

Nissen Hut, Lympne, Newingreen, Hythe

Built Heritage Assessment Report

On behalf of **Otterpool Park LLP**

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Executive Summary

Stantec carried out a built heritage assessment on behalf of Otterpool Park LLP prior to the demolition of a Nissen Hut, to the south of Ashford Road, Lympne, Newingreen, Kent (NGR: TR 11870 36549). Nissen Huts were invented in 1916 by Major Peter Norman Nissen (1871–1930), and comprise prefabricated timber buildings, which later became steel, frames clad with corrugated steel or iron sheets. Many thousands of huts of this kind were produced and used extensively for both domestic and technical accommodation.

The building formed part of an ammunition depot linked to Lympne Airfield, which operated between 1916 and 1984. In WWII, the airfield served as a front-line fighter base and was part of most major military operations, as well as the defence of Britain in the air throughout the war. The ammunition depot is depicted on an aerial photograph from c.1940. It is quite small, arranged around an access road, and comprising (at least) four pairs of huts facing each other and spaced along the road equally. The depot is likely to have housed ammunition for the fighters, including small arms ammunition (SAA), and stores of pyro. The depot is an example of smaller, localised, ad hoc ammunition depots which were built above ground, often with fewer of the safety measures which earlier depots would have been provided with (e.g., bunds encircling the huts to minimise the spreading of an explosion). The arrangement of buildings is very common, and the depots were usually sited some distance from the airfield to minimise catastrophic damage should the depot be targeted. The huts were also similarly dispersed to minimise risk from explosion, which could sometimes occur through accidental detonation. The original layout of the ammunition depot has been largely lost, having been mostly removed by the 1960s. The Nissen Hut is therefore a suggested (possibly isolated) survival of the former complex.

The Nissen Hut is a single storey, one-celled structure, aligned east west and with the traditional semi-circular profile. The building appears to be built around a steel frame, clad internally and externally by corrugated asbestos sheeting, and is sat on a concrete pad on the north and south sides, which provides the foundation. The shell has been modified through the addition of circular holes incorporating upstanding aluminium box ventilators, which are modern. Both the eastern and western ends were originally enclosed by breeze block walls incorporating ceramic ventilation grilles, but only the western end now survives largely intact, with a large central doorway flanked by windows, all now only surviving as openings. No internal (wartime) features survive, and all the evidence indicates that the Nissen Hut was repurposed as a chicken shed, probably sometime in the 1950s. Later modifications at the eastern end included the removal of the east wall and the addition of concrete pads at this end, to allow the parking of a vehicle in the building. Previous assessments suggest the building is not in its original location, which is hard to refute. The building is extensively modified, in generally poor condition.

A full Historic England Level 1 survey of the Nissen Hut was carried out. The building is not likely to provide any additional information from further examination and is not thought worthy of retention. A complete archive of digital photographs from the survey will be deposited with the Archaeological Data Services (ADS). This report and the archive are considered a complete record of the Nissen Hut, and no further work is recommended prior to demolition of the building.

1 Introduction

- 1.1.1 This built heritage assessment has been carried out by Stantec prior to the demolition of a Nissen Hut, to the south of Ashford Road, Lympne, Newingreen, Kent (henceforth 'the Site') situated at NGR: TR 11870 36549 (Figure 1). The works were carried out on behalf of Otterpool Park LLP (OTP).
- 1.1.2 The Nissen Hut comprises a single building within a small complex of (potentially relocated) military huts and access tracks to the south of the Ashford Road, close to Red House Farm (NGR: TR 11944 36583), which have been identified as the potential location of a WWII ammunition depot (recorded as WS20, Arcadis 2019, Appendix 9.5, 21-25). The hut is not designated or otherwise protected. However, the heritage assessment was required to record the building prior to its demolition, as set out in the Otterpool Park Cultural Heritage Mitigation Strategy which was agreed as part of the outline approval for the Otterpool Park Garden Town development.



Plate 1: Nissen Hut facing south.

- 1.1.3 This report presents the results of the assessment of the Nissen Hut, which was carried out on the 27th of July 2023, in accordance with a Written Scheme of Investigation agreed with Kent County Council (Stantec 2023), and the relevant standards and guidance as published by Historic England (2016) and the Chartered Institute for Archaeologists (CIfA 2014). The building recording was limited to the Nissen Hut only at this stage, with other WWII structures requiring recording to be completed at a later date, but some general consideration of the wider area has been included for context.

2 Background

2.1 Location and Topography

- 2.1.1 The Site lies within the Stour River valley in the Folkestone and Hythe District (formerly Shepway District) Council of Kent and is approximately 2.4km to the west of Hythe, on the north-eastern edge of the Weald.
- 2.1.2 The Nissen Hut (Plate 1) is located within a gently undulating landscape to the south of Ashford Road, and 600m west of Newingreen, on the northern outskirts of Lympne. The land surrounding the hut comprises agricultural fields and undeveloped land. The hut lies at c.74m above Ordnance Datum (aOD).

2.2 Project Background

- 2.2.1 A resolution to grant outline planning application (Y19/0257/FH) was confirmed by Folkestone and Hythe District Council (the local planning authority or LPA) in April 2023 for the creation of

Otterpool Park, a new garden town in Kent, comprising an area of 589ha of land and including up to 8,500 residential dwellings and commercial, retail, education, health, community and leisure facilities, parking, landscaping, and public open space. The site is located to the south-west of Junction 11 of the M20 motorway and to the south of the CTRL / HS1, several miles from Folkestone (Figure 1).

- 2.2.2 The development requires demolition of several buildings across the site, though some will be retained and incorporated into the scheme or repurposed. The Nissen Hut has been agreed for demolition. There is currently no Conservation Officer in position at Folkestone and Hythe Borough Council. However, Ben Found (Senior Archaeological Officer at Kent County Council (KCC)) and advisor to the LPA has agreed that a programme of Archaeological Built Heritage Assessment and research should be conducted to make a record before alterations to or demolition of the buildings, to inform ongoing design. This will ensure a permanent archive of the buildings, for their own records and for public benefit via deposition with the local Historic Environment Record.

2.3 Previous Archaeological Work

- 2.3.1 An Environmental Statement has been produced for the whole development site (Arcadis 2019, updated 2022), which includes a Historic Landscape Characterisation and Farmstead Analysis (Appendix 9.3) and a Historic Buildings and Structures Appraisal (Appendix 9.5). Both appendices formed the basis of subsequent discussions with the Senior Archaeological Officer at KCC around the requirements for building recording in advance of development, as set out in Otterpool Park Cultural Heritage Mitigation Strategy. The methodology for this assessment is set out in Section 2.5.



Plate 2: c.1940s aerial photograph of ammunition depot, with approximate position of Nissen hut shown by red arrow (reproduced from Arcadis 2019, Appendix 9.5, Plate 10).

2.4 Historical Background

- 2.4.1 The Site is thought to have been an ammunition depot linked to Lympne Airfield, which operated between 1916 and 1984 and lies c.1km to the south-west. The airfield is now an industrial estate. In WWII, the airfield played a key role as a base for the Naval Air Arm. Initially named HMS Buzzard it was re-named HMS Daedalus II shortly afterwards. By May 1940 it had been passed back to the RAF but was heavily bombed in the Battle of Britain (July-October 1940), which put it out of commission for several weeks. The airfield became fully operational from 1941, serving as a front-line fighter base. The airfield was most notably involved in a planned kidnap of Adolf

- Hitler. The airfield was to be the landing place for the planes participating in the kidnapping, but unfortunately the plot failed due to misinformation. Lympne was part of Operation Jubilee (code named for the Dieppe Raid), Operation Overlord, D-Day, Operation Diver, and the defence of Britain in the air throughout the war. Towards the end of the war the squadrons began to relocate to other bases and the airfield was downgraded to emergency landings only. In 1946, the base was handed over to the Ministry of Civil Aviation (Arcadis 2019, Appendix 9.5, 18).
- 2.4.2 The ammunition depot, as depicted on the aerial photograph from c.1940, is quite small (though no doubt developed through the War), with an access road turning south then west around Red House Farm, before heading directly south across the fields to a junction with a further C-shaped service road leading to (at least) four pairs of huts facing each other and spaced along the service road equally. Further buildings lie east of the access road (some of which have been suggested by Arcadis may still survive, including two workshop buildings on the Benham Business Park which are consistent in style and fabric with other military buildings of this period in the area).
- 2.4.3 The depot is likely to have housed ammunition for the fighters, including small arms ammunition (SAA), and stores of pyro. supplied by the Ministry of Supply (MoS), a Government department formed in 1939 to co-ordinate the supply of equipment to all three British armed forces, not just the Army (Hornby 1958). Both the MoS and the Ministry of Aircraft Production (MAP) financed a huge expansion in Britain's capacity for armament production during the WWII, the MoS through complex agency and capital assistance schemes (Edgerton 2006, 79).
- 2.4.4 The MoS administered the Royal Ordnance Factories (ROFs), which produced explosives and propellants; filled ammunition; and constructed guns and rifles for use by the armed forces. Initially arms were dispersed to Central Ammunition Depots (CADs) before being sent on to Intermediate Ammunition Depots (IADs), and then onto their final destination (Ferryhough 1965, 370). The large depots adopted standardised storehouse methods, including the use of modern machinery such as fork-lift trucks, removable storage such as use of tubular scaffolding, and flow packaging.
- 2.4.5 However, as the War set in in the early 1940s, the situation became more disorganised, with the increased requirement for smaller, localised, ammunition depots to get arms and ammunition dispersed to where it was needed more quickly. This depot at Lympne is an example of one such ad hoc establishment. The smaller depots were built above ground, often with fewer of the safety measures which earlier depots would have been provided with (e.g., bunds encircling the huts to minimise the spreading of an explosion).
- 2.4.6 The arrangement of buildings is very common for ammunition depots, which were usually sited at some distance from the airfield to minimise catastrophic damage should the depot be targeted. The huts were also similarly dispersed to minimise risk from explosion, which could sometimes occur through accidental detonation. Ammunition would have been brought to the site by road from the nearest railhead (most likely Westenhanger Station, 1.1km to the north-east). Some depots in the UK had direct rail links, but in view of the close position of the ammunition depot to the Kent coast, the absence of a connection to a railway line was probably deliberate; the presence of railway lines would have alerted Luftwaffe reconnaissance flights to a military use for the buildings, and it is likely the buildings would have been targeted.
- 2.4.7 The types of huts used in depots varied throughout WWII. By the early 1940s, a timber shortage meant that higher-class timber huts gave way to lower-class timber (the Gerrard 'X', 'Y' and 'Z' timber huts introduced between 1939 and 1940) and then the introduction of huts by the MoS using timber substitutes – including the Magnet (timber and concrete composite), Thorn (plasterboard and timber composite), Laing (plasterboard and timber composite) and the Maycrete and Nashcrete (concrete with timber trusses) (Francis, Flagg and Crisp 2016, 48). Nissen Huts, which had been invented in 1916 by a Royal Engineers Canadian, Major Peter Norman Nissen (1871–1930), were prefabricated buildings developed for WWI initially with timber, but later steel, frames clad with corrugated steel or iron sheets. Nissen Huts were available in three spans (16', 24' and 30'), the 16' being the most common, and sometimes referred to as a 'Bow' hut (Stuart 2005, 56). The longitudinal bays come in multiples of 6' (1.8

m), allowing the length of the cylinder to be any multiple of 6'. Many thousands of huts of this kind were produced and used extensively for both domestic and technical accommodation.

- 2.4.8 In 1942, the Interdepartmental Committee on Hutting became the sole arbiter on design and production, and consequently supply of all types of hut changed from the MoS to the Ministry of Works (MoW). By 1943, the types of huts being used had increased through the use of three other main hut types including Romney Huts (with a much larger span), Curved Asbestos Huts (invented by Turners Asbestos), and the MOWP (Ministry of Works and Planning) Standard Hut (Dobinson 2001, 322), though over fifty variant types also existed (Draper 2015, 1), and some designs such as the Laing and Gerrard huts were revived (Francis, Flagg and Crisp 2016, 48). Later prefabricated hutting used pre-cast concrete posts and panels became commonplace.
- 2.4.9 The Nissen Hut does not appear on the aerial photograph (Plate 2) or mapping from that period. This was quite common for war-time establishments, which were deliberately left off mapping in case this should help the enemy, and, later, not included as they had either been decommissioned or were still serving a military role which required continued secrecy. The ammunition depot has been largely lost and the original layout was no longer extant, the main southerly access road and service road having been removed by the 1960s (from aerial photographic evidence). The Nissen Hut is therefore a suggested (possibly isolated) survival of the former complex.

2.5 Methodology

Aims and Objectives

- 2.5.1 Following discussions with the Senior Archaeological Officer at KCC, it was recommended that a Historic England Level 1 Historic Building Record be carried out on the buildings within WS20 initially, to assess if more detailed recording was required. It was not possible to access the buildings within the Benham Business Park and only the Nissen Hut was surveyed at this time. An assessment of the other buildings within this group will be assessed at a later date.
- 2.5.2 The principal aim of the historic building recording was to provide a photographic, written and drawn record of the ammunition buildings, and their setting, to gain a better understanding of the buildings. The recording would culminate in a brief discussion of any identified group value, the compilation of a permanent archive, analysis of the findings collected during the historic building investigation, and dissemination of the results.
- 2.5.3 The objectives of the building recording are set out in Understanding Historic Buildings (Historic England 2016) as follows:

Level 1

Level 1 is essentially a basic visual record, supplemented by the minimum of information needed to identify the building's location, age, and type. This is the simplest record, and it will not normally be an end in itself but will be contributory to a wider study. Typically, it will be undertaken when the objective is to gather basic information about a large number of buildings – for statistical sampling, for area assessments to identify buildings for planning purposes, and whenever resources are limited, and much ground has to be covered in a short time. It may also serve to identify buildings requiring more detailed attention at a later date.

Written Account

- 2.5.4 The Level 1 survey comprises an examination of the exterior of the buildings, with an interior examination of the buildings desirable where possible under Health and Safety restrictions. The account includes:
- The precise location of the building as an address and in the form of a National Grid Reference

- A note of any statutory or non-statutory heritage designations
- The date when the record was made, the name(s) of the recorder(s) and the location of any archive material.

Drawn Record

- 2.5.5 The Level 1 survey includes a basic location plan, with a block plan denoting the form of the structure (to scale or fully dimensioned) as existing.

Photography

- 2.5.6 The photographic record comprises high-quality digital format (RAW and jpg) taken with a Pentax K70 full frame digital camera (with 24-megapixel capability). All photography complied in accordance with Historic England guidance (Historic England 2015 and 2016). A photographic scale of an appropriate size was included in all general and detailed views, where possible and safe to do so. The location and direction of photographic views is recorded on copies of the site plans. Accompanying photographic registers recorded, as a minimum, the direction of the view and a brief description of the subject and location.

Reporting and Archiving

- 2.5.7 This Built Heritage Assessment will be submitted for approval to the client, and a final version will be submitted to the Senior Archaeological Officer at KCC, archaeological advisor to the LPA, the LPA Conservation Officer (if the position has been filled) for approval. A copy of the final report will be deposited with the Kent Historic Environment Record (KHER). An OASIS (online access to the index of archaeological investigations) record (<http://oasis.ac.uk>) will be created, with key fields completed, and a .pdf version of the final report submitted to the site.
- 2.5.8 The digital archive generated by the project will be deposited with a Trusted Digital Repository, in this instance the ADS, to ensure its long-term curation. Digital data will be prepared following ADS guidelines (Niven 2013 and online guidance) and accompanied by any metadata.



Plate 3: the Nissen Hut facing west.

3 Building Survey Results

3.1 Form

- 3.1.1 The Nissen Hut is a single storey, one-celled structure measuring 26.8m (88') in length by 5.49m in width (18') and standing to 2.74m (9') in height. The building is aligned east west and has a semi-circular profile. The building appears to be built around a steel frame, but as the frame is clad internally and externally by corrugated asbestos sheeting, the frame was only visible as ferric staining on the internal sheeting. Traditionally, the frame would comprise ribs set at roughly 6' (1.84m) centres, which seems the case here. The total length of the building equates to approximately 15 ribs, forming 14 bays. No purlins were evident, but it must be assumed these exist between the sheets to provide bracing between the ribs.
- 3.1.2 The asbestos sheeting is laid with three sheets covering the arc of the hut. The upper sheet overlaps the side sheets by at least 0.15m, with each sheet overlapping the next by at least two corrugations. Every fifth upper sheet has been replaced by a modern corrugated see-through plastic sheet, to allow light into the interior. Every fourth sheet has a circular hole, 0.35m in diameter, pierced through it, which supports the pipe for an upstanding aluminium box ventilator, which also appears to be modern. At least two of these have now been removed or have fallen off, leaving a hole only. The whole structure sits on, and is embedded into, a concrete pad on the north and south sides which provides the foundation.



Plate 4: the Nissen Hut facing east.

- 3.1.3 Both the eastern and western ends were originally enclosed, but only the western end now survives largely intact (Plate 4), the eastern end having been opened out to allow vehicle access (Plate 3). The western end has a large central doorway, 1.96m in height by 1.06m in width, now only surviving as a timber frame, but with evidence of the location of hinges and strike plate for the door latch still surviving. The doorway is flanked by windows, both now only surviving as openings, measuring 0.96m in width by 1.18m in height. The wall infill comprises large concrete breeze blocks, mortared with cement, between the edge of the asbestos roof structure, which overlaps the wall slightly, and the former windows and door. The northern wall in the western elevation includes a row of three ceramic ventilation grilles. The eastern end is likely to have

mirrored the western end to a certain extent, evident by some remaining sections of timber frame, possibly formerly part of the window, in the north wall, and the truncated remains of a ceramic ventilation grille in the south wall. It appears the breeze blocks were cut through with a circular saw.



Plate 5: internal view of Nissen Hut, facing west.

3.2 Circulation and Floor Plan

- 3.2.1 There is no evidence of any internal flooring within the building, though it may originally have had a timber floor resting on lateral floor joists. The floor now comprises bare earth, with a modern concrete pathway 1.30m in width extending the full length of the building and providing a walkway through to the modern cottage to the west, which appears to have made use of the buildings as a garage and store. There are further concrete pads on the north and south sides of the walkway, c.5m in length, to support a parked vehicle in the eastern end of the building (Plate 5).
- 3.2.2 Prior to its current use, the building appears to have been repurposed as a chicken house, probably sometime in the 1950s. There were a series of openings cut into the walls on the north and south sides of the building, at ground level, with evidence of concrete supports for probable timber and chicken-wire stalls inbetween, which would have formed a series of pens for the birds, at roughly 2m spacings. The openings would have allowed the access/egress of the birds from the pens to the outdoors. Cable ducts for electric lighting and sockets extend down each side of the building, with pairs of fittings for a socket and pull-switch spaced above each pen. A further duct extends down the centre of the building, with a pair of light fittings and pull-switches, lining up with the wall switches on each side. All the fittings are Bakelite and include black and red coloured wiring. The fittings appear to relate directly to the use of the building as a chicken house, and there is no evidence this lighting was used for any other (military) purpose before this. Within the southern concrete pad, a line had been cut in for a modern water-pipe (then covered with concrete again) with a tap at the western end, presumably for providing the birds with water.



Plate 6: detail of Bakelite fittings



Plate 7: the access road leading west to the Nissen Hut

3.3 Access Road

- 3.3.1 The road which leads down to the Nissen Hut is part of the original infrastructure associated with the ammunition depot and is shown on the 1940s aerial photograph (Section 2.4.2). The access road is typical of military roads, which were laid as heavy duty paved sections of concrete often at least 6" (15cm) thick and designed to be able to withstand heavy loads without breaking up (Francis, Flagg and Crisp 2016, 6). The position of the road in association with the Nissen

Hut provides some context to its origin and does provide some evidence that the position of the hut may be original, though this is hard to be certain in view of its general absence of interior features which would confirm its wartime use.

3.4 Significance

- 3.4.1 A previous assessment of the significance of the Nissen Hut identified the commonality of the building types as mass-produced WWII structures and suggested that the building was not in its original location, which is hard to refute. The assessment also identified that modification and poor condition had also diminished any potential evidential or aesthetic value the structure may have had. Nevertheless, the structure retains historic value as a residual example of the modification of the landscape by the military in WWII and retains social value through the links between the community and memories of this period, retaining some communal value (Arcadis 2019, Appendix 9.4, 21-5). The initial assessment of the building by Arcadis concluded that the Nissen Hut was not of sufficient importance to warrant preservation in-situ or statutory protection. This built heritage assessment has examined the historic, communal and evidential interest of the Nissen Hut and has concluded that the building has some interest but not sufficient to warrant further detailed assessment prior to its demolition.

4 Discussion and Conclusions

4.1 Discussion

- 4.1.1 A Nissen hut is a temporary structure designed to be functional and mass-produced. The survival of these ultimately ephemeral buildings into the 21st century is rare, but there remain many examples that do survive, and in better condition than this example. The building recording identified that whilst the original metal and asbestos shell survives, little or no detail related to its function is evident in the interior. Though the western wall incorporates the positions of original windows and a door, and their presence at the eastern end can also be alluded to, it is unclear whether these are original 1940s constructions or later (1950s) additions, and because so little else survives internally it seems likely that these may be later additions. The building was clearly extensively modified for the sole purpose of operating as a chicken house, and all the fittings and the internal concrete pathway support this, with all the light fittings and other additions correlating exactly with the positions of the pens for the birds. Later still, the eastern end was modified further with the wall removed and the addition of further concrete pads to allow parking for a vehicle. The position of the hut in relation to the access road is of interest and does provide a possibility that the Nissen Hut is *in situ* rather than relocated, but the hut could equally have been moved next to a convenient trackway from another position within the complex, and the general absence of internal detail would suggest this is more likely, the shell have been reclaimed then modified for use as discussed.

4.2 Conclusions

- 4.2.1 This report comprises a record of the Nissen Hut. No further work is recommended prior to the demolition of the building, and there is no indication that any additional information regarding the building would be gained from further investigation or from monitoring during its demolition. This report will be deposited with the KCC HER, a copy will be kept with OTP's records for the site and a copy of the report and digital photographs will be archived with the Archaeological Data Service (ADS).

5 Acknowledgements

- 5.1.1 The building survey was conducted by Matthew Town, Principal Archaeologist, and Daniel Bray, Principal Archaeology and Heritage Consultant, Stantec UK. This built heritage assessment was authored by Matthew Town, Principal Archaeologist, Stantec UK. Daniel Bray, Principal Archaeology and Heritage Consultant Stantec UK, coordinated and managed the archaeological work for Stantec UK.. All the staff at the Otterpool Park LLP, especially Jamie Jackson, Sean Howarth, Enya Kenny and Nick Harbour, are cordially thanked for their support.

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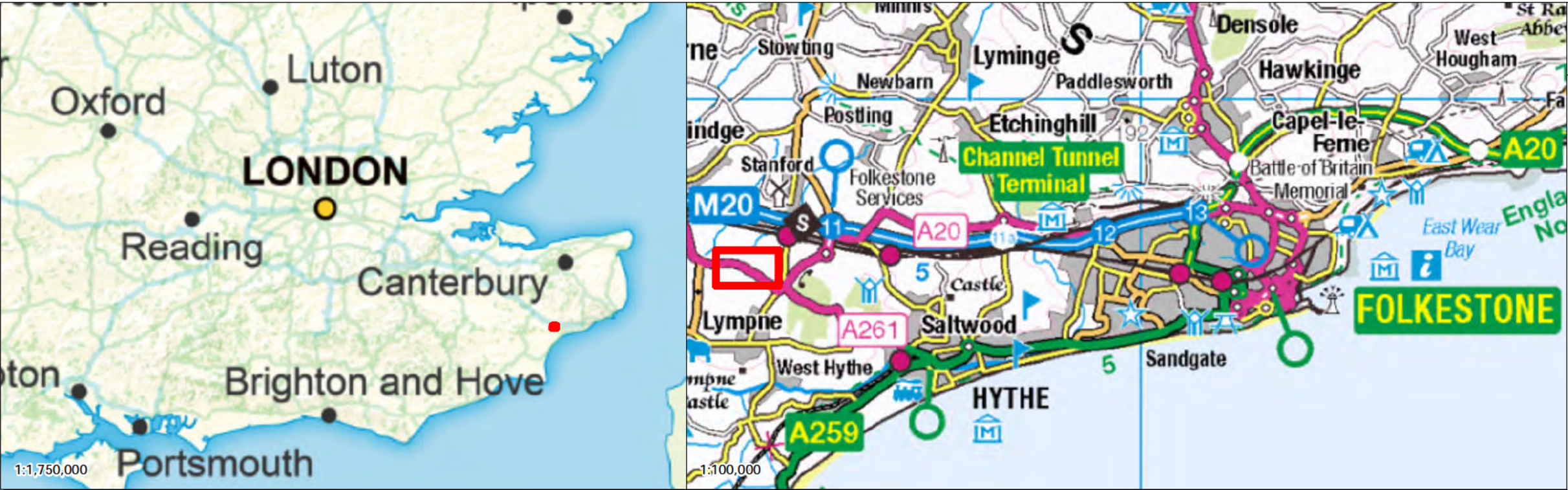
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Appendix 1: Figures



Legend

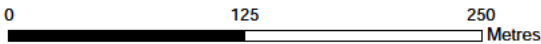
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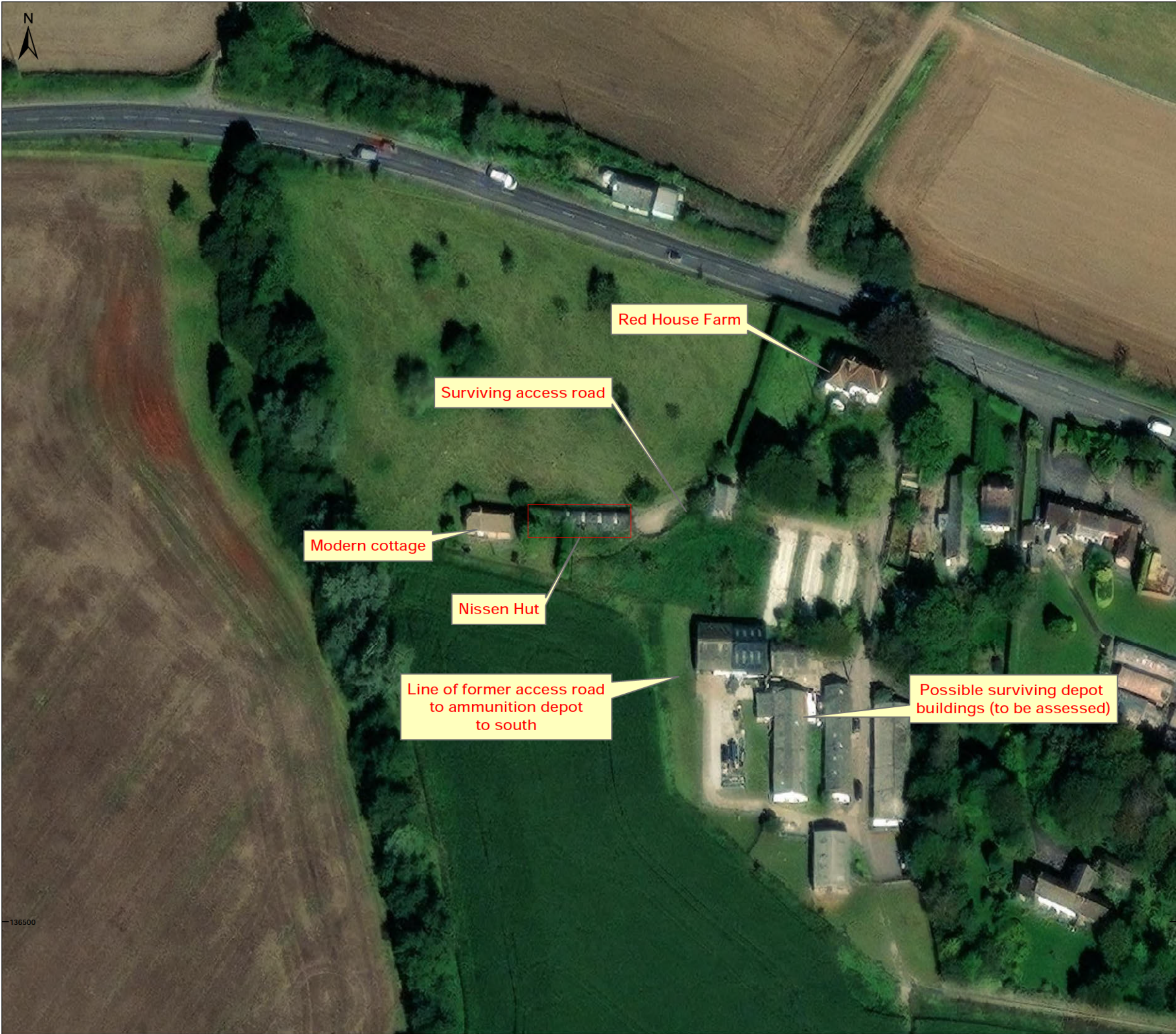
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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community.

Otterpool Park, Building Recording

Site Location



1:4,000 @ A3	14/12/2023
Drawn: MT	Checked: ELC
Figure: 1	Rev A

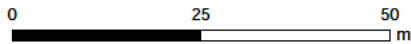


Legend

Nissen Hut

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community.

Otterpool Park, Building Recording
Building Locations

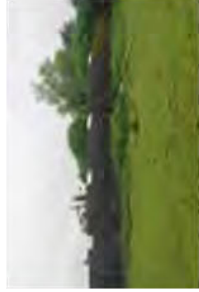


1:1,000 @ A3	Date: 14/12/2023
Drawn: MT	Checked: ELC
Figure: 2	Rev A

Appendix 2: Contact Prints



32410707_OTP_NH_BR_19.jf



32410707_OTP_NH_BR_01.jf



32410707_OTP_NH_BR_02.jf



32410707_OTP_NH_BR_03.jf



32410707_OTP_NH_BR_04.jf



32410707_OTP_NH_BR_05.jf



32410707_OTP_NH_BR_06.jf



32410707_OTP_NH_BR_07.jf



32410707_OTP_NH_BR_08.jf



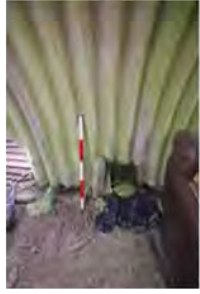
32410707_OTP_NH_BR_09.jf



32410707_OTP_NH_BR_10.jf



32410707_OTP_NH_BR_11.jf



32410707_OTP_NH_BR_12.jf



32410707_OTP_NH_BR_13.jf



32410707_OTP_NH_BR_14.jf



32410707_OTP_NH_BR_15.jf



32410707_OTP_NH_BR_16.jf



32410707_OTP_NH_BR_17.jf



32410707_OTP_NH_BR_18.jf