



## Dunwich Heath, Cable Duct Installation

### Dunwich, Suffolk

**Client:**  
National Trust

**Date:**  
February 2018

DUN 143  
Archaeological Monitoring Report  
SACIC Report No. 2018/015  
Author: M. Sommers  
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# Dunwich Heath Cable Duct Installation Dunwich, Suffolk

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SACIC Report No. 2018/015

Author: M. Sommers

Report Date: February 2018



## HER Information

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**Site Code** DUN 143

**Site Name:** Dunwch Heath Cable Duct Installation, Dunwich, Suffolk

**Planning Application Nos:** n/a

**Dates of Fieldwork:** 9th January 2018 to 16th January 2018

**Grid Reference:** TM 4759 6847 to TM 4769 6781

**OASIS Reference:** suffolka1-3099309

**Curatorial Officer:** n/a

**Project Officer:** Mark Sommers

**Client/Funding Body:** National Trust

Digital report submitted to Archaeological Data Service:  
<http://ads.ahds.ac.uk/catalogue/library/greylit>

Prepared By: Mark Sommers  
Date: 19th February 2018

Approved By: John Craven  
Position: Project Manger  
Date: 26<sup>th</sup> February 2018



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## **Summary**

Archaeological monitoring of works associated with the installation of a cable duct running across Dunwich Heath was undertaken during January 2018. The route ran parallel to, but set back from, Minsmere Road, and terminated at Coastguard Cottages, a total distance of c.700m. Buried remains such as concrete post settings, concrete footings, cabling, and part of an area of hardstanding/roadway, were recorded within the trench, all of which are related to a former World War 2 radar station. A small number of related WW2 artefacts, such as scaffold poles, barbed wire and 'pig-tail' fence post, were also noted. These items were returned to the trench upon backfilling. (Mark Sommers, Suffolk Archaeology CIC, for The National Trust).



## **1. Introduction**

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As part of an upgrade of the data connection at the National Trust properties at Coastguard Cottages Minsmere Road, Dunwich, Suffolk, it was necessary to install a new length of cable duct. The work entailed the mechanical excavation of c.750m of trench running from an existing telephone communications equipment adjacent to Cliff House Holiday Park, along the west side of Minsmere Road, before crossing the road and entering the National Trust offices, close to the eastern end of a terrace of buildings known as Coastguard Cottages, situated at the southern end of Minsmere Road. Throughout its route, the duct crosses Dunwich Heath, a renowned nature reserve, owned and managed by The National Trust.

A large part of the proposed route runs through the site of a former World War 2 radar station. The owners of the site, The National Trust, commissioned Suffolk Archaeology Community Interest Company (SACIC) to carry out a programme of archaeological monitoring in order to provide a record of any heritage assets related to the radar station, or to any earlier activities, that were encountered during the groundworks.

The archaeological monitoring was carried out during January 2018 by SACIC. The National Grid Reference (NGR) for the approximate centre of the cable duct route is TM 4766 6806. Figure 1 shows a location plan of the site.

## **2. Geology and topography**

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The underlying geology in this area consists of sands of the Crag Group. No superficial geology is recorded (information from the 1:50,000 scale geological map, accessed via British Geological Survey website on the 16th February 2018).

The geology results in a local topography that comprises a gently rolling plateau of freely-draining sandy soils.



Figure 1. Location map

### 3. Archaeology and historical background

The proposed route runs across the site of a World War 2 radar station known as Dunwich Radar Station. Dunwich Radar Station. It was a Chain Home Low (CHL) station which became operational on 1st January 1940 to give early warning of low-flying aircraft approaching the coast. It was originally a simply affair with wooden huts housing the equipment and was located between Minsmere Road and the sea (Fig. 2).

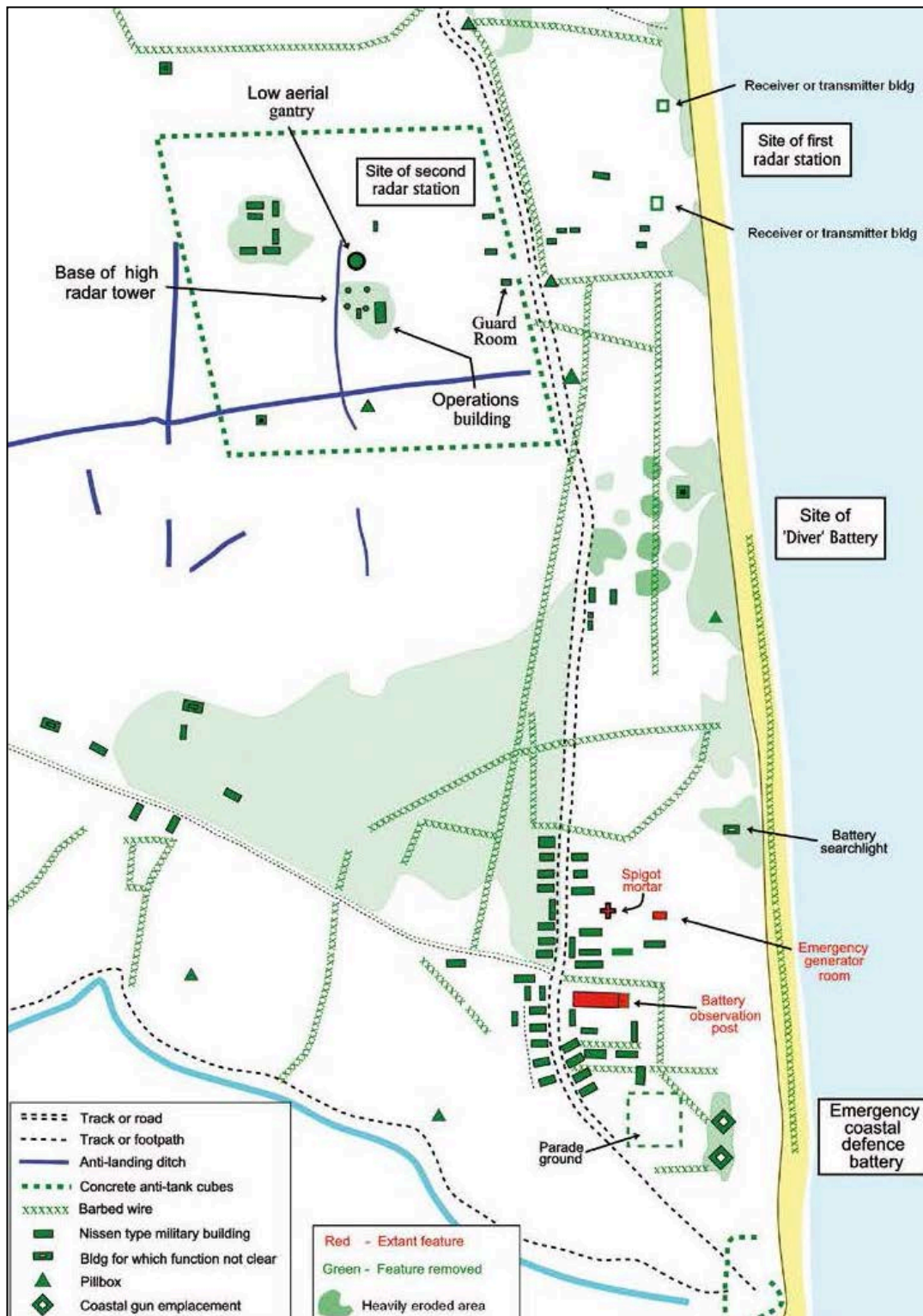


Figure 2. Plan of WW2 structures at Dunwich Heath (from Liddiard and Sims 2014; p.34, Fig. 28)

This was superseded by a second CHL station, located to the west of Minsmere Road, which became operational on 15th February 1941. It was later enhanced with a 184 foot high tower designed to aid the detection of very low-flying aircraft in 1943. At the end of the war the station was kept under 'care and maintenance' before being finally dismantled in the 1960s (Liddiard and Sims 2014).

Due to the strategic importance of the radar stations at Dunwich they were provided with a network of defences consisting of pill-boxes, anti-tank obstructions, anti-landing ditches, fences and barbed wire entanglements. A coastal defence battery and an anti-aircraft battery was also added to the site. A large number of buildings were also provided for the accommodation of personnel posted to the various sites.

Virtually all remains of the radar stations and the other defences were systematically removed after the war, or have been lost through erosion, although occasional fragments of concrete and brick can be seen it is assumed that further evidence of this phase of the site's history will survive as buried remains.

## **4. Methodology**

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The monitoring was achieved through the visual examination of the excavated trench whilst the work was underway, in order to identify and record any significant archaeological features and/or deposits that may be exposed. Measured sketches were drawn of any significant remains exposed although, given the nature of the work, the prime method of recording was through the use of digital photography with an appropriate scale in place.

A limited number of artefacts were noted during the monitoring, all of which were associated with the WW2 history of the site, their presence was noted and measurements and photographs were taken of potentially interesting items; all were returned to the trench upon its backfilling.



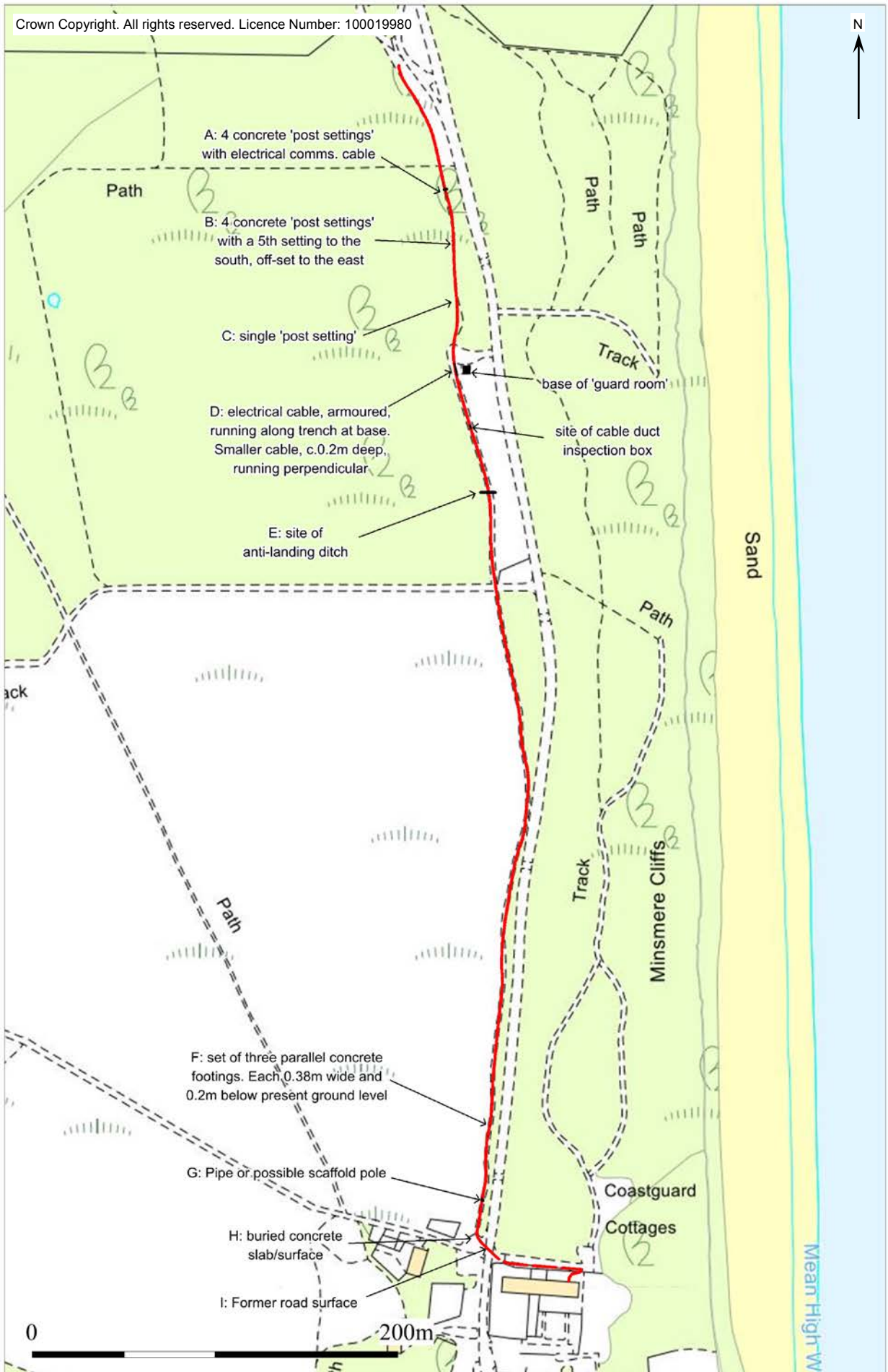


Figure 3. Route of monitored trench and item locations

## 5. Results

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The monitoring was undertaken between 9th January 2018 to 16th January 2018. The trench was excavated using a small tracked excavator fitted with narrow, toothless bucket, around 0.15m in width. The resultant trench was between 0.55 to 0.65m deep and around 0.2m in width. Excavation was commenced at a point (TM 4766 6806) located on an informal footpath located to the west of Minsmere Road and was cut in a southerly direction until it reached a point close to the eastern end of Coastguard Cottages (TM 4768 6781). In general, the trench followed an existing informal path to the west of Minsmere Road before passing beneath the road and along the edge of an unsurfaced track to the north of Coastguard Cottages. Once a suitable length of trench had been excavated the cable ducts were inserted into the base and the trench backfilled. This was a continuous process.

The soil profile exposed by the excavated trench generally consisted of a thin sandy topsoil with turf which overlay natural sand deposits that varied in colour from pale grey to brown with occasional podzolised areas of dark brown to black hard pan, which is typical of heathland. Towards the base of the trench the sands tended towards bright yellow with gravel.

Throughout the trench occasional features, all of which are likely to be related to WW2 activities, were identified. The locations of these are marked in Figure 3 along with a brief description of the item. Each has been identified alphabetically and further details of each item can be found below:

**Item A:** Four, very roughly circular, concrete pads, each approximately 0.5m in diameter, with a circular or slightly oval shaped hole in the centre. This central hole measured between 0.12 to 0.17m across. They lay on a single line, on a roughly north northwest-south southeast alignment, and were spaced between 2.45m and 2.5m apart. Upper surface, which is flush with the recent ground surface, is very slightly conical. They are likely to be the settings for upright posts that formed a fence although other interpretations are potentially possible.

They lay to the west of the excavated duct trench and were not disturbed by these works although an electrical cable crossed the trench at a depth of c.0.4m (Plate 1) and on an alignment that would take it between the central two concrete pads. This cable



was sheathed in an insulating material and contained multiple, individually insulated, wires (Plate 2) suggesting it was a communications cable rather than a power supply.

**Item B:** A further group of four concrete probable 'post settings' of similar dimensions, spacing and alignment as those described above. Presumably a continuation of the same line (Plates 3 and 4). Again all were to the west of the excavated trench and were not disturbed. A fifth setting, the upper surface of which was located just below ground level, was discovered to the south, but off-set slightly to the east which placed it in the direct line of the trench and necessitated its removal. It was placed in the adjacent undergrowth, immediately to the west of its original location.

**Item C:** A single 'post setting', isolated with no obvious associated settings. Similar to those described above. The upper surface was situated just below ground level and consequently it was only discovered during excavation of the trench which necessitated its removal. Placed to the west side of the path. Measurements revealed it to be 0.5m in diameter and 0.28m thick, with a 0.12m diameter central hole (Plates 5 and 6). It could be seen that the concrete flared out slightly towards the top and that it was clearly formed by pouring concrete into a ready cut pit, which was roughly octagonal in shape, with the post presumably held *in situ*.

**Item D:** A length of 'armoured' cable, probably part of an electrical supply running along the base of the trench at a depth of c.0.55m (Plate 7). In the same area a smaller electrical cable, consisting of two twisted wire cables within an insulating cover, crossed the trench on a perpendicular alignment at a depth of c.0.2m. Both these cables were located in the vicinity of a concrete slab (Plates 8) thought to be the base of the former 'guard room' as marked in Fig. 2.

In the area to the northwest of the guard room frequent fragments of hardcore are visible on the surface (Plate 9) and brick rubble was evident in the topsoil in the vicinity of the excavated trench (Plate 10). The bricks primarily consisted of soft, unfrosted red bricks, many with mortar attached suggesting they had been used previously. The site plan (Fig. 2), shows a gap in the line of anti-tank cubes to the north of the guard room. This is likely to represent an entrance to the site, presumably via a trackway that ran to the west from Minsmere Road.

A handful of artefacts were also recovered in this area. They comprised; a length of scaffold pole with clamp (Plate 11), a short length of a 'pig-tail' type of fence post, either an end of line tether or possibly to hold a low trip wire, and various short lengths of barbed wire (Plate 12). These were returned to the trench upon its backfilling.

**Item E:** An anti-landing ditch crossed the excavated trench at this point (as marked in Fig. 2). Although it was not readily apparent in section it could be seen as a slight linear depression on the surface, running off to the west.

**Item F:** A series of three, parallel concrete 'beams' running perpendicular across the trench. They measured between 0.35m to 0.38m in width. Two were c.0.2m thick (Plate 13) whilst the central of the three was 0.4m thick (Plate 14). The upper face of all three lay approximately 0.2m below the present ground surface. The gap between the northern and the central 'beam' was 4.8m (centre to centre); the gap to the southern 'beam' was 6.1m. The northern of the three 'beams' appeared to have a shallow, linear slot running along its length (Plate 15), which may have been related to the setting for brickwork, although there no evidence of any mortar, or a timber joist.

These features are likely to be the concrete footings for a series of WW2 era buildings that lay along the west side of Minsmere Road. They are described as 'Nissen type military buildings' in the legend on Fig. 2. The cable duct was passed beneath these items with minimal disturbance.

**Item G:** A length of scaffold pole or possibly a water pipe running roughly perpendicular across the trench (Plate 16).

**Item H** Concrete surface/hardstanding located at the edge of Minsmere Road at the site of the junction with a track, of probable WW2 vintage, running to the west. It measured approximately 0.15m thick (Plate 17).

**Item I:** The duct trench passed across Minsmere Road which revealed its make-up (Plate 18). The existing road surface comprised c.0.04m of tarmac over a c.0.15m thick base made of two layers of sand and gravel/shingle. This was laid over the top of an early surface that comprised a thin spread of tarmac over a c.0.15m thick layer of crushed red brick rubble which lay directly on the natural subsoil.

## 6. Discussion

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A number of features were noted during the archaeological monitoring all of which are likely to be related to the World War 2 radar station and associated activity.

The probable fence posts (Items A, B and C) are located along the a similar line as the concrete anti-tanks cubes, as depicted in Liddiard and Sim's plan (Fig. 2), and are presumably part of a defensive line around the second radar complex.

The cables noted in the trench are likely to be parts of the telephone communications system and the site's internal power supply.

The two scaffold poles found in the trenches are possibly related to construction work within the site although could potentially be remnants of the beach scaffolding defence that was positioned to prevent an attack by landing craft.

The concrete footings (Item F) are undoubtedly related to the buildings marked on the WW2 site plan to the west of Minsmere Road. The concrete surface (Item H) and the former road surface (Item I) are parts of the internal road system which was presumably enhanced during the military occupation to facilitate vehicle movements.

## 7. Archive deposition

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The site archive will be sent to the County Historical Environment Record, under the HER reference, DUN 143. A summary of this project has been entered into OASIS, the online database, under the reference: suffolka1-309930.

## 8. Bibliography

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- |                                |   |
|--------------------------------|---|
| Kent, P. 1988                  | <i>Fortifications of East Anglia</i> , Lavenham   |
| Liddiard, R., & Sims, D., 2014 | <i>A Guide To Second World War Archaeology In Suffolk, Guide 2: Walberswick To Aldeburgh</i> , 'World War II Heritage' project/European Interreg IV Project |

**9. Plates** (scale, where featured, is 1m in length with 0.1m divisions)

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Plate 1. Item A: probable communications cable (camera facing S)



Plate 2. Item A: probable communications cable, the insulation, which was removed during excavation, is to the right (camera facing N)





Plate 3. Item B, four concrete 'post settings' (camera facing N)



Plate 4. Item B, plan view of a 'post setting'





Plate 5. Item single C: single concrete 'post setting', after removal, plan view



Plate 6. Item C: concrete 'post setting', after removal, side view





Plate 7. Item D: 'armoured' electrical cable with smaller cable crossing at higher level



Plate 8. Base of former guard room (camera facing S)





Plate 9. Base of guard room with trench running to the west (camera facing NE)



Plate 10. Brick rubble evident in area to the north of the guard room (camera facing SW)





Plate 11. Length of scaffold pole with attached clip



Plate 12. Tether or possible trip wire support and fragments of barbed wire





Plate 13. Item F: probable concrete footing, northern of a group of three (camera facing S)



Plate 14. Item F: probable concrete footing, middle of a group of three (camera facing N)





Plate 15. Item F: probable concrete footing, northern of a group of three, showing linear slot



Plate 16. Item G: possible pipe of probable scaffold pole





Plate 17. Item H: concrete surface (camera facing NE)



Plate 18. Item I cross-section through present road (camera facing SE)

## Appendix 1. OASIS data collection form

<b>OASIS ID: suffolka1-309930</b>	
<b>Project details</b>	
Project name	Dunwich Heath cable duct
Short description of the project	monitoring of the installation of a cable duct to the Coastguard Cottages at Dunwich Heath revealed concrete fence posts, electrical cables and probable footings relating to a WW2 radar station.
Project dates	Start: 09-01-2018 End: 21-02-2018
Previous/future work	No / No
Any associated project reference codes	DUN 143 - Sitecode
Type of project	Recording project
Current Land use	Woodland 7 - Scrub
Monument type	ELECTRIC CABLE Modern
Monument type	POST HOLE Modern
Monument type	FOUNDATION Modern
Significant Finds	SCAFFOLD Modern
Significant Finds	BARBED WIRE Modern
Investigation type	"Salvage Record"
Prompt	Voluntary/self-interest
<b>Project location</b>	
Country	England
Site location	SUFFOLK SUFFOLK COASTAL DUNWICH Coastguard Cottages, Dunwich Heath (cable duct)
Study area	750 Square metres
Site coordinates	TM 4766 6806 52.254255299676 1.629113872648 52 15 15 N 001 37 44 E Point
<b>Project creators</b>	
Name of Organisation	Suffolk Archaeology CIC
Project brief originator	Self (i.e. landowner, developer, etc.)
Project design originator	Suffolk Archaeology CIC
Project director/manager	John Craven
Project supervisor	Mark Sommers
Type of sponsor/funding body	Developer

<b>Project archives</b>	
Physical Archive Exists?	No
Digital Archive recipient	Suffolk HER
Digital Archive ID	DUN143
Digital Contents	"other"
Digital Media available	"Images raster / digital photography","Text"
Paper Archive recipient	Suffolk HER
Paper Archive ID	DUN143
Paper Contents	"other"
Paper Media available	"Notebook - Excavation',' Research',' General Notes',"Report"
<b>Project bibliography</b>	
Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Monitoring Report: Dunwich Heath, Cable Duct Installation Dunwich, Suffolk
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Suffolk Archaeology CIC

Unit 5 | Plot 11 | Maitland Road | Lion Barn Industrial Estate  
Needham Market | Suffolk | IP6 8NZ

Rhodri.Gardner@suffolkarchaeology.co.uk  
01449 900120



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