# Heritage Statement in advance of the Proposed Development for a footbridge at Oare Gunpowder Works, Faversham, Kent

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NGR Site Centre: 600413 162522

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Front Cover: View of the proposed development site (looking north) showing gunpowder barrels being transported by barge along the Oare Gunpowder Works canals

**Contents**


1 INTRODUCTION ..... 5

1.1 Planning Background ..... 5
1.2 Site Description ..... 5
1.3 Scope of Document ..... 6

2 LEGISATIVE AND PLANNING POLICY FRAMEWORK ..... 6

2.1 Introduction ..... 6
2.2 National Planning Policy Framework (NPPF) ..... 7
2.3 Designated Heritage Assets ..... 8
2.4 Planning Policy Guidance ..... 9

3.1 Sources ..... 10

4 ARCHAOLOGICAL AND HISTORICAL Resource ..... 11

4.1 Introduction ..... 11
4.2 Kent County Council Historic Environment Record (KHER) ..... 11
4.3 Historical Map Progression ..... 18
4.4 Historical and Aerial Photographs ..... 19

5 WALKOVER SURVEY ..... 18

6 ASSESSMENT OF HERITAGE ASSETS ..... 21

6.1 Introduction ..... 21

7 DEVELOPMENT PROPOSALS AND ASSESSMENT OF IMPACT ..... 23

7.1 Development Proposals -update ..... 23
7.2 Assessment of Physical Impact on Setting ..... 24

8 CONCLUSION ..... 24

8.1 Introduction ..... 25

9 OTHER CONSIDERATIONS ..... 25

9.1 Archive ..... 25
9.2 Reliability/Limitations of Sources ..... 25
9.3 Copyright ..... 25

10 REFERENCES ..... 29

10.1 Bibliographic ..... 30
10.2 Websites .....

# Oare Gunpowder Works, Faversham

## Heritage Statement

***Summary***

*SWAT Archaeology has been commissioned by Swale Borough Council to prepare a Heritage Statement relating to the proposed development area (Site) of Land at the Oare Gunpowder Works, Faversham in Kent.*

*There is a requirement under the National Planning Policy Framework (NPPF) for the client to explain the significance of any particular designated heritage assets that have been identified in the vicinity of the study site and demonstrate any potential impacts that a planning proposal will have upon their significance.*

*The PDA (Proposed Development Area) is situated at the south western end of Oare Creek on the north western edge of Faversham, which is circa 1.2km away. The Country Park of Oare Gunpowder Works is a Scheduled Monument. The schedule covering most of the works includes the best surviving part of the disused factory and runs from south west to north east for around 810m along a heavily wooded valley. The works survive here in the form of standing buildings and structures, ruins, earthworks and buried remains. Part of an associated water management system, a test range and a tramway are also included. The PDA itself is an area across a leat within the gunpowder works, where currently the leat is crossed by an unofficial means of logs put within the leat. Historically this area was part of a tramway network within the gunpowder works and this report is to explore the impact on the significance specifically in this area of the gunpowder works by the proposed development (MAP 1-8).*

*The proposed development is for a new bridge either over or alongside the collapsed concrete tramway bridge (Plates 1-6).*

*Historic England have commented on the proposal in that the application is inadequately documented and recommend that a Heritage Assessment should be undertaken and that*

*Historic England be consulted about the need for scheduled monument consent prior to determination.*

*This Heritage Statement has found that the heritage assets will remain unaffected by the proposed development, which are buried and will retain their historical and aesthetic qualities with the proposed development producing 'no harm' on their settings or significance of these assets in accordance with NPPF paragraph 202.*

# 1 INTRODUCTION

## 1.1 Planning Background

Swale & Thames Survey Company (SWAT) was commissioned by Swale Borough Council (the 'Client'), to carry out a Heritage Statement relating to a proposed development area at land within the Oare Gunpowder Works, Faversham, Kent and centred on National Grid Reference (NGR) 600413 162522). The purpose of the Heritage Statement was to assist the Local Authority to fully understand the impact of the proposed development as required by the NPPF on the significance of any Heritage Assets affected, including any contribution made by their setting.

## 1.2 Site Description

The PDA (Proposed Development Area) Oare Gunpowder Works Country Park is located in the north-west area of the town of Faversham in the County of Kent. To the south is Bysing Wood Road and to the east the Western Link Road. The NGR to the centre of the site is 600413 162522.

The Country Park of Oare Gunpowder Works are a Scheduled Monument. The schedule covering most of the works includes the best surviving part of the disused factory and runs from south west to north east for around 810m along a heavily wooded valley. The works survive here in the form of standing buildings and structures, ruins, earthworks and buried remains. Part of an associated water management system, a test range and a tramway are also included. The PDA itself is an area across a leat within the gunpowder works, where currently the leat is crossed by an unofficial means of logs put within the leat. Historically this area was part of a

tramway network within the gunpowder works and this report is to explore the impact on the significance specifically in this area of the gunpowder works by the proposed development (Plates 1-6).

*Geology*

1.2.1 The British Geological Society (BGS 1995) shows that the local geology at the PDA is bedrock geology of Seaford Chalk Formation with superficial deposits of Alluvium-Clay, Silt, Sand and Gravel.

### 1.3 Scope of Document

1.3.1 This assessment was requested by the Client in order to determine, as far as is possible, the nature, extent and significance of the development affecting the significance of designated and undesignated heritage assets. The assessment forms part of the National Planning Policy Framework (NPPF) requirement and is intended to inform and assist with decisions regarding heritage assets and is to be used in the support of planning applications associated with the proposed development.

1.3.2 The assessment was carried out in accordance with the current guidelines as defined by the Chartered Institute for Archaeologists (CIfA 2017). The purpose of an assessment is to establish the known or potential cultural heritage resource in a local, regional, national or international context. This specifically includes:

- the identification of site specific statutory and non-statutory cultural heritage constraints (including planning constraints)
- the examination of available cartographic and documentary sources
- a walkover survey to assess the surviving cultural heritage resource
- an assessment of potential impacts upon the setting of nearby heritage assets

## 2 LEGISATIVE AND PLANNING POLICY FRAMEWORK

### 2.1 Introduction

2.1.1 National legislation and guidance relating to the protection of, and proposed development on or near, important archaeological sites or historical buildings within

planning regulations is defined under the provisions of the Town and Country Planning Act (1990). In addition, local authorities are responsible for the protection of the historic environment within the planning system.

2.1.2 The National Planning Policy Framework was updated in July 2018 and is the principal document which sets out the Government's planning policies for England and how these are expected to be applied. It provides a framework in which Local Planning Authorities can produce their own distinctive Local Plans to reflect the needs of their communities.

**2.2 National Planning Policy Framework (NPPF)**

2.2.1 The Historic Environment, as defined in the National Planning Policy Framework (NPPF 2021): Annex 2, comprises:

> *'all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.'*

2.2.2 NPPF Annex 2 defines a Heritage Asset as:

> *'a building monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage assets include designated heritage assets and assets identified by the local planning authority (including local listing)'.*

2.2.3 NPPF Section 16: Conserving and enhancing the historic environment sets out the principal national guidance on the importance, management and safeguarding of heritage assets within the planning process. The aim of NPPF Section 16 is to ensure that Local Planning Authorities, developers and owners of heritage assets adopt a consistent approach to their conservation and to reduce complexity in planning policy relating to proposals that affect them.

## 2.3 Designated Heritage Assets

2.3.1 Designated heritage assets are defined in NPPF Annex 2 as:

*'World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Registered Park and Gardens, Registered Battlefields and Conservation Areas designated under the relevant legislation.'*

2.3.2 Designation is a formal acknowledgement of a building, monument or site's significance, intended to make sure that the character of the asset in question is protected through the planning system and to enable it to be passed on to future generations.

2.3.3 Statutory protection is provided to certain classes of designated heritage assets under the following legislation:

- Planning (Listed Buildings and Conservation Areas) Act (1990);
- Ancient Monuments and Archaeological Areas Act (1979); and
- Protection of Wrecks Act (1973).

2.3.4 There are a number of criteria to address, and they include the impact of the proposed development on the significance of the Heritage Assets.

*Heritage Assets*

2.3.5 Any Heritage Asset that includes a World Heritage Site, Scheduled Monument, Listed Building, Wreck, Registered Park or Garden, conservation area or Landscape can be identified as having a degree of significance meriting consideration in planning decisions. Heritage Assets are the valued components of the historic environment and will include designated Heritage Assets as well as assets identified by the Local Planning Authority during the process of decision making or through the plan making process.

*Setting*

2.3.6 The surroundings in which a Heritage Asset is experienced is of importance. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a

setting may make take several guises; a positive or negative contribution to the significance of an asset, the ability to appreciate that significance or it may have a neutral effect with no changes observed.

*Significance*

2.3.7 The value of a Heritage Asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance may be informed by a number of factors which may include; assessment of the significance of the site, setting and building, where relevant, under a number of headings:

- Historic significance – the age and history of the asset, its development over time, the strength of its tie to a particular architectural period, the layout of a site, the plan form of a building and internal features of special character including chimneystacks and fireplaces.

- Cultural significance – the role a site plays in an historic setting, village, town or landscape context, the use of a building perhaps tied to a local industry or agriculture and social connections of an original architect or owner.

- Aesthetic/architectural significance – the visual qualities and characteristics of the asset (settlement site or building), long views, legibility of building form, character of elevations, roofscape, materials and fabric special features of interest.

- Archaeological significance – evolution of the asset, phases of development over different periods, important features, evidence in building fabric and potential for below ground remains.

## 2.4 Planning Policy Guidance

Planning Policy Guidance that help to preserve the built and archaeological heritage are:

*Conservation Principles, Policy and Guidance (Historic England, 2008)*

2.4.1 Historic England sets out in this document a logical approach to making decisions and offering guidance about all aspects of England's historic environment. The Conservation Principles, Policies and Guidance are primarily intended to help ensure consistency of approach in carrying out the role as the Government's statutory advisor on the historic environment in England. Specifically, they make a contribution to addressing the challenges of modernising heritage protection by proposing an integrated approach to making decisions, based on a common process.

## 2.5 Sources

2.5.1 A number of publicly accessible sources were consulted prior to the preparation of this document.

*Archaeological databases*

2.5.2 Although it is recognised that national databases are an appropriate resource for this particular type of assessment, the local Historic Environmental Record held at Kent County Council (KHER) also contains data to provide an accurate insight into catalogued sites and finds within both the Proposed Development Area (PDA) and the surrounding landscape.

2.5.3 The National Heritage List for England (NHLE), which is the only official and up to date database of all nationally designated heritage assets is the preferred archive for a comprehensive HER search.

*Cartographic and Pictorial Documents*

2.5.4 A full map regression (MAP's 1-8) exercise has been incorporated within this assessment. Research was carried out using resources offered by the Kent County Council, the internet, Ordnance Survey and the Kent Archaeological Society. A full listing of bibliographic and cartographic documents used in this study is provided in Section 9.

*Aerial photographs*

2.5.5 The study of the collection of aerial photographs held by Google Earth was undertaken (AP's 1-4).

*Secondary and Statutory Resources*

2.5.6 Secondary and statutory sources, such as regional and periodic archaeological studies, archaeological reports associated with development control, landscape studies, dissertations and research frameworks are considered appropriate to this type of study and have been included within this assessment.

*Walkover Survey*

2.5.7 The purpose of the walkover survey was to;

- Identifying any historic landscape features not shown on maps.
- Conduct a survey for Heritage Assets.
- Understanding the setting of the Heritage Assets and the wider landscape.

**ARCHAOLOGICAL AND HISTORICAL RESOURCE**

**2.6 Introduction**

A search has been made of historic archive material pertaining to this site in County museums and the results are below-

**2.7 Kent County Council Historic Environment Record (KHER)**

2.7.1 A search of the KCC HER was carried out centred on the proposed site with a search radius of 250m. The search provided a large number of records of Listed Buildings. There are also Scheduled Monuments. The PDA is situated within a Conservation Area.

2.7.2 The PDA is located within area of high historical and archaeological interest.

2.7.3 The following gives a summary of the baseline archaeological conditions associated with the site.

2.7.4 *Prehistoric Periods*

2.7.5 Before glaciation the Thames flowed to the north of London through the Vale of St Albans but when glaciers blocked the river's path the Thames migrated southwards towards its present position. At times of low sea-level both the Thames and Rhine met in an area of the southern North Sea and together flowed south-westwards through the English Channel to the Atlantic Ocean. The terrace deposits associated with the River Thames and its tributaries have been found to be rich in Upper Palaeolithic evidence, with large collections of artifacts and fossils from many sites. Mesolithic (to 4,000 BC) Numerous find spots of Mesolithic material are known largely from recent field-walking and records made during the 19th and early 20th centuries (Swale Survey 1999). These find spots are scattered throughout the immediate area but there is as concentration around Oare Creek, to the west of the development site and Nagden to the north-east, also along the southern edge of the Swale marshes and inland headlands leading south of Watling Street. Sea levels were much lower during the Mesolithic period and large areas of the Swale estuary would have been available for exploitation.

2.7.6 *Neolithic (4,000-2,000 BC)*

2.7.7 Data on possible settlements of Neolithic and early Bronze Age data in the area have been collected from numerous flint scatters. (Swale Survey 1999). During the Neolithic period we find the first evidence for the domestication of plant and animal species, although it is likely that Neolithic communities still relied heavily on wild food resources which would have been widely available in the estuary area. The dryland/estuary margin in the vicinity of the development site spans a range of ecological zones and is the key to our understanding of the Neolithic communities in the Swale District. With its light soils, access to fresh water, the dryland/estuary margin at the development site is ideally suited for simple farming and Neolithic flint

scatters at Abbey Farm, Oare, Nagden, Clapgate, School Farm, and Harty Ferry all confirm this hypothesis.

2.7.8 *Iron Age (700BC-AD50)*

2.7.9 A late Iron Age farm was located by Mr Brian Philp to the east of the PDA and just north of Faversham (Philp 1968). Initially, a rectangular enclosure enclosing domestic huts covered an area of about 200 square metres was investigated. A later ditch system, dated by the excavator to about AD 10-20 seems to have been part of an extensive field system which had become filled with silt and rubbish by about AD 50 (Philp 1968).

2.7.10 *The Roman Period (55BC to AD410)*

2.7.11 A Roman villa was found built partially over the Iron Age ditches and the earliest construction is said to date from AD 70-100 (Philp 1968). The villa doubled in size, probably between AD 100-150, and a substantial wing added about AD150- 200. The villa was almost certainly the centre of a farming estate, the boundaries of which have survived as the Anglo-Saxon boundaries of the town of Faversham. Only half the villa was excavated, but it shows features which indicate a Roman villa estate overlaying a Belgic farmstead. Some of the rooms were decorated with painted plaster. However, none of the floors survived in situ, but enough tessellation debris suggests some of the floors were decorated with mosaics of at least five colours.

2.7.12 The plan of the Roman villa shows a house with overall dimensions of 22 by 33 metres (72 by 108 ft); clearly more rooms, and probably another wing, lay to the north beyond the excavated area. and close to the Proposed Development Site (Figure 1).

2.7.13 Built during the 2nd century, this villa estate appears to have continued in use until the late 4th century (Detsicas, 1987). Field-walking to the east and north of the Roman villa by the Kent Archaeological Field School retrieved numerous Roman building ceramics, and Roman pottery, 42 sherds, having a date range from the late 1st to early 3rd centuries. The amount of Roman material found suggests that more Roman

buildings are to be found in this area, both to the east and north in the area of the Proposed Development Site.

2.7.14 The Roman villa estate looked to the Springhead stream, rather than Faversham Creek, for its water supply and transport. The topography and Roman finds at the springhead itself suggest the stream was wider and deeper during the Roman period, and this was confirmed by an auger profile taken of the existing stream (Swale Survey 1999).

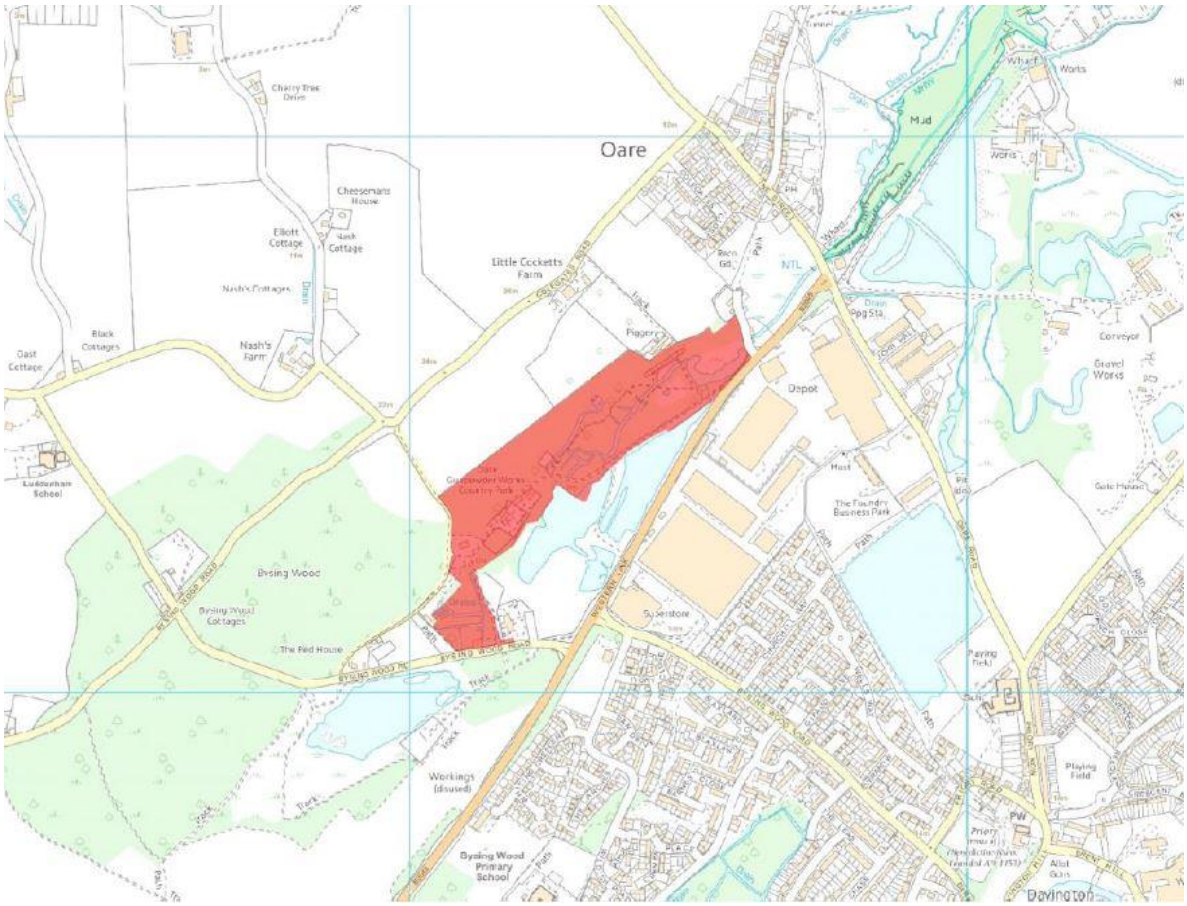
2.7.15 Access to Watling Street, about 1.2 km to the south, was probably by Roman road leading to the Roman and later Medieval port of Thorne. This road, at right angles to Watling Street, runs in a dead straight line to the Medieval port and passes through the Proposed Development Site. This boundary, noted in Anglo-Saxon charters from AD 699, is also mentioned in a perambulation of 1209.

2.7.16 In 2012 an archaeological investigation by Dr Paul Wilkinson of the Kent Archaeological Field School on an area to the east of the known Roman villa found the largest Roman aisled barn known in Kent. Recent work has shown that the waters of the Swale estuary lapped the buildings, which during the Roman period sat beside a large tidal inlet deep enough to harbour ships. Current work on the complex's bathhouse has yielded prestigious small finds including silver jewellery, exotic glass vessels and large quantities of coloured wall plaster which, together with the structure's impressive dimensions, measuring some 45m by 15m, suggests a building of some importance.

2.7.17 *Saxon and Medieval*

2.7.18 The first written reference to the port of Faversham was in AD 699 when King Wihtred called his Council together at a place called Cilling, possibly downstream (at Clapgate) from the Proposed Development Site, and to the east of Faversham town. Cilling was a Saxon port of some importance. Another charter of 812 says: *"Strata antiqua quae jacet ad portum quae dicitur Cillincg*" ("The ancient street which leads to the port named Cilling"). This street may still survive as a feature in the landscape, and pass through the Proposed Development Site. Cilling was probably a Royal port

belonging to the King. The grass pastures to the east are called “Cynincges Cua Lond” (“The King’s cattle pastures”). Cilling, which possibly means “gully stream” (Gelling, pers. corres. 1995), would possibly have been a muddy foreshore, laid with a bed of tree branches to serve as a hard.




OS plan. Red area indicates the location of the PDA within the Scheduled Monument arrea

2.7.19 The history and development of the gunpowder mills at Oare are discussed in detail in the 1994 RCHME/ Faversham Society booklet, which provided the details added to the Scheduled listing seen section 10. It is not proposed to repeat the detail here. The site of the proposed footbridge is highlighted in the RCHME’s 1991 survey drawing (MAP 5) as the site of an area known as No. 27 – Tramway Causeway and Bridge. Therefore, focus will be given specifically in understanding the tramway and bridge aspect of the site. Other numbers provided in the following paragraphs also refer to the key in MAP 5.

2.7.20 Documentary evidence suggests that gunpowder manufacturing has been in operation on the site since the 18th century under private ownership. Much of what is known regarding the buildings is from 19th century maps. Operation continued under several different ownerships and at times grouped with other manufacturing operations in the nearby area known as Marsh and Home Works. There were changes to the site throughout its operation. A major change occurred in 1926, under the ownership of Nobel Industries Ltd, which was absorbed in to ICI in that year, investment and refurbishment was made to the Oare site. By 1934 the Oare site closed following the transfer of works to Scotland.

2.7.21 It is known that at the end of its working life that the mill was served by a tramway system to transport the powder. This was powered by hand or by horses. Very little is known about the tramway, when it was originally laid down and exactly what routes it took across the site. Photographs of the site catch brief glimpses of the tramway at various buildings and along with surviving earthworks seen during the RCHME survey, aspects of the tramway can be understood.

2.7.22 The site of the northern eastern end of the leat originally had two bridges, with the site of No. 27, being the far northern bridge. The southern bridge (No. 23) was a footbridge. Both were brick built. The leat in this section of the gunpowder works was known to be approximately 5m in width and by the location of No. 27 had joined to form a single channel which then passed under a bridge into the lower pond through an earthen causeway located at No. 29. This section was interpreted as not a dam but to provide an easy road across the valley.

2.7.23 The nature of the construction of the tramway has left little by way of evidence on earthen tracks. According to the RCHME/Faversham Papers report, one section survived by the Cartridge Packing Shed (No. 3), at the far southern end of the site. The RCHME reports suggests that the tramway may have also been utilising tracks by the Glazing House (No. 19). The site visit showed the tramway raised to first floor level in front of the 1926 incorporating Mills (No. 28) on a raised wooden platform. The route of the tramway from the incorporating mill towards the site of the bridge across the

leat (No. 27) can been seen as a curved causeway which part of it cut away by a current footpath.

2.7.24 Another possible route for the tramway is north east from the Press House (No. 24), that runs in a straight line on the eastern side of the site up to what was the Stables (No. 35) given the tramway was powered by ponies. This building was in existence by 1897. It is not clear whether this eastern route would have been the main route for a tramway into the southern area of the works or whether, any tramway would have passed west from the stables across the main large causeway across the valley at the lower pond and down along the western side of the valley. However, we know that the horses pulled carts north of the works on a tramway at Oare Creek and surviving earthworks suggests this this continues out of the works on the eastern side.

2.7.25 The fact that there is no suggestion from the historic maps of a bridge crossing the valley at Site No. 27, it is possible that this crossing did not exist until the building of the incorporating mills (No. 28) in 1926 and that if the main tramway route was via the eastern side of the site, then this allowed access across the valley. Perhaps as the RCHME report suggests that north of these incorporating mills the tramway did cross the main causeway. If so, it is possible that the north eastern part of the works had a circular element to the tramway with the southern part following the line from the Press House (No. 24) following the track down all the way pass the group of buildings (No. 16, 15, 13), continuing southwards toward the southern most building (No. 3).

2.7.26 However, the relationship of the tramway across the bridge at No. 27 to the eastern side of the valley is obscured due to the Victorian dump. The Victorian dump has not been marked on any maps. The dump can clearly be seen in Plate 2 and based on that, it measures some 50x45m rather than the 30x30m suggested in the RCHME report. The dump contains fragments of pottery and glass, along with smaller pits within the dump itself and obscures the relationship of the causeway (No. 27) on the eastern side of the valley. However, whilst the contents of the dump are Victorian, it does not make sense that it was there in 1926 when the tramway was built as where

would the track go once it had crossed this side of the bridge, so the dump contents may have been dumped from elsewhere, possibly after the works had closed?

2.7.27 The RCHME survey in 1991 reports that the causeway was 6m wide and 1.2m high at the valley bottom and that it crossed the leat on a concrete bridge that had been supported on brick piers which had now fallen. Evidence at the time was seen of tracks on the surface of the concrete bridge floor(Plates 1-6).

## 2.8 Historical Map Progression

2.8.1 *Andrews, Dury and Herbert map of 1769*. The published atlas some thirty years before the Ordnance Survey, immediately becoming the best large-scale maps of the county. Whilst the works were thought to be in existence at this time, there is no indications of the works other than 'A Mill' is shown in the location next to was watercourse that flows into Oare Creek. The centre of Oare is north west of the creek (MAP 1).

2.8.2 *Ordnance Surveyors Drawings 1797*. This map shows the individual buildings and field boundaries and clearly states that there are Powder Works. Unlike the previous map the watercourse now looks intensely managed. There are large pools of water at the south western end of the site. North east of the PDA is a large pond and the PDA is on a long leat that feeds this pond in its eastern corner. The map shows buildings scattered across the south western part of the site. In addition to the main leat that traverses across the site there is another much shorted straight leat south of the main leat that feeds another leat eastern of the pond. A track passes along the eastern side of the site and there are also a number of other managed waterways across the site.

2.8.3 *Tithe map from 1844*. This shows a number of changes to the watercourses. The straight leat south of the main leat is no longer in place. The area is referred to as a meadow in the tithes. The main powder works in area designated 40, with 41 as a pond and 42 as house and garden. Although north east, closer to Oare Creek is area designated 14, which is also part of Oare Powder mill and yard. (MAP 3)

2.8.4 *London, Chatham and North Kent Railway Plan Oare Gunpowder Works 1846.* Whilst undertaken only a couple of years after the tithe map, this map clearly labels the various buildings seen at the gunpowder works for the first time. The Corning House is seen for the first time and included two dog-legs off the main leat. There is a track along the eastern side of the site until it reaches the Press House where is traverses across to the western side of the site to continue southwards. In addition, there is now a causeway at the southern end of the northern most pond with a footpath that crosses to the west side and peters out. The area of the PDA appears, marshy/meadow land. There is no suggestion of any crossing at the PDA site at this point in time (MAP 4).

2.8.5 *Historic OS map 1865*. There is little change at the PDA itself. However, around the PDA there have been other changes at the gunpowder works. The area north of the PDA that was previously where the footpath petered out is showing as a pit. The track also now continues along the western side of the northern part of the leat towards the Corning House, and continues southwards to join up in the area of the main, much wider track that traverses the eastern side just south west of the Press House. The area north of the PDA is wooded, whilst that map south of the PDA does not show any defining features (MAP 5).

2.8.6 *Historic OS Map 1896.* There is little change. Outside of the gunpowder works there are now brickworks of the works that have a tramway from the brickworks towards Oare Creek. This tramway was probably substantial as at the gunpowder site there is still no mention of a tramway. At the PDA there is still a rectangular area of cleared ground of purpose unknown but now has a new large rectangular building located in the eastern corner of that rectangular area and is thought to be a stable block and perhaps a paddock for the horses. Interesting the OS map for this period does show tramways at the other nearly gunpowder sites at the Uplees and Marsh works (MAP 6).

2.8.7 No changes are noted. However, this is after the 1926 refurbishment and improvement but does not show the new incorporating mills that are to the north of the PDA. There is also no suggestion on the map of a tramway or a causeway crossing although the site had closed in 1934 (MAP 7).

**2.9.0. Walkover Survey**

2.9.1 A walkover survey was undertaken on the 10thth April 2019. The PDA is located west of the new incorporating mills which have a re-constructed wooden walkway at the historic first floor level. The route of the path can be traced from this point towards the bridge crossing, which has a vegetation covered earthen bank to raise the ground level leading to the approach of the leat. Any bridge would have needed to be high enough to allow for the movement of punts along the leat (cover photograph).

2.9.2 At the leat crossing point itself on the northern bank are broken and tumbled blocks of bricks (Plate 3), which are the remains of the brick piers and to one side are a couple of concrete bases laying partly in the leat. On the southern side are the remains of one of the concrete bases where one end of the concrete base appears to be in situ, with the other end sloping sharply into the water (Plate 4). Underneath the concrete base are the remains of the decaying iron structure that would have originally been the beams to support the concrete floor of the bridge (Plate 4). The length of the surviving concrete floors suggested that more than one would have been needed for the bridge.

2.9.3 The Faversham Papers report, in 1991 mentions that the tramway tracks are visible on the surface of the concrete. There was no evidence of that at the site visit, but within the surface of the concrete spaced circa 45cm apart are metal studs which may have held the track on the bridge (Plate 5). It is not known what will happen to these concrete floors remains once the new bridge is constructed but they may need to be removed from their current position to make way for the new bridge. The 1991 report mentions that tramway tracks survived in the area of the

Cartridge Packing Shed. However, this was not able to be confirmed as this area is not part of the public country park and is on private land. However, one small piece of what looks like possible tramway was seen on the eastern trackway just to the south east of the bridge crossing (Plate 6). Confirming that it at least ran along the eastern side of the works.

# 3 SITE ASSESSMENT

## 3.1 Introduction

3.1.1 A walkover survey was undertaken on the 10thth April 2019. The PDA is located west of the new incorporating mills (Plate 10), which have a re-constructed wooden walkway at the historic first floor level. The route of the path can be traced from this point towards the bridge crossing (Plate 1), which has a vegetation covered earthen bank to raise the ground level leading to the approach of the leat. Any bridge would have needed to be high enough to allow for the movement of punts along the leat (cover photograph).

3.1.2 At the leat crossing point itself on the northern bank are broken and tumbled blocks of bricks (Plate 3), which are the remains of the brick piers and to one side are a couple of concrete bases laying partly in the leat. On the southern side are the remains of one of the concrete bases where one end of the concrete base appears to be in situ, with the other end sloping sharply into the water (Plate 4). Underneath the concrete base are the remains of the decaying iron structure that would have originally been the beams to support the concrete floor of the bridge (Plate 4). The length of the surviving concrete floors suggested that more than one would have been needed for the bridge.

3.1.3 The Faversham Papers report, in 1991 mentions that the tramway tracks are visible on the surface of the concrete. There was no evidence of that at the site visit, but within the surface of the concrete spaced circa 45cm apart are metal studs which may have held the track on the bridge (Plate 5). It is not known what will

happen to these concrete floors remains once the new bridge is constructed but they will need to be removed from their current position to make way for the new bridge.

3.1.4 The 1991 report mentions that tramway tracks survived in the area of the Cartridge Packing Shed. However, this was not able to be confirmed as this area is not part of the public country park and is on private land. However, one small piece of what looks like possible tramway was seen on the eastern trackway just to the south east of the bridge crossing (Plate 6). Confirming that it at least ran along the eastern side of the works.

3.1.5 The map regression exercise does not appear to show that there is any bridge at the PDA. From documentary and photographic evidence, it suggests that the tramway itself was put into place circa 1926. With a tramway and surviving earthworks showing the path of the tramway following the construction of the 1926 incorporating mills, suggests this was when a concrete bridge was added to cross the leat at this point of the PDA. Unfortunately, we have not been able to track down photographs of when the bridge was in active use. Surviving material shows that the bridge was a utilitarian construction of brick piers and concrete floor supported by metal beam. It is possible that the base of the brick piers remain in situ on the banks of both sides and that it is the higher level of the brick piers that have tumbled. One of the concrete floors appears to remains partly in situ with possible evidence of the fixing for the tramway tracks embedded in the concrete.

# 4 DEVELOPMENT PROPOSALS AND ASSESSMENT OF IMPACT

## 4.1 Development Proposals

4.1.1 The proposed development is for new bridge over one of the leats. Within the works, this area has been used as a crossing point through the informal dumping of logs into the leat. The new wooden bridge design is to match existing ones at the works and will provide proper access to the boardwalk in the wet meadow area. There will be each side of the bridge, five Ekki timber piles, making a total of 10, of which a total of four would be located within the leat and six on the banks either side. The plans show the piles to be 1.25m in length. The boardwalks to tie the bridge into the existing path will be 1m length of Ekki timber, each set within a concrete block of 30x30cm. The purpose of this new bridge is to allow access to the boardwalk in the wet meadow area which is only currently accessible via steps by the 1926 incorporating mills. From our findings, the primary heritage significance of the tramway, causeway and bridge is its historic interest as part of the 1926 improvement to the Oare Gunpowder works. As for the tramway itself there are virtually no surviving remains. Of the original bridge, there are surviving remains, which do inform about its structure and setting, although the bridge is not able to be resurrected or used. The leat historically was accessible by punt along its length. The location of two piles within the channel of the leat will no longer show this openness along the length of the leat and it is possible that there are chance finds dropped within the leat, these would be impossible to locate in the silt. However, the proposed development does show that the piles on either side of the bank are potentially set back from the bank far enough in order to prevent any disturbance to the brick pier remains as leaving evidence of them would be preferable. If a use could be found with regards to the remaining concrete floor, this will assist retaining some of the historical significance of the original construction.

## 4.2 Assessment of Physical Impact on Setting

4.2.1 Step 1 of the methodology recommended by the Historic England guidance *The Setting of Heritage Assets* is '*to identify which designated heritage assets might be affected by a proposed development. Development proposals may adversely impact heritage assets where they remove a feature which contributes to the significance of a designated heritage asset or where they interfere with an element of a heritage asset's setting which contributes to its significance, such as interrupting a key relationship or a designed view'.* Consideration was made as to whether any of the designated heritage assets present within or beyond the 500m study area include the site as part of their setting, and therefore may potentially be affected by the proposed development. Assets in the vicinity identified for further assessment on the basis of proximity and intervisibility comprise:

4.2.2 This report has demonstrated that the PDA lies within the Oare Gunpowder Works Country Park, which is a Scheduled Ancient Monument. The PDA is located on a tramway crossing of the leat for the works created circa 1926 that existed for a few years until the closure of the works. This report has focussed specifically on the tramway and crossing within the Scheduled Ancient Monument.

4.2.3 The proposed development for a new footbridge allowing step free access to the wet meadow and a safe way to cross the leat will offer public benefits and will outweigh any 'less than substantial' impact to the tramway bridge and the conservation area outweigh any potential harm done.

## 4.3 Conclusion

4.3.1 The purpose of this Heritage Impact Statement was to assist Historic England to understand the impact of the proposed development as required by the NPPF on the significance of any Heritage Assets affected, including any contribution made by their setting. This Heritage Statement has been prepared by SWAT Archaeology for the landowners in support of the application for proposed developments of land at Oare Gunpowder Works, Faversham, Kent

4.3.2 The Heritage Statement has found that the heritage assets will remain unaffected by the proposed development, which retain their historical and aesthetic qualities with the proposed development producing 'no harm' on their settings or significance of these assets in accordance with NPPF paragraph 202.

## 5 OTHER CONSIDERATIONS

### 5.1 Archive

5.1.1 Subject to any contractual requirements on confidentiality, two copies of this Heritage Impact Assessment will be submitted to the LPA and Historic England within 6 months of completion.

### 5.2 Reliability/Limitations of Sources

5.2.1 The sources that were used in this assessment were, in general, of high quality. The majority of the information provided herewith has been gained from either published texts or archaeological 'grey' literature held at Kent County Council, and therefore considered as being reliable.

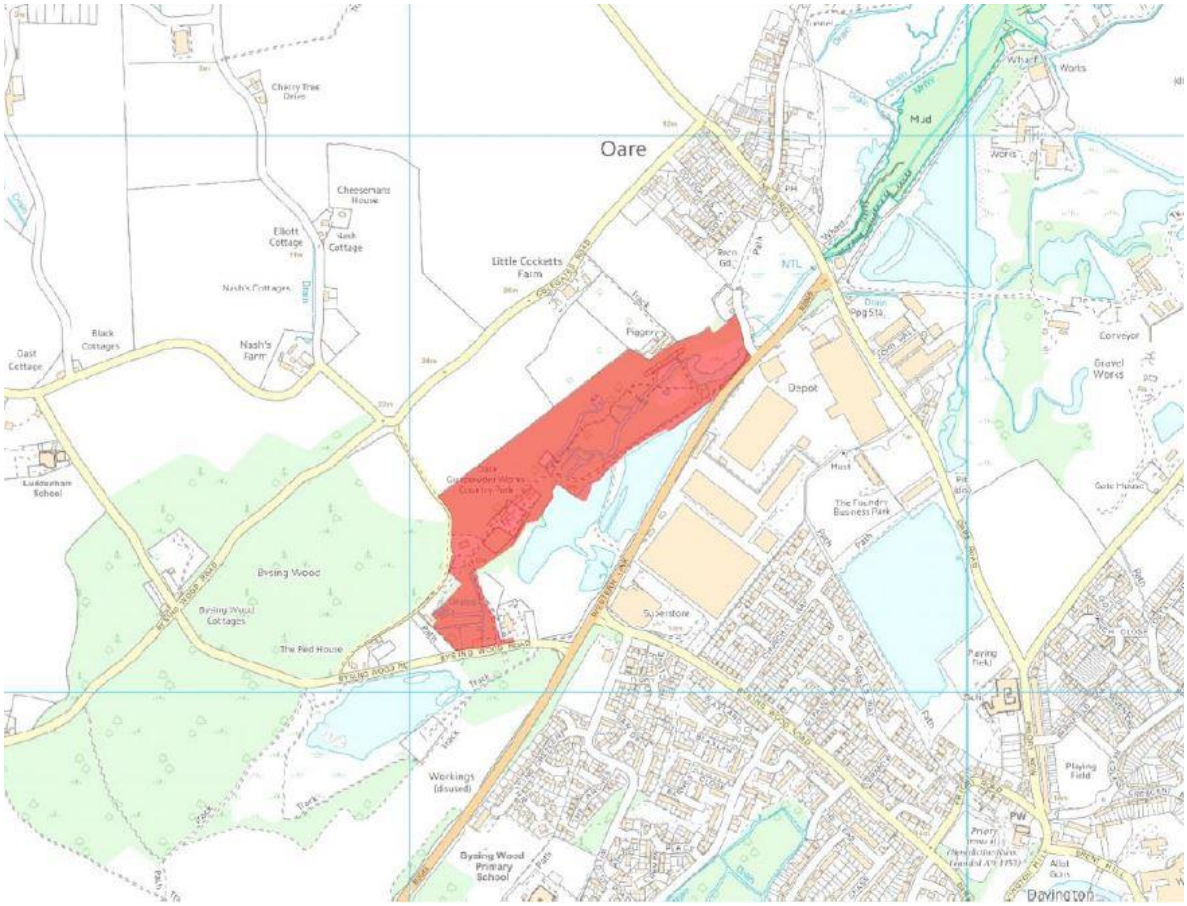
### 5.3 Copyright

5.3.1 Swale & Thames Survey Company and the author shall retain full copyright on the commissioned report under the Copyright, Designs and Patents Act 1988. All rights are reserved, excepting that it hereby provides exclusive licence to Swale Borough Council (and representatives) for the use of this document in all matters directly relating to the project.

Paul Wilkinson

Dr Paul Wilkinson MCIfA., FRSA

Appendix 1. Scheduled Monument Status




**5.4** APPENDIX 1

5.4.1 KCC Heritage HER listing TR 06 SW 1077

Summary

One of the Incorporating Mills may have been built c.1793. The Engine House and No. 2 Incorporating Mills buildings were built c.1840, or shortly thereafter. The original function of the buildings had ceased by 1926. A cess pit situated between the two Incorporating Mills post dates this, when the area seems to have become used for temporary accommodation. A WWII Royal Canadian Air force mug was found which may date this change.

| |
|---|
| **Grid Reference:** TR 00207 62380 |

| | |
|---|---|
| **Map Sheet:** | TR06SW |
| **Parish:** | FAVERSHAM, SWALE, KENT |

***Monument Types***

- INCORPORATING MILL (Post Medieval to Modern - 1793 AD? to 1926 AD)
- ENGINE HOUSE (Post Medieval to Modern - 1840 AD? to 1926 AD)
- CESS PIT (Modern - 1926 AD? to 1926 AD)

***Full description***

Two buildings are shown on the plan of 1793. It is believed that these later became the incorporating mills which were in use from 1844 to 1926. An engine house was built c.1840 which provided the power not only for the incorporating mills, but also the sawmills and the glazing house. Investigations in 2004 found that No. 1 Incorporating Mills was the earliest of the three structures (the others being No.2 Incoporating Mills and the Engine House). No precise dating evidence was found, but the surviving fabric of No.1 Mills suggests that it was probably built at the end of the C18th or start of the C19th and therefore could be one of the buildings on the map of 1793. No evidence has been found for its original source of power. No.2 Incorporating Mills and the Engine House were built c.1840, when No.1 Incorporating Mills was modified to contain two sets of incorporating mills which were powered by the steam engine in the Engine House. No.2 Incorporating Mills were built as three sets of under-driven edge-runner incorporating mills, either at the same time as the Engine House, in 1840, or between 1846 and 1863. At some later date, the machinery in the middle of this building was removed and a masonry wall was built across the structure, dividing it into two each of which contained one set of machinery. The reference in an inventory of 1899 to a continuation shaft for two mills would suggest that these alterations took place before 1899. A relatively recent cess pit, which was probably built in WWII was discovered between Mill nos. 1 & 2. At this time the mills' original function had ceased and the area was used as temporary accommodation.

No.1 Incorporating Mills consisted of three phases of building. It was 9.04m long by 5.01m wide and contained 2 bases for edge-runner incorporating mills which had been altered on at least one occasion. To the rear of this building is a small brick wall 27cm wide, 29cm

tall and which runs for a length of 8m. It appears to have originally supported a sill beam of a wooden building. Outside the west face of the west wall was a brick-lined drain. A retaining wall about 2m behind the west wall, was built in 3 different phases - the earliest of red brick. Beneath this building is a vaulted brick channel, thought to be a culvert, now filled mostly with rubble and silt. Phase 2 of this building consisted of the enlargement of the mill base to the north and the south. Phase 3 consisted of the sealing of the openings which had carried the drive for the under-driven mills, with stone slabs, sealed over with a cement-based mortar. This is thought to have been done c.1926.

No 2 Incorporating Mills consisted of 4 phases of building. The original floor measured 12.7m by 5.08m wide. All 4 external walls were timber framed. The original floor was of broken red bricks. Outside the building, to the east and the west, are brick and tile-lined drains. A vaulted undercroft of red brick runs the full length of the building. Phase 2 took place at some uncertain date between 1850 and 1899. An internal brick wall was built across the structure to divide the mill in two, with each area containing a single incorporating mill. A cement based mortar floor was laid. During phase 3, at an unspecified date, a thicker (50mm) cement-based mortar floor was laid. In phase 4 the 2 remaining mill bases were abandoned and the plates and mill bases were rendered over with a cement-based mortar. The only piece of dating evidence for the latter works was part of a Royal Canadian Air Force ceramic mug. Also during phase 4, a cess pit may have been inserted between Nos.1 & 2 mills.

The Engine House. This was not fully investigated in 2004. The earliest features appear to have been the walls forming the culvert. Several walls consisting of a mixture of red and yellow bricks were found. It was probably built c.1840.

A substantial cess pit 1.27m wide was situated between the two mills. It has concrete slabs over the top and an inscpection cover. The construction of the cess pit would have, in part, destroyed any features which may have existed bweteen the two mills such as the culvert and the duct which would have carried the drive to the under-driven No.2 incorporating Mills. (1)

<1> **Canterbury Archaeological Trust**, 2004, *Archaeological Investigations at Oare Gunpowder Works The Early Incorporating Mills & The Engine House* (Unpublished document). SKE15679.

5.4.2

## 6 REFERENCES

| | |
|---|---|
| **HER Number:** | TR 06 SW 65 |
| **Type of record:** | Monument |
| **Name:** | Oare Gunpowder Works, Faversham |

Summary

The Oare Gunpowder Works was founded at the end of the seventeenth century. In the nineteenth century it was acquired by John Hall and Sons, owners of the Home and Marsh Gunpowder Works in Faversham. The Oare Works produced black powder, continuing to do so until 1934 when production was moved to Ardeer, Scotland. Many of the original buildings survive and in 2005 were restored when the site became a Country Park with a small museum.

| | |
|---|---|
| **Grid Reference:** | TR 0028 6241 |
| **Map Sheet:** | TR06SW |
| **Parish:** | FAVERSHAM, SWALE, KENT |

Monument Types

- GUNPOWDER WORKS (Post Medieval to Modern - 1690 AD to 1934 AD)

| | |
|---|---|
| **Protected Status:** | Scheduled Monument 1016497: OARE GUNPOWDER WORKS |

Full description

If you do not understand anything on this page please contact us.

TR 001 622: Oare works gunpowder factory, founded in c1710, was situated alongside the stream that flows into Oare Creek, just west of Faversham town. After the Napoleonic Wars the works were acquired by John Hall, a Dartford engineer, and eventually became part of ICI Ltd, who ceased gunpowder production at Faversham in 1934. Gravel-working now occupies the site of the Oare Works, but some interesting remains survive: the foremans house, now called Davington Hill, the offices, stores, and remains of No 1 Magazine. (1-2) TR 0035 6245 (GCE). The gunpowder works at Oare appear from documentary sources to have been in operation from the early eighteenth century. In the nineteenth century the works was acquired by John Hall and Son owners of the Home (TR 06 SW 45) and Marsh (TR 06 SW 64) gunpowder works in Faversham. In 1920s the works were one of the few English blackpowder works to escape closure and were refurbished by ICI in 1926. The remains from this date representing the last phase of black powder production technology in England. The works closed in 1934 when black powder production was concentrated at Adeer, Scotland. Some of the newest machinery at the

Oare works was moved to Scotland at this date. The site of the works is covered by dense vegetation, a few buildings are in light industrial use or remain in residential use. This summary is derived from an RCHME archaeological level 3 survey undertaken in April 1991. The results are held in the NMR archive. (3)

In 2005, the overgrown site was cleared and regenerated as a Country Park with public access. Gunpowder buildings were stabilised and restored and some of the machinery brought back from Ardeer and put on display. A small musuem was created to show the history of the gunpowder works. At the date of writing (2007) restoration work is continuing. (10)

From the National Heritage List for England:
Details
The monument is situated at the south western end of Oare Creek on the north western edge of Faversham and includes most of the area occupied by the Oare gunpowder works. This represents the best surviving part of the disused factory and runs from south west to north east for around 810m along the wooded valley. The works survive here in the form of standing buildings and structures, ruins, earthworks and buried remains. Part of an associated water management system, a test range and a tramway are also included. In continuous use from the early 18th century to 1934, the factory complex underwent many phases of expansion and redevelopment. Most visible surviving components date to the 19th and early 20th centuries. Traces of the earliest, 18th century phases of the works will survive mainly in the form of below ground archaeological remains.

Historical records suggest that the privately owned gunpowder works were in operation by 1719. Raw materials such as sulphur and saltpetre, and the finished gunpowder, were transported to and from the mills by way of Oare and Faversham Creeks and the Swale Estuary. The early works were powered mainly by waterwheels and utilised a series of now mostly dry, brick and clay lined canals, also used for transporting materials between the buildings on small punts. The main feeder pond for the water management system was situated beyond the area of the scheduling to the south east. This area has been significantly disturbed by subsequent gravel extraction and is therefore not included in the scheduling.

The main entrance to the works was at the southern end of the monument, and a series of 19th century maps and descriptions indicate that the initial processing of the ingredients took place at the southern end of the site. The mixed ingredients were then transported to the more dispersed incorporating and refining mills situated in the central and northern parts of the monument.

From the mid-19th century steam power was introduced to the works. One of the most impressive surviving structures from this period is the corning house situated in the central part of the monument, near its north western boundary. Corning involved the grading of the powder to produce grains of the correct size for the various end uses. The massive size of the corning house reflects the fact that this operation was one of the most dangerous parts of the refining process. Thought to have been constructed in around 1845 and substantially redeveloped in 1926, the north west-south east aligned, roughly

rectangular structure has rounded corners and is set into a steep hill slope to the north west. The battered, brick and concrete retaining walls stand to a height of around 6m. Its open, south east facing entrance is screened by a huge earthen blast bank. The original superstructure and corrugated iron roof, designed to be blown clear of the building in the event of an explosion, have not survived.

In 1854, Hall and Company took over the ownership of the three Faversham gunpowder factories, resulting in more integrated production practices and new investment in the Oare works. The test range, where the strength and reliability of the gunpowder was checked by test firings, was constructed during this period. It survives as a levelled terrace around 170m long and 11m wide along the north western edge of the monument. Each side of the terrace was screened by specially planted avenues of Wellingtonia trees, the stumps of which survive at 9m intervals. Building foundations visible at the south western end of the range represent an associated laboratory and gun shed.

After World War I, British explosives manufacturers grouped together to form Nobel Industries Limited, and, because of the growing use of chemical explosives, gunpowder production became concentrated in a small number of factories. These included the now integrated Faversham works, comprising the Oare and Marsh works, the latter situated around 1km to the north east. In 1926, Nobel Industries were absorbed into Imperial Chemical Industries (ICI), and the Oare works underwent a new phase of expansion, becoming for a time the largest gunpowder producer in Britain. Among the most impressive buildings constructed during this time was the electrically driven incorporating mill, situated within the north western sector of the monument. This 84m long, north west-south east aligned, concrete based building housed four pairs of mills set on either side of a central motor room. The building retains some of its concrete machine bases. Contemporary photographs have revealed that the building originally had a timber first floor and was fronted with glazed, wooden framed panels, although these features no longer survive. During this period a manually powered tramway was used to move goods around the works. Most of the metal rails were subsequently removed, although a short section is visible within a large storage building situated on the southern edge of the monument.

During the early 1930s it was recognised that the coastal position of the Faversham works made them vulnerable to wartime invasion or aerial bombardment. For this reason, the Oare works were closed for production in 1934, and the factory lands were auctioned in 1935. Some of the machinery was removed to the Ardeer works in Ayrshire, and many of the processing buildings were subsequently demolished. These, along with further, associated archaeological features will survive within the monument in the form of below ground remains.

Building number 23 at the southern boundary of the works adjacent to Bysing Wood Road, all modern fences, railings, signs and the modern surfaces of all paths and tracks are excluded from the scheduling, although the ground beneath these features is included.

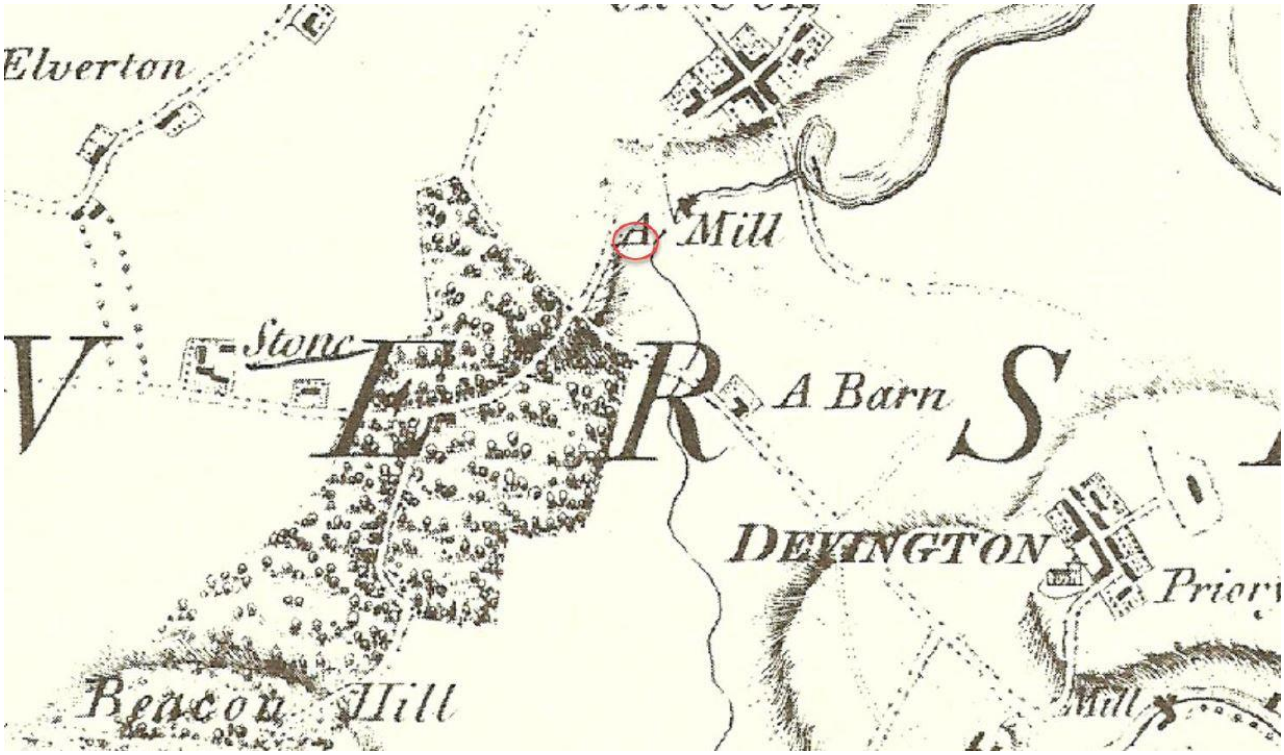
Reasons for Designation

Gunpowder was the only explosive available for military use and for blasting in mines and quarries until the mid-19th century. Water-powered manufacturing mills were established in England from the mid-16th century, although powder had been prepared by hand for at least 200 years. The industry expanded until the late 19th century when high explosives began to replace gunpowder. Its manufacture declined dramatically after the First World War with British production ceasing in 1976. The technology of gunpowder manufacture became increasingly complex through time with the gradual mechanisation of what were essentially hand-worked operations. Waterwheels were introduced in the 16th century, and steam engines and water turbines from the 19th century. Pressing and corning were also introduced between the 16th and 19th centuries to improve the powders. Pressing improved the explosive power of the mill cake and corning broke the pressing cake into different sizes and graded it with respect to its fineness. Additional techniques were developed throughout the 17th, 18th and 19th centuries to improve the quality and consistency of the finished product, and this in turn resulted in a variety of types of powders; ranging from large coarse-grained blasting powders used in mines and quarries, to fine varieties used, for example, in sporting guns. Gunpowder manufacturing sites are a comparatively rare class of monument with around 60 examples known nationally. Demand for gunpowder centred on the London area (for military supply), other ports (for trade), and the main metal mining areas. Most gunpowder production was, therefore, in Cumbria, the south west, and the south east around the Thames estuary. The first water-powered mills were established in south east England from the mid-16th century onwards, and many of the major technological improvements were pioneered in those mills. All sites of gunpowder production which retain significant archaeological remains and technological information and survive well will normally be identified as nationally important.

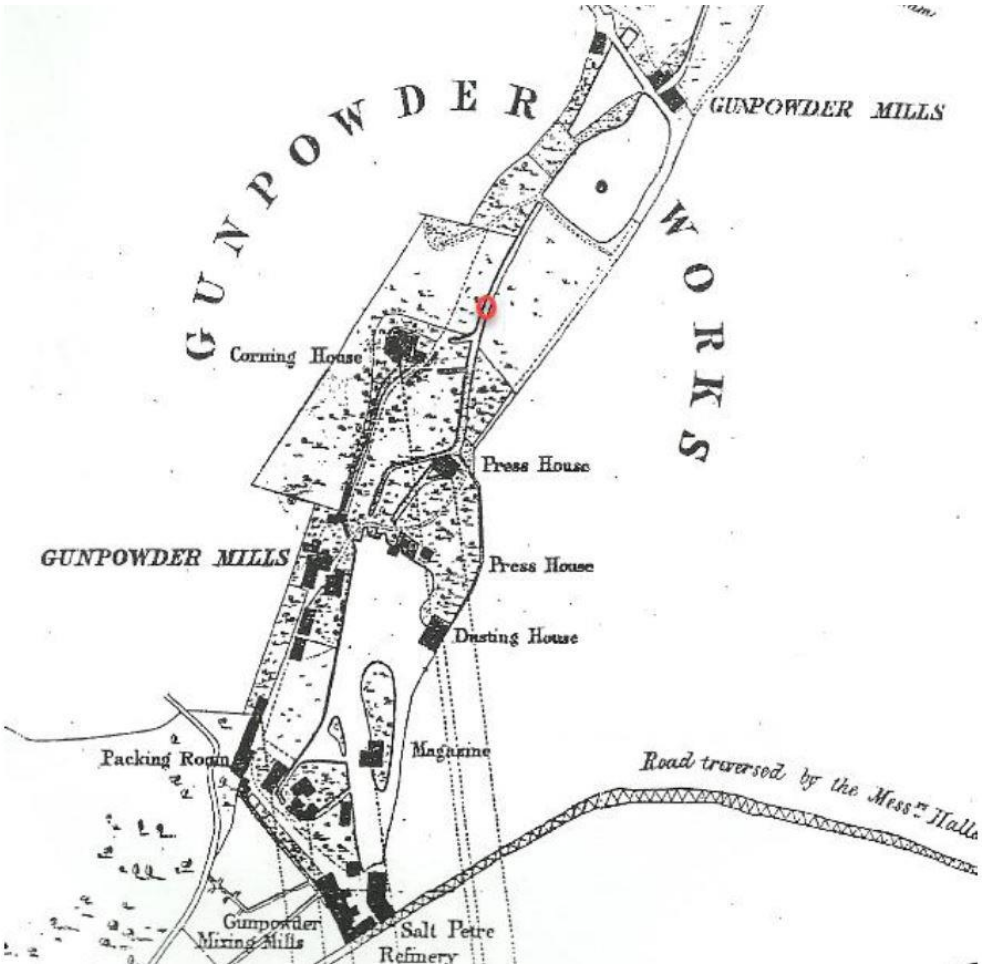
Faversham was one of the most important centres of gunpowder production nationally, and the Oare works comprise the most extensive remains of the industry surviving in and around the town. The works survive comparatively well over most of their original extent, retaining a range of impressive standing buildings and structures in which some internal features, such as concrete machine bases, remain in place. Important survivals also include components of the original transport and power systems which connected the site. Most phases are well documented, at least 215 years of the factory's use are represented by visible remains, with a range of rare early 20th century components, such as the electrically powered incorporating mills, illustrating the peak of English gunpowder technology.

Named as one of the largest gunpowder mills and controlled by the crown. Oare is a large 19th-early 20th century complex. (12-14)

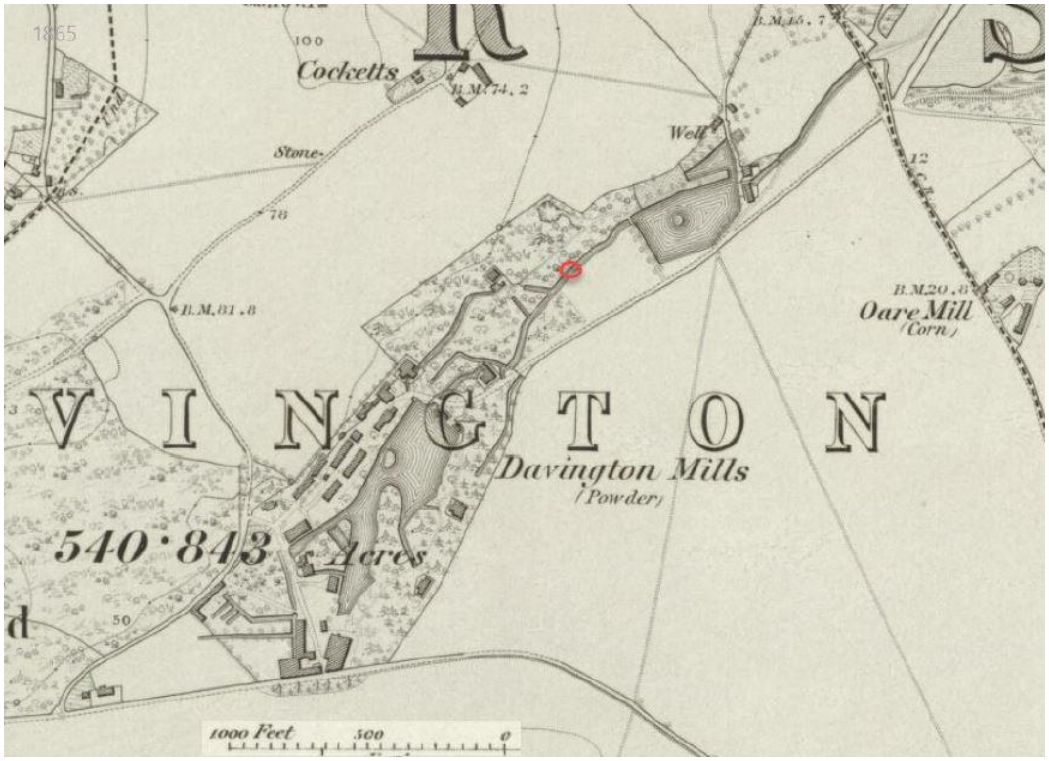
Historic England archive material (15)



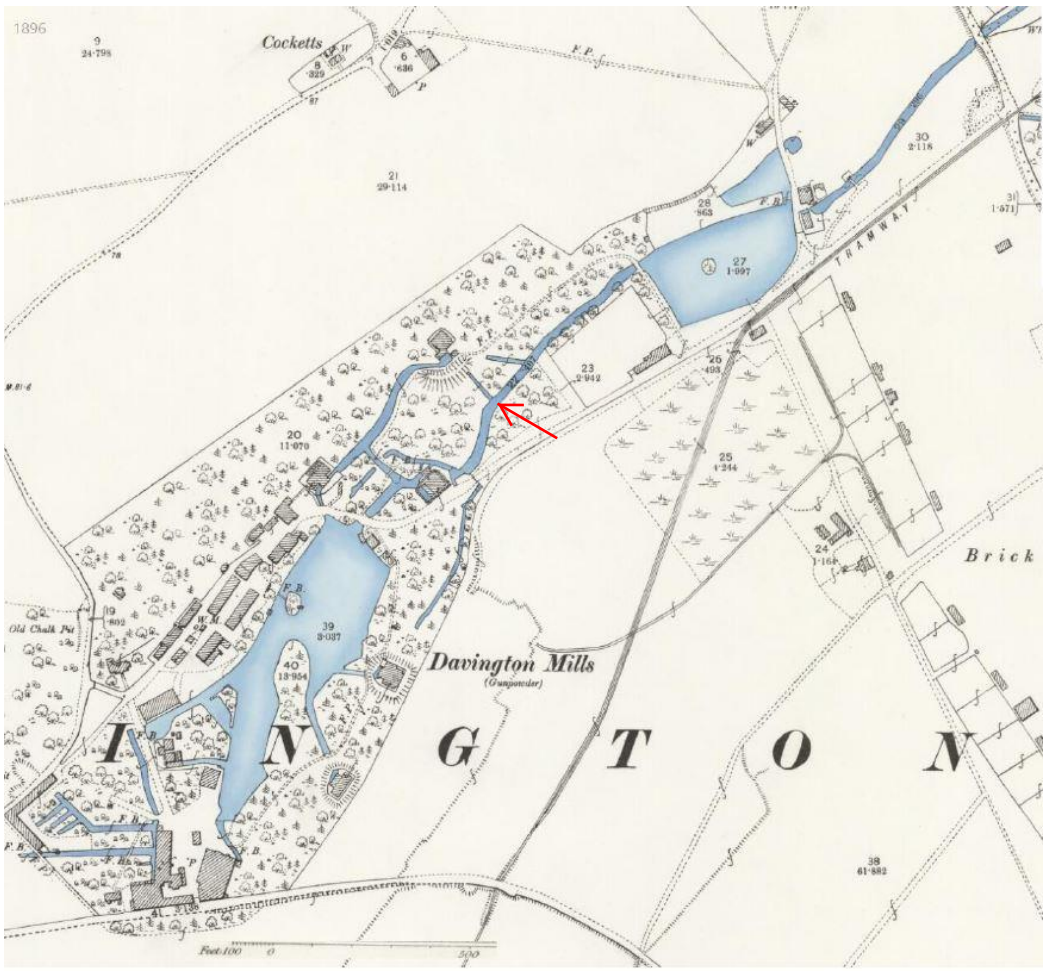

MAP 1. Andrews, Dury and Herbert map of 1769 (red circle site location)




MAP 2. OS 1846



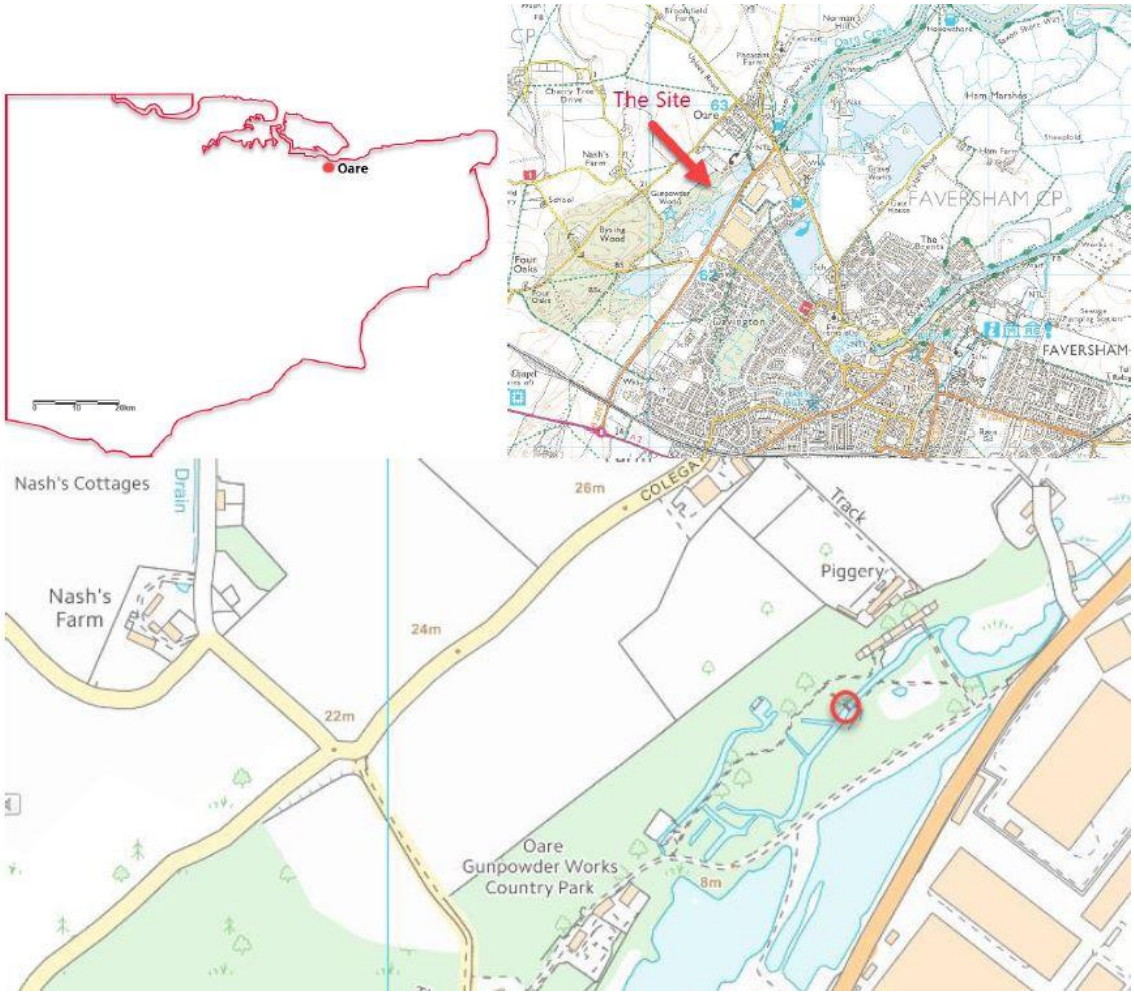

MAP 3. OS 1865



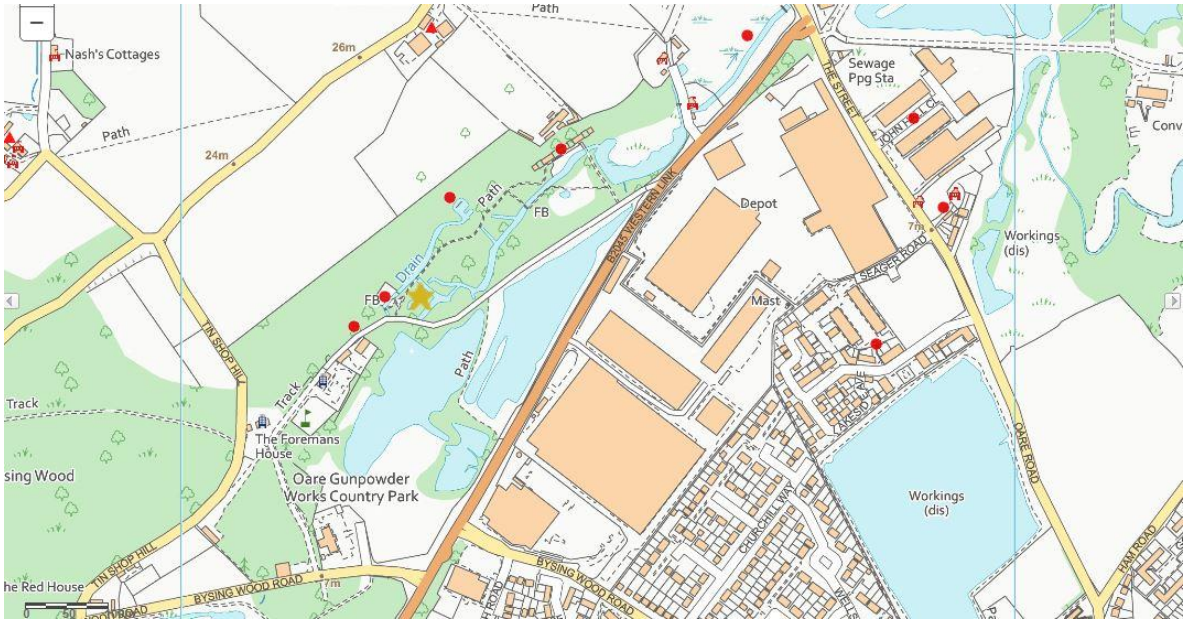

MAP 4. OS 1896


MAP 5. *RCHME Survey 1991. Key (Based on last known use): 1 – Packing Room; 2 -General Stores and Boiler House; 3 -General Stores and Boiler House; 4 – Engineers Shop; 5 – Saw mill, smithy, carpenters lodge; 6 – Expense Magazine; 7 – Tin Shop, Japan and Labels shop; 8 – Charcoal Store; 9 – Foreman's House; 10 – Barrel Store; 11 – Hoop Store; 12 – Packing Rooms, Workshop, Office, Boiler House; 13 – Cooperage; 14 – Oil Store; 15 – Store and timber shed; 16 – Timber Store and Lodge; 17 – Incorporating Mills; 18 – Dusting House; 19 – Glazing House; 20 – Pump and Engine House; 21 – unknown; 22 – Expense Magazine and Hand Press House; 23 – Footbridge; 24 – Press House; 25 – Test Range; 26 – Corning House; 27 – Tramway Causeway and Bridge; 28 – Incorporating Mills; 29 – Expense Magazine(?); 30 – Expense Magazine; 31 – Nos. 1-2 Grove Cottages; 32 – Grove Bungalow; 33 – The White House; 34 – Incorporating Mill; 35 – Stables; 36 – Late Victorian Dump.*


MAP 6. OS 1938




MAP 7. Site Location




MAP 8. KCCHER map

Plate 1. View across the leat towards the north path, Scale 1m (facing NNW)

Plate 2. *View across the leat with the Victorian dump in the background (facing SSE).*

Plate 3. *Side view of one of the surviving concrete floors with the metal beam remains underneath (facing East).*

Plate 4. *View towards the 1926 incorporating mills at the point the tramway would have curved round towards the leat (facing NE)*

Plate 5. *Showing evidence of the metal studs in the concrete floor, Scale 10cm intervals (facing NNW).*

Plate 6. Possible tramway remains seen on the eastern path (facing NNW)