed, street lamps and railway lights. Some lights were specialized based on the site they protected. Trebor Pughe recalled they had lights that simulated “welding, riveting and furnace glow as we were in a ship building area.”²⁸ QL sites became a main part of the decoy program in 1941.

Finally, the fourth site was codenamed Starfish. The name “Starfish” came from its initials, SF, which stood for “special fires.” The need for Starfish sites arose from German use of a new type of bomb: the incendiary bomb. This bomb exploded on impact to create massive fires. The purpose of the fires was destruction, but also to mark the site so that the next waves of bombers would have no trouble locating the burning city. Colonel Turner called Starfish a “secondary decoy, i.e. it is not supposed to be lit until the parent target has been attacked, the idea being that the parent station should put out its fires as quick as possible, light the decoy and so transfer any future wave of attack.”²⁹ The innovation and destructiveness of the incendiary bomb resulted in equal innovation of Starfish decoys. To build a convincing mimic of a burning city the engineers needed the most technologically advanced decoys. This led to Starfish being

²⁷ Ken Wallis, interview by Huby Fairhead, *Decoy Sites*, 1996, Foreward.

²⁸ Trebor Pughe, interview by Huby Fairhead, *Colonel Turner's Department*, 1997, p. 9.

²⁹ Colonel Turner to the D.D.H.O., *Use of Decoy Fires to Protect Vital Targets in Enemy Night Raids*, AIR 8/317, October 1 to December 31, 1940. (United Kingdom).

the most challenging to invent and build out of all four decoy types.³⁰ But it quickly became the most in demand as they were built “as quickly as possible.”³¹ For six months, starting in December 1940, almost one Starfish site opened a day³² (see Appendix 5). Ken Baker recalled some techniques used on the six Starfish sites protecting Belfast and the nearby docks:

Each site covered about 50 acres and each consisted of six wooden huts about 20 by 30 feet in size ... [in] which were placed bales of waste cotton which had been soaked in oil; if used they would have been ignited by detonators to look like buildings bombed and on fire. In addition, there were large piles of peat which had cans of oil tucked into the sides ... These would have given off lots of smoke as well as flames.³³

In a 1998 speech about his time on a Starfish site, decoy man Trevor Denniff described the enormous illusions Sound City created on the sites. Decoy men controlled the ignition of electrically wired baskets of coal over lighter materials. First diesel was released over the baskets to set the vapors on fire, and then water flushed into the mixture create massive amounts of steam that imitated smoke. As Trevor Denniff added, “It was all very impressive but films lost some of their magic.”³⁴ *Flight* magazine in 1945 printed the sole newspaper article about the decoys that slipped out even during the department's complete classification. It reported that Starfish sites drew “no fewer than 100 attacks on big industrial and civil targets.”³⁵ The Air Historical Branch believes that estimate was conservative, but even 100 diverted raids meant huge numbers of people and equipment saved.

³⁰ Pratt and Grant, *Wings Across the Border*, p. 105.

³¹ "Red Herrings for Luftwaffe," 1945.

³² Dobinson, *Fields of Deception*, p. 89.

³³ Ken Baker, interview by Huby Fairhead, *Colonel Turner's Department*, 1997, p. 12-13.

³⁴ United Kingdom, BBC, WW2 People's War, BBC, by Trevor Denniff, December 2, 2003, accessed August 30, 2015, <http://www.bbc.co.uk/history/ww2peopleswar/stories/60/a2100060.shtml>.

³⁵ "Red Herrings for Luftwaffe," 1945.

The Sound City Engineers tended to be proud that their work that was able to confuse both friend and foe hundreds of times. Some of that pride can be seen in the transcription of a telephone call between a flight sergeant and his pilot officer during a major attack on a decoy:

Flt Sgt. (agitated): Sir! We're being attacked.
Pilot Officer: Splendid, Sergeant. Good show.
Flt Sgt.: They're smashing the place to bits.
Pilot Officer: Yes. Excellent. Carry on.
Flt Sgt.: But, Sir - we need fighter cover. They're wrecking my best decoys!³⁶

Unfortunately, not even Shepperton Studios were safe from the Blitz. One bombing attack on the studios in 1940 killed two boys, while a second in 1944 killed nine people. Durrell Way in Shepperton is named for May Durrell, a nurse who refused to take shelter and was killed when she instead went to help people during the attack.³⁷ These two attacks are a reminder that the threat of bombing was always present.

At the beginning of decoy planning, Turner assumed that the German pilots flew over with designated targets in mind. Therefore, it was logical to create at least one decoy for every single airfield. For example, if a bomber were searching for RAF Coningsby, the dummy airfield at Hagnaby would hopefully distract the pilot.³⁸ The seemingly indiscriminate pattern of German bombing suggested to Turner that the Luftwaffe was much less focused. It appeared that bombers dropped their payload over any area that had a large collection of lights, rather than looking for specific targets. Captured German pilots reported exactly that. In fact, they were encouraged to bomb anything that looked populated. Turner wrote in a letter "There appears to be considerable evidence that many of the enemy pilots appear to be lost and to be inclined to

³⁶ Derek Threadgall, *Shepperton Studios: An Independent View* (London: British Film Institute, 1994), p. 28. Conversation reprinted as it appears in Threadgall's work.

³⁷ Threadgall, *Shepperton Studios: An Independent View*, p. 26.

³⁸ Hall and Feary, *The Dummy Airfield "K" Site*, Introduction.

bomb anything they can see, especially lights.”³⁹ While this discounted some of the effort involved in the strategic placement of decoys, it meant that the decoys were even more effective as attractive targets. Trevor Denniff served on a Starfish site, but he reported these estimates from the Air Historical Branch: “let me just say that without those K site dummy airfields we might have lost the Battle of Britain, because they attracted half the attacks meant for the real operational airfields. Between 1940 and 1944 the night time Q site airfields were bombed as much as the real, operational airfields.”⁴⁰ These decoys played a pivotal role in the larger narrative of wartime Britain, specifically on the Home Front.

Even though they are not as well known as the M1918 Browning Automatic Rifle or the Panzer IV tank, the decoys are a critical piece in World War II technology as a whole. The effective use of technology and arts in the war provides evidence that the decoys were a key example of innovation in World War II. The second part of my argument is that these decoys’ importance to the war effort is proven by the urgency and commitment placed on Turner’s Department by the British government. The importance of the decoys to the British military is seen in the way they are discussed in correspondence and meetings, in the urgency behind the fast creation of hundreds of sites, the immense freedom afforded to Turner, and in the reliance and emphasis placed on decoys.

Before any attacks came from Germany, the Air Council was already considering options for constructing decoys. When it became clear that nothing could stop German planes, tricking the pilots with decoys was an immediate idea. Once approved, this idea needed the freedom to develop as quickly as possible and without hindrance. Correspondence concerning the decoy

³⁹ Air Ministry and Ministry of Defence, *CAMOUFLAGE (Code B, 18): Night Dummy Landing Grounds: Policy*, AIR 2/8022 (f 20a), John Turner, June 23, 1940. (United Kingdom). Quoted in Colin Dobinson, *Fields of Deception* (London: Methuen, 2000), 56.

⁴⁰ United Kingdom, BBC, WW2 People's War, BBC, by Trevor Denniff, December 2, 2003.

program in 1940s has a severe tone of urgency. Wing Commander J. H. Harris reported in a letter on December 4th, 1940, “We are now engaged in preparing the crashdec [original name for Starfish sites] fires as fast as possible ... Our work is made none the easier by the continual necessity of leaving it in order to write papers...”⁴¹ The Air Ministry staff had a habit of putting the needs of the decoys over the need to follow proper protocol and diplomacy in certain situations. “Our section must have had priority;” one decoy man wrote, “what we asked for we got.”⁴²

Prioritization of the department sometimes allowed Turner to bypass regular channels and avoid outside attempts to control the program. In October of 1940, Prime Minister Churchill requested an update on the decoys. The department assured him that they were “being given the highest possible priority.”⁴³ An example of prioritizing the decoys is in complaints by Turner and other staff about local busybodies getting flustered about the decoy sites. Almost always the landowners who hosted the decoys were generous and used discretion, but Turner’s Department did occasionally receive complaints about not being included in discussions of decoys from “busybodies.” The latter category was described as nosy, local bureaucrats “whose mission in life is to criticise all actions of the Government.”⁴⁴ Deputy Director of Plans in the Air Ministry, Arthur Harris responded to the demands for more conferences by saying,

[T]he whole essence of the decoy fire racket is operational secrecy, and the very suggestion that these matters should be bandied about and discussed by such bodies as local Agricultural Committees, fills one with horror. ... [future

⁴¹ Air Ministry and Ministry of Defence, *Use of Decoy Fires to Protect Vital Targets in Enemy Night Raids*, AIR 8/317, October 1 to December 31, 1940. (United Kingdom).

⁴² Hall and Feary, *The Dummy Airfield “K” Site*, p. 11.

⁴³ Letter to Churchill in response to his attached minutes, *Use of Decoy Fires to Protect Vital Targets in Enemy Night Raids*, AIR 8/317, November 5, 1940. (United Kingdom).

⁴⁴ Air Ministry and Ministry of Defence, CAMOUFLAGE (Code B, 18): *Camouflage and Deception Arrangements: Liaison with Other Departments*, AIR 2/4598, 1940-1941. (United Kingdom). Quoted in Colin Dobinson, *Fields of Deception* (London: Methuen, 2000), 94.

bureaucratic interference] will have to be dealt with in the same ‘high handed’ manner.⁴⁵

Reports during the height of the Blitz (1940-1941) confirm the effectiveness of the decoys. Decoy man Paddy Riley remembered that his site ‘claimed’ about 200 bombs⁴⁶ (these estimates were always deliberately conservative) during the entire Blitz. This included two land mines, and an unexploded 1,000 pound bomb that had to be dug up. Riley recalled that “[d]uring one period of thirteen weeks, the dummy lights were lit for a total of 285 hours, during which there were eleven attacks made on the decoy.”⁴⁷

Other issues arose when different branches of the military seized upon the idea of large-scale decoys and began building some themselves. It appears that bombing decoys were a natural first response to the Battle of Britain, even before Turner took over the decoy program.

Individual airfields started placing kerosene lamps in nearby fields, as did the navy for its ports. The main concern with these individual projects was their quality; Turner feared they would be a clear giveaway to the Germans that the British were dotting their landscape with dummies. In 1939, the Air Council appointed Turner as the sole mastermind for the entire decoy program. This was in order to cut down on unauthorized production, as well as to ensure uniform quality among the decoys. Turner was never given an official title for the sake of secrecy but with this newly invented position he earned the facetious title “Dictator of Dummies.”⁴⁸

The frequency of Luftwaffe bombings decreased from 1943 to 1944. Decoy sites that experienced a long period of inactivity became unoperational but remained powered in case they need to be manned again. These were mostly Q and K sites; Starfish sites remained largely

⁴⁵ Air Ministry and Ministry of Defence, *Heavy Bombers: Electrical Maintenance Difficulties*, AIR 19/489, 1940-1941. (United Kingdom). Quoted in Colin Dobinson, *Fields of Deception* (London: Methuen, 2000), 94.

⁴⁶ Paddy Riley, interview by Huby Fairhead, *Decoy Sites*, 1996, p. 13.

⁴⁷ Paddy Riley, interview by Huby Fairhead, *Decoy Sites*, 1996, p. 13.

⁴⁸ Dobinson, *Fields of Deception*, p. 62.

operational. This did not mean the decoy men or Sound City's work was over. The Air Ministry instead packed up many of the decoy planes, Sound City engineers, and decoy men to prepare for Operation Fortitude. This was part of the larger Operation Bodyguard. Fortitude was a collection of deceptive maneuvers designed to fool the Germans in thinking the eventual landing in France would take place anywhere besides Normandy (the true landing point). Some of the new mobile decoy sites were further along the coast to suggest a landing at the Pas de Calais, France. Yet, some sites were as high as Scotland, to suggest a landing in Norway.⁴⁹ Ken Baker's Starfish site in Belfast closed in 1942 and he moved to the decoy sites prepared for the D-Day landing. This unit was "fully trained on generators, batteries ... We used these with the Mobile QL lights; with these we were able to simulate rail marshaling yards, etc. at very short notice."⁵⁰ Decoy man Jack Hill used similar techniques along the English coasts and in later in France, as recalled by his wife, Jean Butler: lights set out "on open fields, could be made to look like an army convoy on the move ... There were also the AS/Q lights for after the invasion, when dummy flarepath (sic) lights were ... taken to Europe where they could be used as decoy sites."⁵¹ From these documents, it appears the decoys were an automatic reaction to the Battle of Britain. The British military's confidence in and fidelity to the decoys is a tribute to their ingenuity as well as the fact that they were effective. The Air Council provided Colonel Turner with the resources and power he needed to create decoys as quickly as possible. He also had the incredible magic tricks produced by Sound City engineers.

The last functioning part Turner needed was his decoy men. The decoy men make up the last section of this paper, but not because they are least important. They appear here because it did not do the men's stories justice to have them at the beginning before the context from the

⁴⁹ Forbes, *Dazzled and Deceived*, p. 177.

⁵⁰ Ken Baker, interview by Huby Fairhead, *Colonel Turner's Department*, 1997, p. 12.

⁵¹ Jean Butler, interview by Huby Fairhead, *Colonel Turner's Department*, 1997, p. 32.

other two sections. The decoy men were RAF soldiers who invited bombs to rain down on them while in camouflaged bunkers that probably would not survive a direct hit.⁵² Besides the tons of bombs falling, major dangers also included unexploded ordinances that went off when men were repairing the decoy. In some occasions the decoys were even fired upon by low-flying planes.⁵³ According to other soldiers not in the department, working on a decoy was not an enviable position. One decoy man recalled the story of an emergency landing by two RAF pilots despite the warnings that it was a decoy. The pilots survived the landing then came inside to bunker to wait with the decoy men:

Chatting whilst they were waiting for transport to arrive from RAF Waddington to collect them, they were perturbed to find they were in a Q site bunker where we were inviting the Luftwaffe to drop their bombs on us. Ironically, they said they wouldn't have our job for anything and their transport couldn't arrive quick enough for them.⁵⁴

These soldiers exhibited tremendous courage simply by occupying the bunkers while the Luftwaffe bombed. The men were dedicated to protecting the nearby vulnerable target. One decoy man remembered a night when “during an enemy attack on the Downside site, the control cables were hit and a very brave RAF man ran to the site to light the fires by hand. He later received a medal for his courage.”⁵⁵ Lieutenant Commander Alistair MacClean remembered when a German plane flew overhead and a soldier had to “run across the field with a green light in his right hand and a red light in his left to imitate an aircraft taxiing.”⁵⁶

Another difficult feature of the decoy men's lives was the intense secrecy surrounding the sites. “We were called the “Hush, Lush, Squad,”⁵⁷ wrote decoy man Geoff Hall. Even after

⁵² Huby Fairhead, *Decoy Sites: Wartime Deception in Norfolk and Suffolk* (H Fairhead, 1996), Foreward.

⁵³ Jim Cant, interview by Huby Fairhead, *Colonel Turner's Department*, 1997, p. 29.

⁵⁴ G. S. Sharp, interview by Huby Fairhead, *Colonel Turner's Department*, 1997, p. 16.

⁵⁵ Kenneth Comer, interview by Huby Fairhead, *Colonel Turner's Department*, 1997, p. 23.

⁵⁶ Alistair MacClean, interview by Huby Fairhead, *Decoy Sites*, 1996, p. 8.

⁵⁷ Hall and Feary, *The Dummy Airfield “K” Site*, p. 3.

information on Turner's Department was declassified, the decoy men were reluctant to talk about their work. Some interviewers report that after the war the men still held onto their oath. In a brief documentary by the BBC on the Whixall Moss Starfish site, the researcher says "when we were compiling a book about the mosses, the people connected with the Starfish site wouldn't speak about it, because they said they were sworn to secrecy."⁵⁸ Janet Zelnik used to visit her grandfather when he manned the decoy at Stags Holt. "Father had impressed on me the fact that I was to tell no one at all about where I had been or what Grandad did there, as it was paramount that the enemy didn't ever learn of its whereabouts or function ... I never did tell a soul, not even my mother."⁵⁹

Even with the strict need for secrecy, many of the locals in these rural areas had some idea of what the sites were for. Decoy men reported very positive and generous interactions with the locals. "Many of the locals opened their doors to any of us who cared to visit them," wrote Hall. "Mr. Maxwell, having served in W/W 1 (sic) knew what it was like to be away from home and their door was always open."⁶⁰ A touching part of this interaction with the community was the common occurrence of decoy men meeting their wives in the towns they protected. Mr. S. G. Coleman was one of these men. He recalled, "We were not [at the Derby decoy] long before I met Hilda, the girl I was to marry. After that, things turned out quite good for me. The crew got on with local people extremely well and we were treated like sons."⁶¹ Terry King tells the story of how she met her husband Robert King (a Starfish officer) at an RAF band. During a ladies'

⁵⁸ *Strategic Starfish Site -- Whixall Moss*, 2013.

⁵⁹ Janet Zelnick, interview by Huby Fairhead, *Colonel Turner's Department*, 1997, p. 27.

⁶⁰ Hall and Feary, *The Dummy Airfield "K" Site*, p. 5.

⁶¹ S. G. Coleman, interview by Huby Fairhead, *Decoy Sites*, 1996, p. 11.

privilege dance she asked him for a dance, “just to be friendly,” but then: “I had that dance, and then another, and then another, and then eventually when I was 21 ... we got married.”⁶²

Without the stories of these men the overall history of the decoys is not complete. Too many historians excluded this aspect in favor of the more administrative angle. Even when writing a complete history of Turner’s Department the personal side was left out. These decoy men attracted German bombs to fall on them, maintained innovative and technologically demanding projects, and kept secrets for decades. Perhaps British people’s respect for decoys today is due to the admiration they feel for the men who risked their lives to protect the civilians. Certainly researchers are interested in the technological and tactical features of the decoys, but locals also want to remember the decoy men who protected their families.

Colonel Turner’s decoys are the subjects of discussion today. Preservation movements on both local and national levels have presented lengthy documents arguing for monument status for many “military remains.”⁶³ Military remains are any remnants of war fortification or battlegrounds. Within the last ten years, there has been “an extraordinary intensification of academic and popular interest in the ruins of the recent past.”⁶⁴ Military remains of the decoys are also involved in this recent intensification of interest. Remains of Turner’s decoys include each site’s control bunker, Starfish fire baskets, and occasionally night shelters (see Appendix 2). All of these are in varying states, and some were recently fortified and recreated for the sake of memory and tourism. A 2004 report by the Council for British Archaeology praises the decoys:

The programme represented a large investment of time and resources ...
Furthermore, decoy sites are closely tied to the wartime fortunes of the targets

⁶² Terry King, "A Personal Story: Terry King," interview, *Discovering Black Down*, 2015, accessed September 14, 2015, <http://www.discoveringblackdown.org.uk/node/273>.

⁶³ Schofield, *Modern Military Matters*, p. 2.

⁶⁴ Caitlin Desilvey and Tim Edensor, "Reckoning with Ruins," *Progress in Human Geography* 37, no. 4 (August 2013): p. 465, accessed March 12, 2016, <http://0-search.proquest.com.wncln.wncln.org/docview/1399052140?accountid=8388>.

they served. The decoys were often successful, drawing many attacks otherwise destined for towns, cities and aerodromes.⁶⁵

The main concern of this report on the decoys was the need for speedy assignment of statutory protection “especially in the cases of the more vulnerable and rare monument classes (eg bombing decoys and D-Day sites).”⁶⁶ One of the best preserved sites is the bombing decoy on Fobbing Marshes in Essex. It was one of only 12 QF sites that functioned using oil. It is classified as a monument due its rarity because it “is very possible that the Fobbing site retains the last surviving night shelter of this decoy type.”⁶⁷ It generally appears that the two main factors when considering monument status are rarity and current physical state.

The Whixall Moss Starfish site was recently recreated as part of a new tourist trail. County Council member Jim Stabler placed new fire baskets in the spots he identified they were originally in by examining 1940s aerial photographs of the site taken by the Germans. According to BBC Midlands Today anchor, Bob Hockenhull, the locals are “glad the land is slowly revealing its war secrets to the public.”⁶⁸ Shepperton Studios are still relevant today, now under the larger name of Pinewood Studios. Hundreds of major films owe at least some of their sets to Shepperton. Notable films include the *Star Wars* trilogies, *Harry Potter*, and the *James Bond* films.

The full extent and importance of Colonel Turner’s Department can be glimpsed through the examination of its advanced technical aspects, its priority in the mechanisms of the wartime government, and in the individual experiences of brave decoy men. These three aspects prove that the decoys were one of the integral but overlooked innovations. World War II is famous for

⁶⁵ Schofield, *Modern Military Matters*, p. 22.

⁶⁶ Schofield, *Modern Military Matters*, p. 67.

⁶⁷ "World War II Bombing Decoy on Fobbing Marshes," *Unlocking Essex's Past*.

⁶⁸ *Strategic Starfish Site -- Whixall Moss*, 2013.

its aggressive and world-changing weapons, such as the incendiary bomb, Panzer tank, or Colt 1911. However, the defensive measures used to counter these innovations were often just as technically sophisticated.

World War II was the last conflict where the British had to fight to defend their home soil, their countrymen, and families. All wars since then were fought in distant countries where the threat against their home was less imminent. Colonel Turner's Department provides one example of World War II soldiers putting their lives on the line for a cause as near to them as a mile away. The objective of the decoys was to save lives, something they were effective at. Turner's Department provides a counter to the annihilative power of other advancements. It was not just the lethal technologies that saved the war for the Allies; non-lethal ones had a great impact as well. Now that information about these decoys and other tactics are open to the public, there may be a due shift in focus to the lesser known, and less harmful, strategies. Perhaps overtime more people will be able to recall the story of Turner's decoy men, and of the ingenious dummies that fooled the Luftwaffe.

Works Cited

Primary Sources

Newspaper Articles

"Red Herrings for Luftwaffe." *Flight*, November 29, 1945. Accessed September 29, 2015.
<https://www.flightglobal.com/FlightPDFArchive/1945/1945%20-%20202328.PDF>.

Even though the decoys were kept top secret for decades after the war, *Flight Magazine* published the only known article about the decoys in 1945. This was after the decoys were already mostly dismantled. This article reflects the appreciation of the decoys at the end of the war.

Government Documents

Air Ministry and Ministry of Defence. *CAMOUFLAGE (Code B, 18): Camouflage and Deception Arrangements: Liaison with Other Departments*, AIR 2/4598. 1940-1941. (United Kingdom). Quoted in Colin Dobinson, *Fields of Deception*. London: Methuen, 2000.

Held by the National Archives at Kew. Documents conferencing between other departments about camouflage and deception arrangements. Referenced in this paper are the first part of Arthur Harris' argument that the decoys be allowed to bypass regular governmental and bureaucratic channels. This was for the sake of the lives the Starfish would save.

Air Ministry and Ministry of Defence. *CAMOUFLAGE (Code B, 18): Night Dummy Landing Grounds: Policy*, AIR 2/8022 (f 20a). John Turner. June 23, 1940. (United Kingdom). Quoted in Colin Dobinson, *Fields of Deception*. London: Methuen, 2000.

Held by the National Archives at Kew. Letter by Colonel Turner expressing disappointment because of new intelligence that showed the Luftwaffe pilots bombed anything lit. The pilots were not looking for specific targets, as originally believed.

Air Ministry and Ministry of Defence. *Heavy Bombers: Electrical Maintenance Difficulties*, AIR 19/489. 1940-1941. (United Kingdom). Quoted in Colin Dobinson, *Fields of Deception*. London: Methuen, 2000.

Held by the National Archives at Kew. Documents conferencing between other departments about camouflage and deception arrangements. The second part of Arthur Harris' argument that work on the decoys be free from governmental and bureaucratic interferences.

Air Ministry and Ministry of Defence. *Use of Decoy Fires to Protect Vital Targets in Enemy Night Raids*, by the Department of the Chief of Air Staff. AIR 8/317. October 1 to December 31, 1940. (United Kingdom).

Held by the National Archives at Kew. This set of documents includes a letter referenced in this paper, one from Wing Commander Harris. Harris discusses the urgency behind building Starfish sites and complains about impediments to his progress. This document is in the author's possession and the quotes are verified.

Baldwin, Stanley. United Kingdom. House of Commons. "The Bomber Will Always Get Through." London, November 10, 1932. Accessed October 14, 2015.
http://www.emersonkent.com/speeches/the_bomber_will_always_get_through.htm.

Stanley Baldwin (former Prime Minister) delivered his famous speech in order to push the reluctant government to rearmament in the face of Hitler gaining power. I like the idea of using this to make the argument for the decoy's necessity. I even thought this could make a good title. However, apparently other people writing on the decoys have had the same ideas and so far I have seen three informal works using this speech to open their report.

Oral Histories and Memoirs

Baker, Ken. Interview by Huby Fairhead. Printed in *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain*. Huby Fairhead, 1997.

Ken Baker served on a Starfish that protected Belfast, Ireland. He describes his initial training at Shepperton Studios and then his time on the site. He goes into elaborate detail about the mechanisms of the decoy.

Butler, Jean. Interview by Huby Fairhead. Printed in *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain*. Huby Fairhead, 1997.

Jean Butler discusses her husband's role as a decoy man. This interview is particularly rare because she talks about how her husband became part of a mobile decoy after his original one closed. This provides a piece of the more mysterious involvement of the decoys in Operation Bodyguard.

Cant, Jim. Interview by Huby Fairhead. Printed in *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain*. Huby Fairhead, 1997.

Jim Cant was a decoy man on two Q sites protecting St Eval. In his interview, he recalls some of the dangers the decoy men faced. Though they had a bunker, the decoy men were often running around the site during raids. According to Cant, they were very exposed and vulnerable.

Coleman, S.G. Interview by Huby Fairhead. Printed in *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain*. Huby Fairhead, 1997.

S.G. Coleman manned the decoy site at Derby. He discusses the electrical wiring of the decoy as well as the technical experience needed for its maintenance. He talks about daily

life on the decoy and interactions with locals. He includes the story of how he fell in love with his wife, Hilda, a local.

Comer, Kenneth. Interview by Huby Fairhead. Printed in *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain*. Huby Fairhead, 1997.

Kenneth Comer made the fire baskets for Starfish sites as an employee of a firm in Bristol. He explains the technical aspects of Starfish. Comer also tells the story of a man who ran out to light the fires by hand after the fuel pipes were hit.

Fairhead, Huby. *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain*. Huby Fairhead, 1997.

Huby Fairhead researches aviation and war history around Norfolk and Suffolk. He has written two books on the decoys and created a decoy exhibit at the Norfolk and Suffolk Aviation Museum. This book is solely a collection of memoirs and interviews Fairhead collected after arranging annual reunions for the RAF men who worked on the decoys. I am corresponding with Fairhead now, and he was kind enough to mail me a copy of this rare book.

Fairhead, Huby. *Decoy Sites: Wartime Deception in Norfolk and Suffolk*. Huby Fairhead, 1996.

This is Huby Fairhead's first book on the decoys. It is almost purely a collection of memoirs, with minor insertions of context by Fairhead for the reader's benefit. He includes helpful diagrams and detailed accounts for each nearby site. Fairhead was kind enough to also send me this book after already sending me his second.

Hall, Geoff, and Doug Feary. *The Dummy Airfield "K" Site*. Spilsby, 1996.

This book contains two very short memoirs written by Hall and Feary. At a reunion of RAF men they were disappointed that no one remembered, or even knew about about the K decoy site in Hagnaby. These "reminiscences" are to preserve the legacy of the men's work at the K site.

King, Terry. "A Personal Story: Terry King." Interview. *Discovering Black Down*. 2015. Accessed September 14, 2015. <http://www.discoveringblackdown.org.uk/node/273>.

Terry King tells the story of meeting her husband, Robert King, who was an "RAF Boy," and with Starfish. He did not pass the pilot eye test so was eventually assigned to work in Chedder on the decoys. He barely talked about Starfish with his wife because he took the secrecy very seriously. She also tells the funny story of a German pilot who crashed down into the Mendips (Norman Tricks also tells this story) and that her mother did not let the pilot go anywhere till he had a cup of tea because "he's somebody's son." Toward the end she even talks about her gradual distrust of Churchill and his propaganda. "We never thought we'd be conquered."

MacClean, Alistair. Interview by Huby Fairhead. Printed in *Decoy Sites: Wartime Deception in*

Norfolk and Suffolk. Huby Fairhead, 1996.

Lieutenant Commander MacClearn provides estimates on how many bombs fell on the North Tuddenham decoy airfield. He also tells the story of how during a bombing a poor decoy man was made to run around the field imitating an aircraft.

Newbery, Frank. "A Personal Story: Frank Newbery." Interview. *Discovering Black Down*. 2015. Accessed September 14, 2015. <http://www.discoveringblackdown.org.uk/node/268>.

Frank Newbery was an electrical engineer apprentice on Starfish during WWII. He worked on numerous sites around Bristol and Exdor. He talks about the technical side of the Starfish fires. His details for how they made the fire boxes is very interesting. He also talks about how the British would intercept the German plans for bombing that night, and would then warn specific sites to be ready.

Pughe, Trebor. Interview by Huby Fairhead. Printed in *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain*. Huby Fairhead, 1997.

Trebor Pughe was a decoy man at the Starfish/QL site that protected South Shields. Almost all the interview is about the technical side of his decoy. Pughe details the lights they used for their specific site, which was meant to imitate shipbuilding.

Riley, Paddy. Interview by Huby Fairhead. Printed in *Decoy Sites: Wartime Deception in Norfolk and Suffolk*. Huby Fairhead, 1996.

Riley provides some estimates of the amount of bombs dropped on his site. This was the K site at South Pickenham. He also remembers how busy the site was during the height of the Blitz. This is a testimony to Turner's faith in the site.

Sharp, G. S. Interview by Huby Fairhead. Printed in *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain*. Huby Fairhead, 1997.

Sharp has a particularly long interview. He tells the story of two pilots who crash landed on his decoy site near Lincoln. The pilots were not happy to find out they were on a site designed to have bombs fall on them.

Tricks, Norman. "A Personal Story. Norman Tricks 1." Interview. *Discovering Black Down*. 2015. Accessed September 14, 2015. <http://www.discoveringblackdown.org.uk/node/267>.

This is an eight minute interview with Norman Tricks, who worked one the Starfish site at Blagdon. The interview begins with him recalling a near death experience from the first time he was bombed. He then talks about building the "tumps" on Blagdon, which were to stop pilots from landing and to look like avenues of houses. He believes they were successful because of the bomb craters that lasted until "not that long ago."

United Kingdom. BBC. *WW2 People's War*. BBC. By Trevor Denniff. December 2, 2003. Accessed August 30, 2015. <http://www.bbc.co.uk/history/ww2peopleswar/stories/60/a2100060.shtml>.

This is a transcript of a speech given in 1998 by Trevor Denniff. In the speech, he talks heroically about the RAF decoys, and about his work on Starfish site Farleigh Common. Good primary source observations and stories. He said that, "without those K site dummy airfields we might have lost the Battle of Britain, because they attracted half the attacks meant for the real operational airfields."

Wallis, Ken. Interview by Huby Fairhead. Printed in *Decoy Sites: Wartime Deception in Norfolk and Suffolk*. Huby Fairhead, 1996.

Wallis was a wing commander in World War II who crashed onto a convincing Q site. He wrote the introduction for Fairhead's first book. In it, he has high praise for the decoy men and Sound City engineers who built the sites.

Zelnick, Janet. Interview by Huby Fairhead. Printed in *Colonel Turner's Department: Memoirs of the Men That Operated the Secret Decoy Sites of Wartime Britain*. Huby Fairhead, 1997.

Janet Zelnick recalled her grandfather working on the decoy site at Stags Holt. This is sentimental interview. Zelnick remembers the intense secrecy involved with the decoys. She thinks the decoy men were all very brave and deserve to be remembered.

Photographs and Physical Documentation

The Brothers B. "Decoy Sites." Lancashire At War.co.uk. Accessed October 13, 2015.
<http://www.lancashireatwar.co.uk/decoy-sites/4575224154>.

Two brothers run this site as part of their research into local wartime history. This includes several surrounding several local decoy sites. The site has a large collection of photographs from the last few years and, while this site is not scholarly, it has photographs I plan to use to show the different states of the sites today. I have already talked to one of site creators about my project and he gave me permission to use his pictures.

Contemporary Preservation Discussion

"Mendip Hills AONB National Mapping Programme Project." Historic England. Accessed August 29, 2015.
<https://www.historicengland.org.uk/research/research-results/recent-research-results/south-west/mendip-hills-aonb-nmp/>.

This article contains two RAF photographs from the 1940s. It is also a geological survey that makes up a larger argument for the historic significance of Mendip Hills. This is a good example of the movement to preserve the decoys.

Schofield, A. J. *Modern Military Matters: Studying and Managing the Twentieth-century Defence Heritage in Britain: A Discussion Document*. York: Council for British Archaeology, 2004. Accessed September 25, 2015.
http://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-284-1/dissemination/pdf/cba_op_024.pdf.

Another work made possible by a grant from English Heritage. This book is an overview of "military remains" and monuments in the United Kingdom. Military remains are artifacts left over from any wars. This document is a primary source because it argues for the preservation of decoy sites. It provides an example of the contemporary discussion on the sites, which I plan to include toward the end of my paper.

Strategic Starfish Site -- Whixall Moss. Produced by BBC. Youtube.com. September 3, 2013.
<https://www.youtube.com/watch?v=n6HUtb5clUc&index=8&list=WL>.

A brief 2:00 minute production by the BBC on the Starfish Site at Whixall Moss. Includes an overview of the decoy's purpose and background, then discusses how it has been preserved as a tourist site today. The fire baskets used in the war were recreated and are now occasionally lit to remember how the decoy protected the city. This illustrates not only the technically aspect of the Starfish Site, but also the modern-day preservation movement.

"World War II Bombing Decoy on Fobbing Marshes." Unlocking Essex's Past. Accessed February 9, 2016.
http://unlockingessex.essexcc.gov.uk/uep/custom_pages/monument_detail.asp?content_page_id=89&monument_id=31870&content_parents=48%2C79.

This part of the site is dedicated to archeology around Seax. This was the site of a QL site. UnlockingEssex.gov is an example of the more local movement to protect and remember the sites. Also features many good photographs of the site in its current condition.

Secondary Sources

Desilvey, Caitlin, and Tim Edensor. "Reckoning with Ruins." *Progress in Human Geography* 37, no. 4 (August 2013): 465-85. Accessed March 12, 2016. <http://0-search.proquest.com.wncln.wncln.org/docview/1399052140?accountid=8388>.

This scholarly article covers the recent, and growing, interest in military remains. Most recently, the discussion surrounding the decoys is concerned with their preservation. The article does not mention the decoy sites, but it provides context for the larger preservation discussion that concerns them.

Dobinson, Colin. *Fields of Deception: Britain's Bombing Decoys of World War II*. London: Methuen, 2000.

This source is a fantastic work that tells the entire history of Colonel Turner's department. I am reading this work very carefully because Dobinson goes into detail. This book was commissioned by English Heritage, and was done using mostly archival work. All of the background information I have needed so far I could find in this book.

Dunt, Paul, prod. "Matter of Fact: The Decoy Men." Transcript. BBC TWO. February 28, 2002. http://www.bbc.co.uk/pressoffice/pressreleases/stories/2002/02_february/28/matteroffactdecoy.shtml.

This is one of the few broadcasts on the decoys. At one point I use it as a primary source to show how the general knowledge of the decoys is lacking. However, the people who do know about them feel positively toward the decoys.

Field, Geoffrey. "Nights Underground in Darkest London: The Blitz, 1940-1941." *International Labor and Working-Class History* 62 (Fall 2002): 11-49. <http://0-www.jstor.org.wncln.wncln.org/stable/27672803>.

Field's journal article focuses on the working class and their reactions to the London Blitz. The London Blitz was part of Hitler's bombing of Britain, it has a special name because London was intentionally hit much harder than other locations. The article is quite moving; it tells the story of fearful civilians while also detailing the steps taken to protect them. This article does not discuss the decoys, but it provides a powerful background on how dangerous the bombing was, as well as the steps Great Britain would go to to protect its people.

Forbes, Peter. *Dazzled and Deceived: Mimicry and Camouflage*. New Haven: Yale University Press, 2009.

Forbes' work discusses naturally occurring camouflage in nature, as well as how biological camouflage and deception inspired tactics used in warfare. This work offers an interesting perspective as well as background information. Instead of having one chapter on Colonel Turner's department, the decoys are part of the entire book.

Latimer, Jon. *Deception in War*. New York, NY: Overlook Press, 2003.

Latimer is a historian based in Wales who focuses on military history and strategy. This book is a collection of deception tactics used in wars. Turner's decoys have a section in this book and most valuable is the significance Latimer places on decoys, and how he places them in the history of World War II.

Pratt, Derrick, and Mike Grant. *Wings Across the Border: A History of Aviation in North Wales and the Northern Marches*. Vol. 3. *Wings Across the Border*. Wrexham: Bridge Books, 2005.

This series covers all aviation history in Northern Wales and the Northern Marches, volume three covers World War II. The decoys have a significant part in this volume because Pratt and Grant consider them an important part of RAF history. Especially useful in this book are the numerous diagrams, photographs, maps, and illustrations.

Threadgall, Derek. *Shepperton Studios: An Independent View*. London: British Film Institute, 1994.

The only known book written purely on Shepperton Studios (previously Sound City Film Studio). Threadgall does include a substantial section on Sound City during the war. The decoys are only briefly referred to in passing, the focus is on other wartime activities. Threadgall is the first I have seen to mention how Sound City itself was bombed during the blitz, resulting in nine deaths.

APPENDIX 1:

Chronology

1932	Stanley Baldwin delivers his “A Fear for the Future” speech to Parliament where he famously states “the bomber will always get through.” This becomes a sort of motto used by the Air Ministry and Air Council to warn about the Luftwaffe.
1935	Hitler violates the Treaty of Versailles by beginning to create an army so strong it is unrivaled in Europe. France and the United Kingdom continue policies of appeasement
1936	Hitler occupies the Rhineland, a territory originally created as a buffer between France and Germany.
1939 March	Hitler invades and takes over Czechoslovakia. Civilians in London begin to evacuate to the countryside.
1939 September	Hitler invades Poland. Appeasement ends and Britain, France, Australia and New Zealand declare war on Germany.
1940	Camouflage at this time is used constantly but ineffectively. Surfaces are covered in brown and gray squares, and shiny, poorly drawn trees are meant to disguise cooling towers and smoke stacks from above.
1940 June	The Germans invade and take control of France.
1940 July 10	Battle of Britain begins. Bombers target only large factories and airfields
1940 Aug 15	“The Greatest Day,” the first major battle in the Battle of Britain. A German loss, it is also referred to as “Black Thursday” in Germany.
1940 August	The Royal Engineers' Camouflage Development and Training Center in Surrey is established. Artists, magicians, and biologists work together to put an end to amateur camouflage.
1940 Aug 25	The first British raid on Germany. Germany begins to focus on civilian targets in Britain.
1940 Sept 7	The beginning of the “London Blitz,” a nine-month long campaign against the city. London is the hardest bombed city in all of England by the end of the war.
1941 Dec 7	Japanese planes bomb Pearl Harbor. The next day the United States enters the war.

- 1940 November The original journal entry for the now famous tale of a completely wooden German decoy. The decoy was immaculate, however, it took so long to build that RAF photographers captured images of it from every stage of its production. The day after construction stopped, a lone British plane flew over, circled once, and then dropped one wooden bomb.
- 1940 Oct - Hitler delays the attempted invasion of Britain and instead focuses on
1941 Dec fighting Russia. Daytime raids end completely, though night raids remain.
- 1940 - Colonel Turner removes decoy men from most K and Q decoys (daytime
1944 sites). QL and Starfish are mostly all operational until 1944. Mobile decoy sites are created to simulate the movement of troops in preparation for an invasion of Europe. These decoys help suggest the invasion will be happening at Pas de Calais, or Norway, or anywhere that is not the actual invasion site at Normandy.
- 1944 May The U.S. Army's "Ghost Army" assembles in Europe. They are a team of highly qualified artists, actors, and engineers who confuse German ground units using mainly inflatable tanks, large sound systems, and the spreading of false rumors.
- 1944 June 6 D-Day, Allied forces land on Normandy, France and take the beaches.
- 1944 July 24 The first concentration camp is liberated by Soviet Troops.
- 1944 Aug 25 Liberation of Paris by Allied troops.
- 1945 March 22 The Ghost Army's and final deception operation out of 22 major ones. With massive effort, the Ghost Army mixes with the 9th Army to cross the Rhine, destroying Germany's last hope for winning the war.
- 1945 April 30 Hitler dies by suicide.
- 1945 May 8 Victory in Europe (V-E) Day. One day after Germany's unconditional surrender.

APPENDIX 2:

Current photos of Worsthorne Decoy Site, Control Bunker. Used with permission of the Brothers

B. from their site Lancashire At War. <http://www.lancashireatwar.co.uk/decoy-site-worsethorne/4580679007>



APPENDIX 3:

Second World War bombing decoy and anti-glider obstructions on Black Down photographed by the RAF on 13-JAN-1946. The rows of mounds were designed to stop any German aircraft that tried to land. The QL site (night airfield decoy) is in the top left corner.



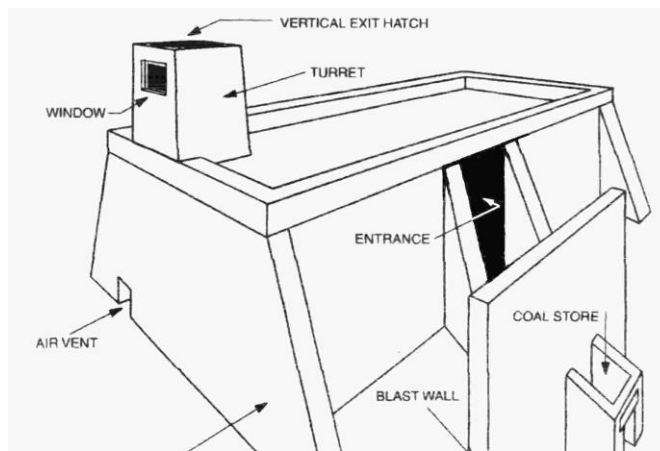
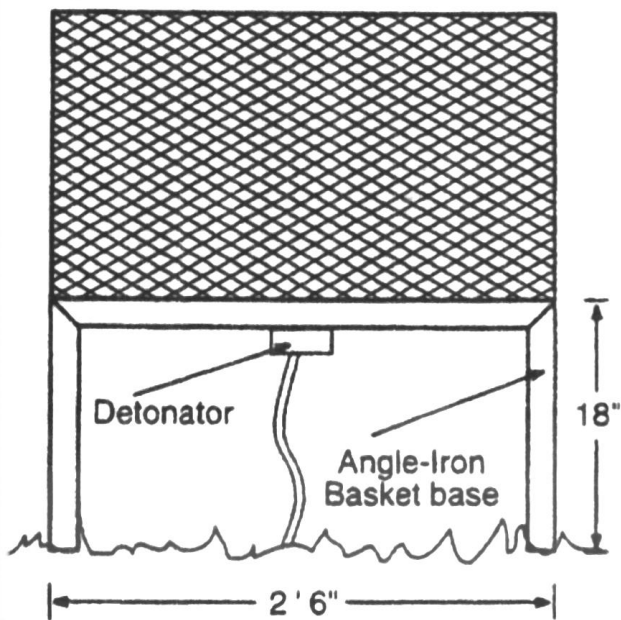
"Mendip Hills AONB National Mapping Programme Project." Historic England. Accessed August 29, <https://www.historicengland.org.uk/research/research-results/recent-research-results/south-west/mendip-hills-aonb-nmp/>.

APPENDIX 4:

Diagrams of decoy sites. Created by Huby Fairhead and the Norfolk and Suffolk Aviation Museum. <http://www.aviationmuseum.net/AirfieldDecoys.htm>.

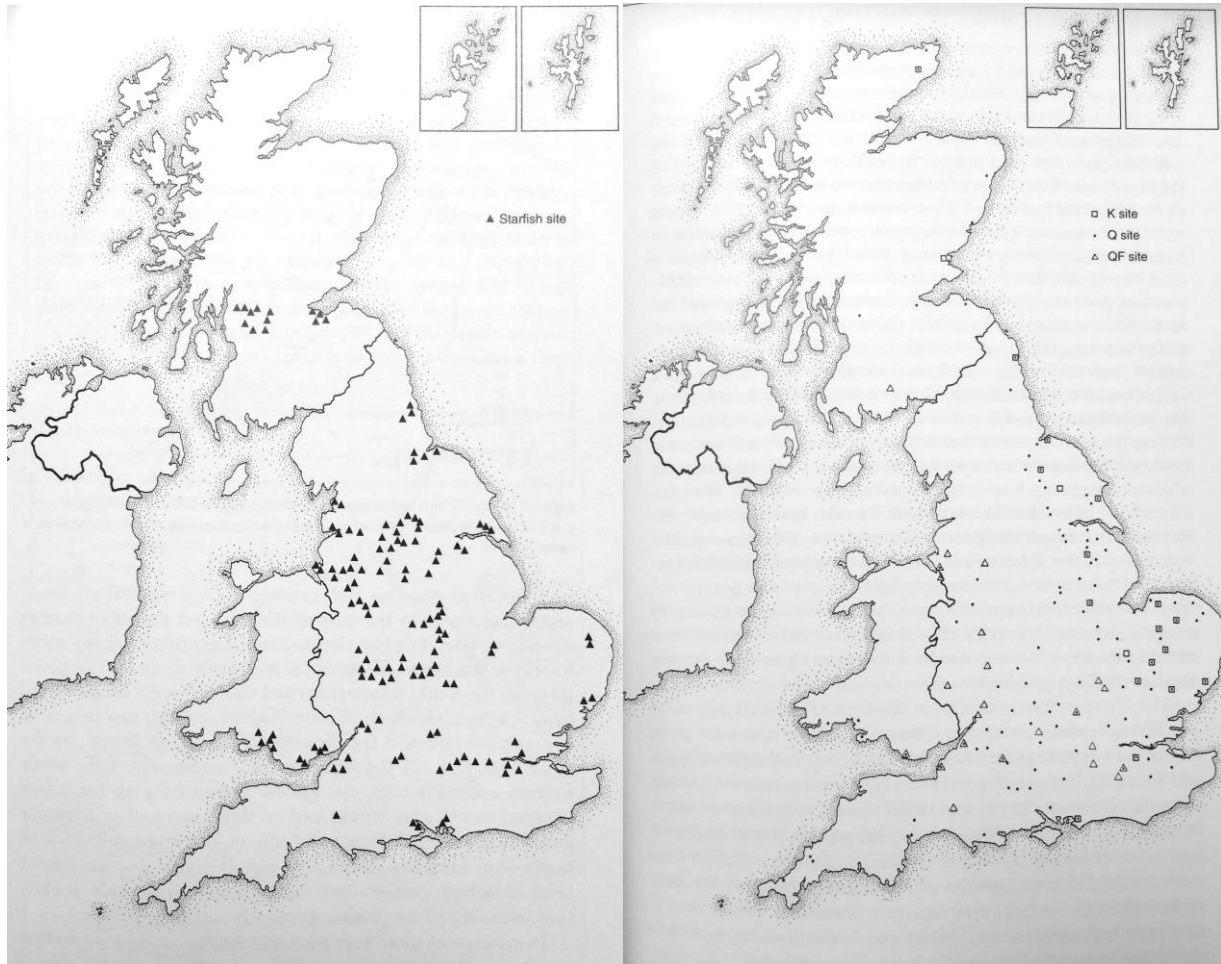
BRAMERTON 'FIRE BASKET'

Wire Basket filled with brushwood, or reeds, soaked in oil



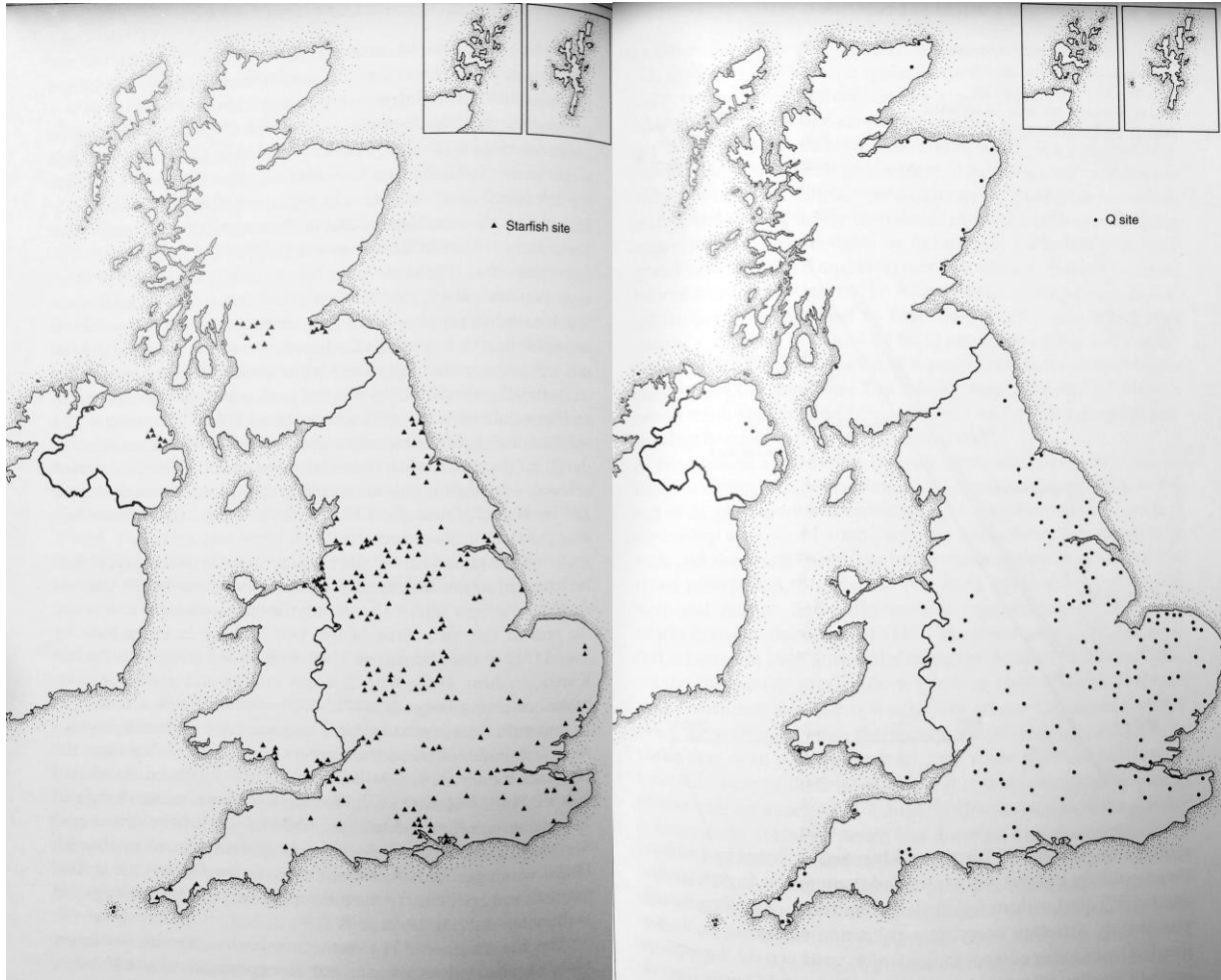
APPENDIX 5:

Maps showing locations of decoy sites. Reprinted according to English Heritage copyright. All images reprinted from Dobinson (2000).



Left: Distribution of civil and naval Starfish, June 1941.

Right: Distribution of airfield decoys, July 1941.



Left: Distribution of Starfish (all types), December 1942.

Right: Distribution of Q sites, autumn 1942.

APPENDIX 6:

Examples of dummy aircrafts. Reprinted according to English Heritage copyright. All images reprinted from Dobinson (2000).

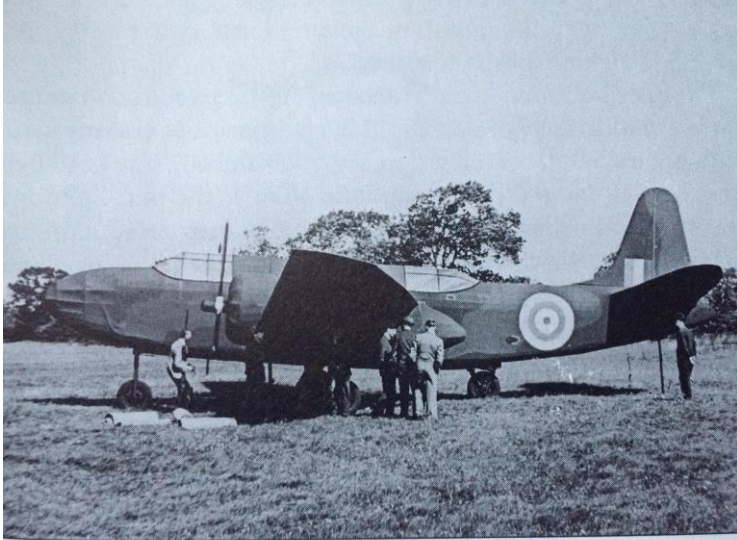


Plate 17 Dummy Boston aircraft of the type used in Operations *Tindall* and *Fortitude*

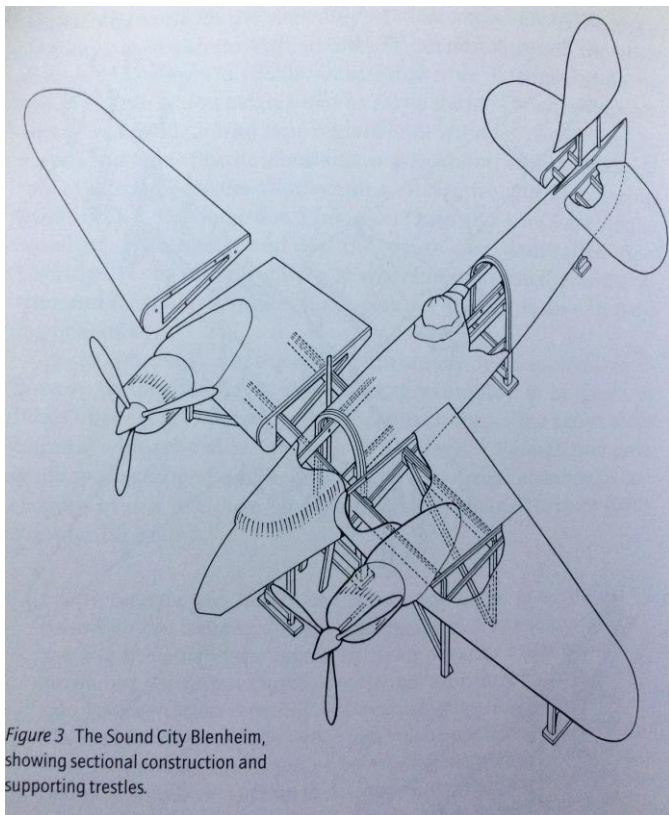
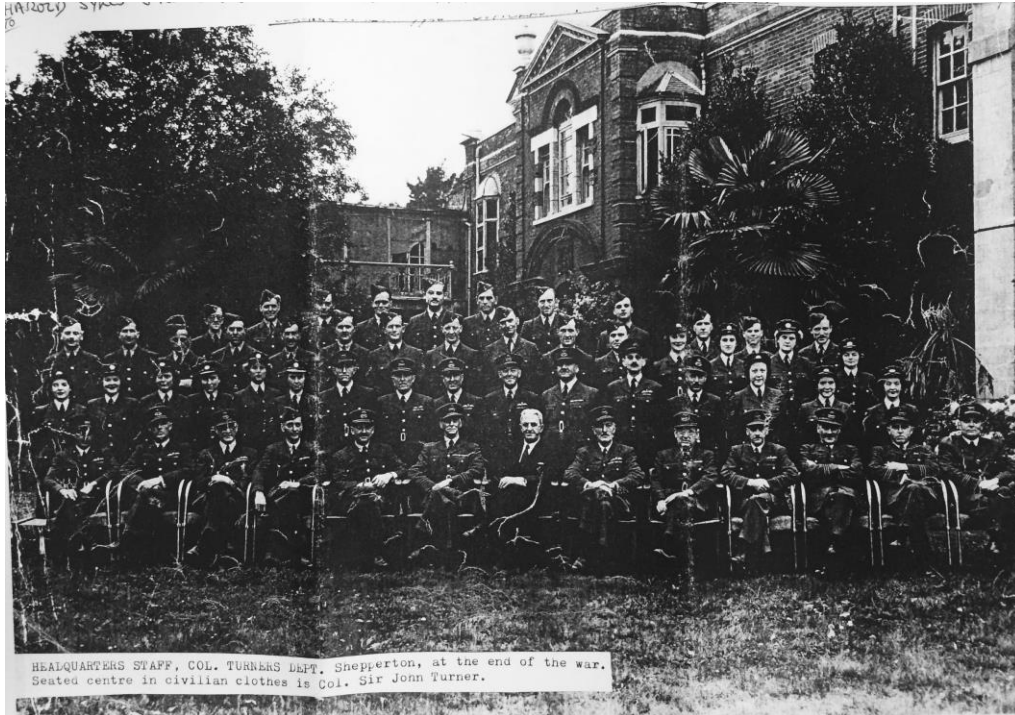


Figure 3 The Sound City Blenheim, showing sectional construction and supporting trestles.

APPENDIX 7:

Top image: The decoy men. Colonel Turner is in the middle in plain clothes. Used with permission from Hub Fairhead. Lower image: Colonel Turner. Reprinted according to English



Heritage copyright. All images reprinted from Dobinson (2000).



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COVER LETTER

I spent too much time just on minor tweaks. I doubt that even half of them will be noticed, but it was helpful for my sake to refine tons of sentences that were not quite right. Mostly I worked on making the sentences more concise, excising the passive voice, and bringing the important part of the sentence to the front.

I decreased my emphasis on the men at the beginning. That way the author will not be confused why they do not immediately follow the background. I provided justification for putting the men last (needing the most context) in both the beginning and in the transition to the decoy men section.

To be more clear, I went ahead and announced that it was a synthesis paper of the scholarly and human element. I tried to “nerd it up” (thanks Chris) by changing the language and including references to other famous World War II tech. I also included “interdisciplinary warfare” more and tried to explain what it meant in the beginning.

I added more images to the appendix. I also included more examples of decoys/deception in the timeline.