# Archaeological Desk-Based Assessment In advance of Development of Land at The Embankment Marina, Albion Parade, Gravesend, Kent

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Report for The Embankment Marina (Gravesend) Ltd Date: 10/09/2015

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## Archaeological Desk-Based Assessment In advance of Development of Land at the Embankment Marina, Albion Parade, Gravesend, Kent

#### 1 SUMMARY

1.1 SWAT Archaeology has been commissioned by The Embankment Marina (Gravesend) Ltd to carry out an archaeological desk-based assessment of land at the Embankment Marina, Gravesend in Kent. The proposed development is to comprise the demolition of a brick built toilet block and its replacement with a marina building. The site was visited (13.07.2015) and a site inspection undertaken (Plates 1-4).

1.2 This Desk Based Assessment has examined the archaeological data held by Kent County Council (KCC) and other sources. This data has been reviewed and it is recommended that an **Archaeological Watching Brief** to an Archaeological Specification approved by KCC on the footprint of the proposed building will be required.

It is advised that the archaeological work should be secured by an Archaeological Condition attached to the forthcoming Planning Permission.

#### 1.3 Historical development

The proposed development area (PDA) is located on the west bank of the canal lock chamber and north of the canal basin of the Thames and Medway Canal built in c.1799. To the west is the historic New Tavern fort built in the 18<sup>th</sup> century as an artillery fort and continued in this role to the close of World War II (Plates 7, 8, 9). Examination of cartographic sources shows that from the historic maps available for study the area of the PDA was open land from 1588 to 1801 but by 1809 the Walkers plan shows that the 'Canal Basin' had been completed with the lock and drawbridge (Plate 19) - all adjacent to the Proposed Development Area (PDA).

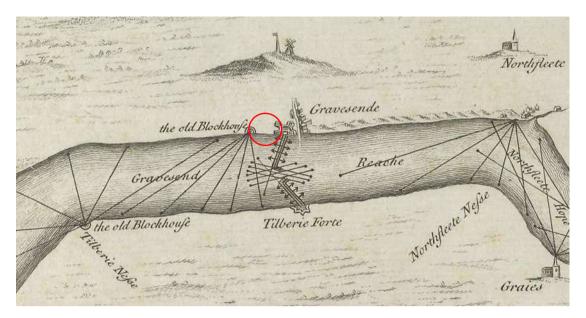


Figure 1a. Map of 1588 (area of development highlighted in red)

1.4 The earliest map (Figure 1a above) that could be found through research is the 1588 map of the artillery defences of the River Thames. 'Tilberie Forte' is identified as is another fort across the river at Gravesend and to the east of 'Gravesende'. This may be a precursor to the 18<sup>th</sup> century New Tavern Fort yet to be identified in the archaeological record. Further east on the Kent side 'the old Blockhouse' is shown which may be the Milton Blockhouse (TQ 67 SE 32). In between these two fortifications (red circle) there are no features in the vicinity of the PDA.

1.5 By 1769 the Andrews Dury map (Plate 7) shows 'Tilbury Fort' and 'New Tavern'. In addition the town of Gravesend is shown in detail as is the PDA which seems to be a straight stretch of river bank backed by an earth sea wall. The MOLAS Archaeological and Built Heritage Assessment of 2008 says that: 'The 1769 Andrews Drury and Herbert map shows a marsh covering the area later occupied by the Canal Basin (MOLAS 2008: 5.2.47). Indeed the Museum of London Archaeological Services sums up the archaeological potential of the PDA as:

"It is likely that for much of the prehistoric period the western end of the canal was located within salt marsh or seasonally inundated land exploited for resources by local populations.

This exploitation intensified during the Neolithic and Bronze Ages, culminating with extensive Roman activity in the area. From the later medieval period, land reclamation is likely to have occurred along the margins of the marsh, which was divided between local parishes.

Reclamation continued during the Post-medieval period when the area was increasingly used for military purposes" (MOLAS 2008).

In addition both Sandra Soder, Lynda and Victor Smith recommended in their seminal work in 2000 that:

'If any excavation of the Basin or Canal was undertaken it will probably yield many interesting small finds and an archaeological watching brief would be advised'.

1.6 The Walker plan of 1809 show the area of the PDA to be devoid of development but does show the newly constructed canal basin (Plate 19) whilst the Ordnance Board sketch of 1834 shows no development on the area of the PDA (Plate 20) and the plan of 1844 shows the same situation (Plate 21). The 1866 OS map shows the 'Canal Basin', lock gates and swingbridge (Fig. 1).

#### 2. Introduction

The Desk-Based Assessment was commissioned by Sharon Brokenshire of The Embankment Marina (Gravesend) Ltd in order to supplement a planning application for the development of the site at the Embankment Marina at Gravesend.

Gravesham Borough Council has indicated it will require an Archaeological Deskbased Assessment Report to clarify the extent of known archaeology on the development site and it's near vicinity as part of the planning process.

- 2.1 Correspondence from Ms Wendy Rogers at KCC Heritage has said that: 'early OS maps indicate post medieval industrial workings and buildings some of which may have been directly associated with the canal. A quick review of some of the late 19<sup>th</sup> and early 20<sup>th</sup> century OS maps clearly show a range of buildings and redevelopment on this site' (Rogers 18/06/2015).
- 2.2 A thorough search through the OS historic archive held at Kew and the online facilities of the British Library for the 1799 Ordnance Survey Surveyors Drawings has shown quite clearly that there are no buildings to be found on the footprint of the

proposed development area (PDA) on any of the earliest maps and the OS historic maps (Plates 18-21. Figures 1-8).

2.3 This desktop study has been produced in line with archaeological standards, as defined by the Institute for Archaeologists (revised 2011). A desktop, or desk-based assessment, is defined as being:

"a programme of study of the historic environment within a specified area or site on land, the inter-tidal zone or underwater that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets and, in England, the nature, extent and quality of the known or potential archaeological, historic, architectural and artistic interest. Significance is to be judged in a local, regional, national or international context as appropriate". (CIFA 2011)

The purpose of a desk-based assessment is to gain an understanding of the historic environment resource in order to formulate as required:

- 1. an assessment of the potential for heritage assets to survive within the area of study.
- 2. an assessment of the significance of the known or predicted heritage assets considering, in England, their archaeological, historic, architectural and artistic interests
- 3. strategies for further evaluation whether or not intrusive, where the nature, extent or significance of the resource is not sufficiently well defined
- 4. an assessment of the impact of proposed development or other land use changes on the significance of the heritage assets and their settings
- 5. strategies to conserve the significance of heritage assets, and their settings

6. design strategies to ensure new development makes a positive contribution to the character and local distinctiveness of the historic environment and local place-shaping

7. proposals for further archaeological investigation within a programme of research, whether undertaken in response to a threat or not.

(CIfA 2011)

#### 2.1 POLICY AND RESEARCH FRAMEWORKS

This report has been prepared in accordance with national and regional policy regarding heritage assets and with reference to research frameworks.

The National Planning Policy Framework (March 2012), and in particular Policy 12: 12.8 is of some importance and itemised below:

#### 12. Conserving and enhancing the historic environment

**12.8.** In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation' (NPPF 2012).

#### **Local Policy**

Local planning policy is set out in the Gravesham Local Plan Core Strategy (September 2014) and saved policies from the Gravesham Local Plan First Review (1994). Gravesham Local Plan Core Strategy Policy CS20 'Heritage and the Historic Environment' states that the Council will accord a high priority towards the

preservation, protection and enhancement of its heritage and historic environment as a non-renewable resource, central to the regeneration of the area and the reinforcement of sense of place. Particular attention in this regard will be focused on those heritage assets most at risk through neglect, decay or other threats. Securing viable, sustainable and appropriate futures for such assets at risk will need to be reconciled with the sensitivity to change that many present'.

#### Research Frameworks

The national and regional policy outlined above should be considered in light of the non statutory heritage frameworks that inform them.

English Heritage has issued detailed guidance on the *Setting of Heritage Assets* (2011). This guidance is based on principles and guidance already issued by English Heritage in the *Historic Environment Planning Practice Guide* (2010), and *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment* (2008).

It provides a framework for assessing impacts based on the identification of individual asset's cultural significance and the relationship between that and its surroundings followed by assessment of the degree to which change in the surroundings affects significance.

This Desk-Based Assessment therefore forms the initial stage of the archaeological investigation and is intended to inform and assist in decisions regarding archaeological mitigation for the proposed development and associated planning applications.

#### 2.2 The Proposed Development

The proposed development will comprise of a planning application for a marina services building to design and location approved by the Planning and Conservation Officers of Gravesham Borough Council.

#### 2.3 Project Constraints

No project constraints were encountered during the data collection for this assessment.

#### 2.4 Geology and Topography

The Geological Survey of Great Britain (1:50,000) has been consulted and shows that the proposed development site (PDA) is situated on bedrock geology of Seaford Chalk and/or Thanet Sand Formation, Sand, Silt and Clay. The Superficial Deposits are Alluvium-Clay and Silt. However, on the site visit it was noticed the area of the PDA adjacent to the lock is about 1m higher than the surrounding land which may suggest that some spoil from the cutting of the lock was used to reinforce and stabilise the earth bank and the area of the PDA could be made up ground. The PDA is to the east of Gravesend and is within the Riverside Conservation Area and is located on the west side of the lock chamber which accesses the Canal Basin located to the north of Canal Road. The average OD height of the PDA is 4.50mOD.

#### 3 AIMS AND OBJECTIVES

#### 3.1 Introduction

The Desk-Based Archaeological Assessment was commissioned in order to supplement a planning application for the development of land at the Embankment Marina, Albion Parade, Gravesend in Kent. The proposals are for a marina services building which will include an office, toilet, shower, changing, and kitchen facilities (Appendix 1).

#### 4 METHODOLOGY

#### 4.1 Desk-Based Assessment

#### 4.1.1 Archaeological databases

The local Historic Environment Record (Plates 14-17) held at Kent County Council, the Urban Archaeology Data Base, the Archaeology Data Service Portal (ADSP)

provides an accurate insight into catalogued sites and finds within both the proposed development area and the surrounding environs of the former Canal Basin.

The Archaeology Data Service Online Catalogue (ADS) and was also used. The search

was carried out within a 500m radius of the proposed development site (15/07/15). The Portable Antiquities Scheme Database (PAS) was also used as an additional source as the information contained within is not always transferred to the local HER data base.

#### 4.1.2 Historical documents

Historical documents, such as charters, registers, wills and deeds etc were deemed not relevant to this specific study. However, historic maps were consulted.

#### 4.1.3 Cartographic and pictorial documents

A full map regression exercise was undertaken during this assessment. Research was carried out using resources offered by Kent County Council, the local library service, and the Internet plus Ordnance Survey Historical mapping. Research was also carried out using resources available on the Internet and Ordnance Survey Historical mapping (Figures1-8).

#### 4.1.4 Aerial photographs

The study of aerial photograph's held at the Kent Archive Centre, Maidstone has not added a great deal to this study. However, the collection of aerial photographs by Google Earth was consulted with some success (Plates 10-13).

#### 4.1.5 Geotechnical information

No geotechnical investigations were available for this study.

#### *4.1.6 Secondary and statutory resources*

Secondary and statutory sources, such as regional and periodic archaeological studies, landscape studies; dissertations, research frameworks and Websites are considered appropriate to this type of study and have been included within this assessment where necessary.

#### 5 ARCHAEOLOGICAL AND HISTORICAL DEVELOPMENT

#### 5.1 Introduction

	Palaeolithic	c. 500,000 BC – c.10,000 BC
	Mesolithic	<i>c</i> .10,000 BC – <i>c</i> . 4,300 BC
<u>.</u>	Neolithic	c. 4.300 BC – c. 2,300 BC
Prehistoric	Bronze Age	c. 2,300 BC – c. 600 BC
Preh	Iron Age	c. 600 BC – c. AD 43
Roma	ano-British	AD 43 – c. AD 410
Anglo	o-Saxon	AD 410 – AD 1066
Medi	eval	AD 1066 – AD 1485
Post-	medieval	AD 1485 – AD 1900
Mode	ern	AD 1901 – present day

Table 1 Classification of Archaeological Periods

5.1.1 The archaeological record for Gravesend is recognised as an archaeological resource of local importance and with most of the Gravesend Riverside Conservation Area set within Kent County Councils principal designated Area of Archaeological Potential (AOP) with the Canal Basin having its separate AOP.

Evidence of prehistoric activity in and around Gravesend is limited to individual finds such as Neolithic axe heads, Iron Age coins although recent excavations at Gravesend and North Kent Hospital show that there was prehistoric and Roman occupation in the locality of Gravesend (TQ 67 SE 347).

- 5.1.2 The Romans built a settlement at nearby Springhead and the Roman town of *Vagniacae* seemed to have been built on the site of an Iron Age settlement that the Romans occupied in 43AD.
- 5.1.3 The Early Medieval period is attested by hoards of Saxon coins and pottery found at various locations around Gravesend, and the late medieval period by the

site of Milton Blockhouse built in 1539 (TQ 67 SE 32) and the nearby New Tavern Fort (TQ 67 SE 37) rebuilt in 1780 as a earthwork fronted by a unrevetted ditch and armed with 15 muzzle loading cannon.

5.1.4 Of some importance is the nearby Thames and Medway Canal (TQ 67 SE 20) dating from 1799 when an engineer Ralph Dodd published a pamphlet and began to advertise for investment in the proposed six mile canal. By 1800 the canal company has received the necessary Act of Parliament and work began at the Gravesend end of the canal.

The canal was originally designed to provide a safe route for ships and barges from the Deptford and Woolwich Dockyards supplying ordnance to Royal Navy ships lying at Chatham and thus avoiding the danger of French privateer ships operating in the Thames Estuary.

- 5.1.5 Adjacent to the PDA is the listed Grade II Barrelled Lock Chamber, Sea Walls, Swing Bridge, Locks and Canal Basin (508409).
- 5.1.6 The 20<sup>th</sup> century is attested by a number of shipwreck sites and WW2 sites including the site of a Police telephone box removed in 1946 (TQ 67 SE 1227).

The following section of the assessment will focus on the archaeological and historical development of this area, placing it within a local context. Each period classification will provide a brief introduction to the wider landscape. Time scales for archaeological periods represented in the report are listed on page 11 in Table 1.

### 5.2 Scheduled Monuments, Listed Buildings Historic Parks & Gardens and Conservation Areas

The PDA is located within the Gravesend Riverside Conservation Area and within an Area of Archaeological potential (AOP). There are no listed buildings, historic parks or gardens within the footprint of the PDA, however the proposed development is adjacent to the Grade II listed Barrelled Lock Chamber, Sea Walls, Swing Bridge,

Locks and Canal Basin listed on 17 September 2010 (508409). Discussions have been held with Gravesham Conservation and Planning Officers and the design and setting of the proposed new building has been approved.

#### 5.3 Prehistoric (Palaeolithic, Mesolithic, Neolithic and Bronze Age)

The Palaeolithic represents the earliest phases of human activity in the British Isles, up to the end of the last Ice Age. Evidence of prehistoric settlement within the county of Kent can be dated back to the Palaeolithic period and can be found around the River Gravels of the Thames and the Greater Stour.

The Kent HER has no record of archaeological evidence from these periods within the assessment area.

The Bronze Age, a period of large migrations from the continent and more complex social developments on a domestic, industrial and ceremonial level is not represented in the assessment area.

#### 5.4 Iron Age

The Iron Age is, by definition a period of established rural farming communities with extensive field systems and large 'urban' centres and hillforts. No monuments or find spots are to found in the assessment area.

#### 5.5 Romano-British

The Romano-British period is the term given to the Romanised culture of Britain under the rule of the Roman Empire, following the Claudian invasion in AD 43, Britain then formed part of the Roman Empire for nearly 400 years. No monuments or find spots are to be found in the assessment area.

#### 5.6 Anglo-Saxon

The Anglo-Saxon period is not represented in the assessment area.

#### 5.7 Medieval

The medieval period is not represented within the assessment area.

#### 5.8 Post-Medieval

The Post Medieval period within the assessment area is represented by the fort of New Tavern some 300m to the west of the PDA. In addition the site of Milton Blockhouse is located 200m to the east of the PDA (TQ 67 SE 32).

#### 5.9 Modern

Modern archaeology within the assessment area has been limited to the nearby Thames and Medway Canal site (TQ 67 SE 20), the canal lock (TQ 67 SE 167) and swing bridge.

#### 5.10 Cartographic Sources and Map Regression

A map regression exercise on large scale Ordnance Survey maps has been carried out on the proposed development area (Figs. 1-8). The site (Plate 1) in 1588 was probably open fields. In addition earlier historical maps have been viewed (the Walker plan of 1809, the sketch of Ordnance Land in 1834 and the plan of Gravesend Basin in 1844) and again show no development in the footprint of the PDA. The 1769 Andrews Dury map (Plate 7) shows the New Tavern site and in the area of the PDA a large earth seawall. The 1801 OS County Map shows the New Tavern Fort in detail, but again the area of the PDA a large earth sea wall (Plate 9).

5.10.1 Both the Walker plan of 1809 (Plate 19) and the Ordnance Survey maps show that (Figure 1) the area around the PDA has been transformed with the building of the 'Canal Basin', 'Drawbridge' and the canal lock (barrel shaped) with two gates and to the east by 1866 an industrial area containing 'Soap Works', Forge', and 'Steam Mill'. The entrance to the Thames and Medway Canal is shown with its lock and lock gates situated south-east of the PDA.

5.10.2 By 1897 (Figure 2) the drawbridge over the canal basin lock had been replaced by a 'Swingbridge' and a 'Swingbridge' added to the lock entrance to the canal, a small building immediately adjacent to the PDA (red rectangle) had been built and to the east in the industrial zone 'Milton Iron Works' had appeared. To the south of the 'Canal Basin' a 'Trans Crane' had been installed.

5.10.3 The OS map of 1909 (Figure 3) shows a polygon 'Band Stand' to the west of the PDA. The small building adjacent to the PDA had been extended to the west and to the east 'Thames Iron Works' had joined the 'Milton Iron Works'. The lock adjacent to the PDA now has only one lock gate located on the seaward end of the lock.

5.10.4 By 1932 (Figure 4) a 'Sailing Club House' had been built just north of the PDA and a tramway installed on the south side of the canal basin. The 1953 map shows that the lock gates are now at the south end of the lock and called 'Tidal Lock' and there is an additional small building adjacent to the PDA (Figure 5).

5.10.5 The OS map of 1964 shows little change (Figure 6) but by 1980 the Thames and Medway canal had been filled in and the lock partly dismantled (Figure 7).

5.10.6 By 1993 a 'Flood Gate' had been added to the lock adjacent to the PDA and both buildings adjacent to the PDA had been demolished to replaced by the existing toilet block and store (Figure 8).

#### 5.11 Aerial Photographs

Google Earth provided a 1940, 1960, 1999 and 2013 location aerial photograph of the PDA (Plates 10-13). These show that in 1940 the canal partly filled in and a few commercial lighters moored in the canal basin. The 1960 aerial photograph shows that pleasure craft are beginning to fill the basin but to the south large areas are waste ground and by 2013 the canal basin has had finger pontoons installed for pleasure craft and car parking to the north of the basin. A visit to the Kent Archive Centre, Maidstone failed to provide any additional aerial information.

#### 6 ARCHAEOLOGICAL POTENTIAL AND ASSESSMENT

The archaeological potential of the site is based on the data provided by the KCC HER, historical mapping and a site walkover (Plates 14-17). There is very little firm evidence for archaeological remains in the vicinity of the PDA and it is likely the PDA

immediately adjacent to the 19<sup>th</sup> century lock is sitting on made ground as the regressive mapping shows that before the lock was constructed the ground was a earth bank built probably in the Late Medieval period as a sea wall.

#### 6.1 Palaeolithic, Mesolithic, Neolithic and Bronze Age

The potential for finding remains that date prior to the Iron Age within the confines of the proposed development is therefore considered **low**.

#### 6.2 Iron Age

The potential for finding remains dating to the Iron Age within the confines of the development site is also considered **low**.

#### 6.3 Romano-British

The potential for Romano-British archaeology is considered to be **low**.

#### 6.4 Anglo-Saxon

The potential for finding remains dating to the Anglo-Saxon period on the development site are considered **low.** 

#### 6.5 Medieval

The potential for finding remains dating to the medieval period are considered as **low**.

#### 6.6 Post-Medieval and Modern

Evidence for post-medieval and modern occupation in the area is abundant with the remains of buildings close to the PDA. However, the potential for finding remains dating to the post-medieval and modern period are considered as **medium**.

#### 7 IMPACT ASSESSMENT

#### 7.1 Existing Impacts

The search area is for the most part, has been subject to some development activity. It was noted that the area of the PDA immediately adjacent to the historic lock is about 1m higher than the surrounding area and may suggest that some of the

material from the 19<sup>th</sup> century lock construction was used to stabilise the banks on both sides of the lock and will be made ground.

#### 7.2 Proposed Impacts

At the time of preparing this archaeological assessment, the extent of the proposed development was the demolition of an existing building and the new build of a high quality marina building to a design and location approved by the Planning and Conservation Officers' of Gravesham Borough Council. Extensive impact is to be expected within the development area once construction begins. The excavation of footings will be the main cause of this impact and it is therefore considered as **high**. The supply of services is not considered an impact as a large service duct is already in situ to the north and adjacent to the proposed development.

#### 8 MITIGATION

The purpose of this archaeological desk-based assessment was to provide an assessment of the contextual archaeological record, in order to determine the potential survival of archaeological deposits that maybe impacted upon during any proposed construction works.

The assessment has generally shown that the area to be developed is within an area of **low** archaeological potential.

It is recommended in this case that further archaeological assessment will be required and that an <u>Archaeological Watching Brief</u> should be carried out during development to a specification approved by KCC Heritage on the areas that will be impacted on by the proposed development. This will provide an opportunity for additional assessment of the nature; depth and level of survival of any archaeological deposits that may be present within the extents of the proposed development site.

#### 8.1 Archive

Subject to any contractual requirements on confidentiality, two copies of this desk-based assessment will be submitted to Kent County Council (Heritage) within 6 months of completion.

#### 9.2 Reliability/limitations of sources

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.

#### 9.3 Copyright

Swale & Thames Survey Company (SWAT Archaeology) 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 The Embankment Marina (Gravesend) Ltd (and representatives) for the use of this document in all matters directly relating to the project.

#### 10 ACKNOWLEDGEMENTS

The author would like to thank Sharon Brokenshire of the Embankment Marina (Gravesend) Ltd for commissioning this report.

Paul Wilkinson PhD., MCifA., FRSA. 10/09/2015

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Kent County Council Historic Environment Record:

http://www.kent.gov.uk/ExploringKentsPast/advancedsearch.aspx

**Kent History Town Surveys** 

National Monument Records: <a href="http://www.pastscape.org.uk/">http://www.pastscape.org.uk/</a>

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#### Plates



Plate 1. View of site looking north- white brick building to be demolished

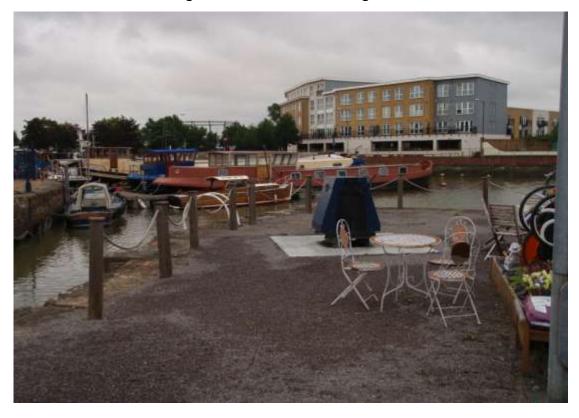


Plate 2. View of looking south across the canal basin



Plate 3. View of looking north-east

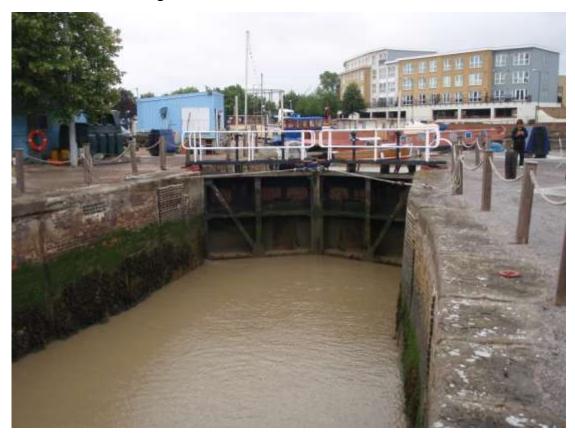


Plate 4. View of lock looking south-east



Plate 5. Site of the proposed development (looking north)



Plate 6. View of the building to be demolished (looking south)

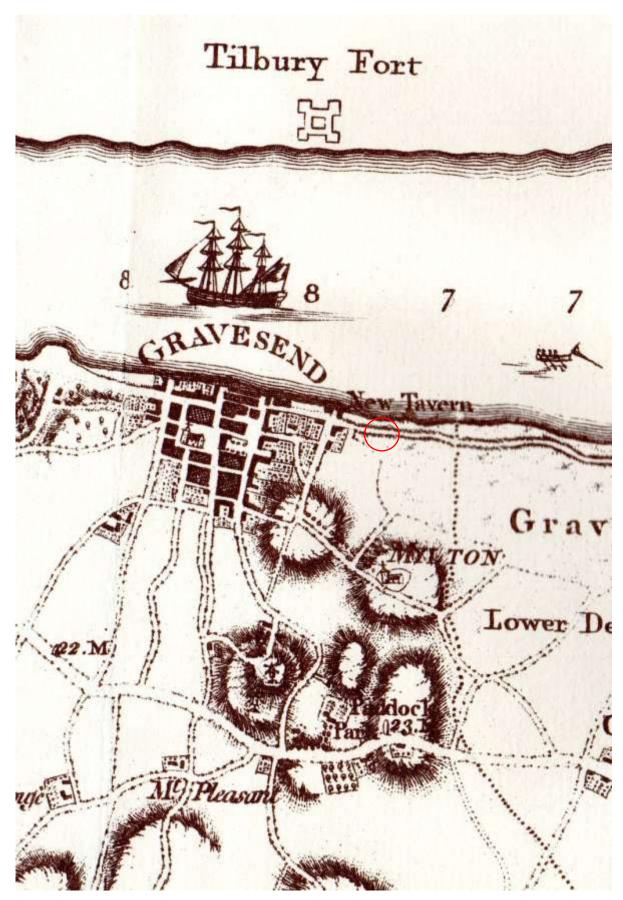


Plate 7. Andrews map of 1769 (PDA in red circle)

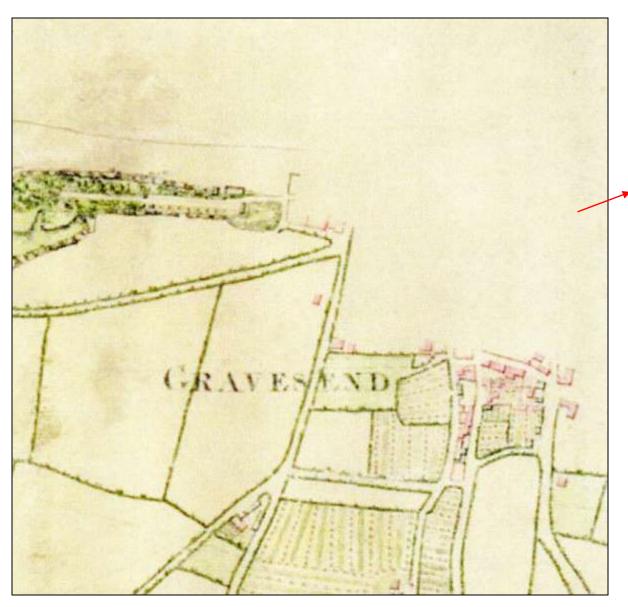


Plate 8. OSSD 1799 (PDA off map to the east)



Plate 9. OS map of 1801 (PDA in red circle)



Plate 10. GoogleEarth 1940



Plate 11. GoogleEarth 1960



Plate 12. GoogleEarth 1999



Plate 13. GoogleEarth 2013

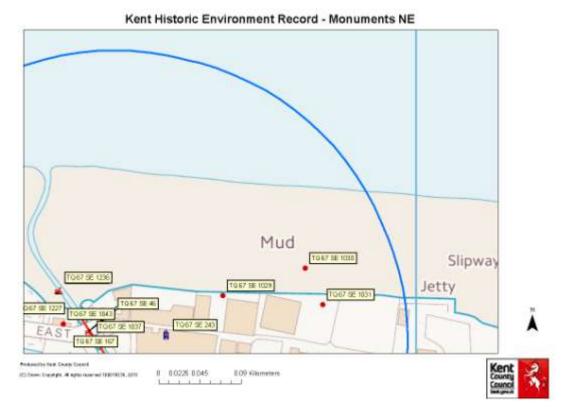


Plate 14. KCC HER North-East

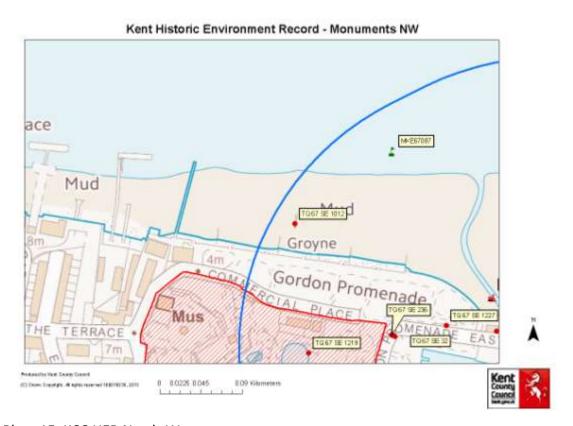


Plate 15. KCC HER North-West

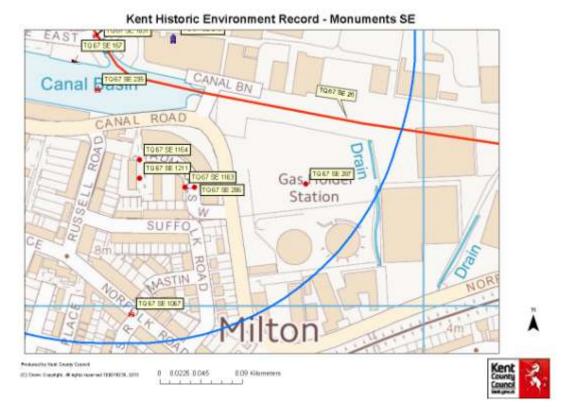


Plate 16. KCC HER South-East

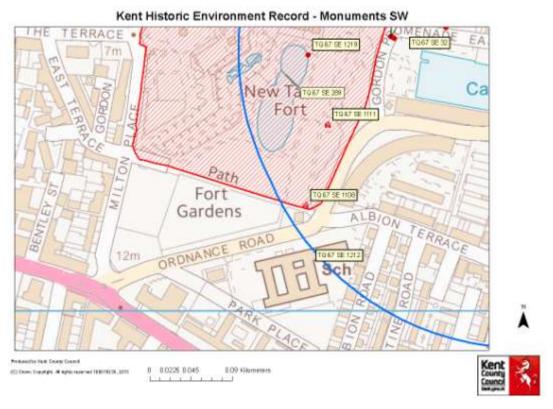


Plate 17. KCC HER South-West

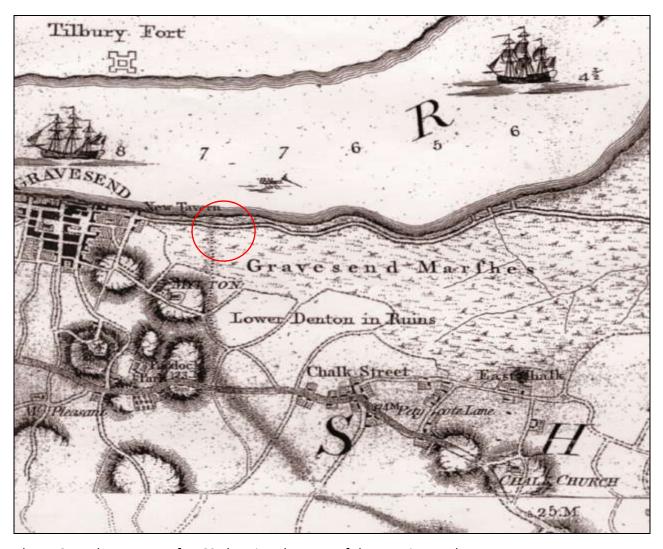


Plate 18. Andrews map of 1769 showing the area of the PDA is marsh

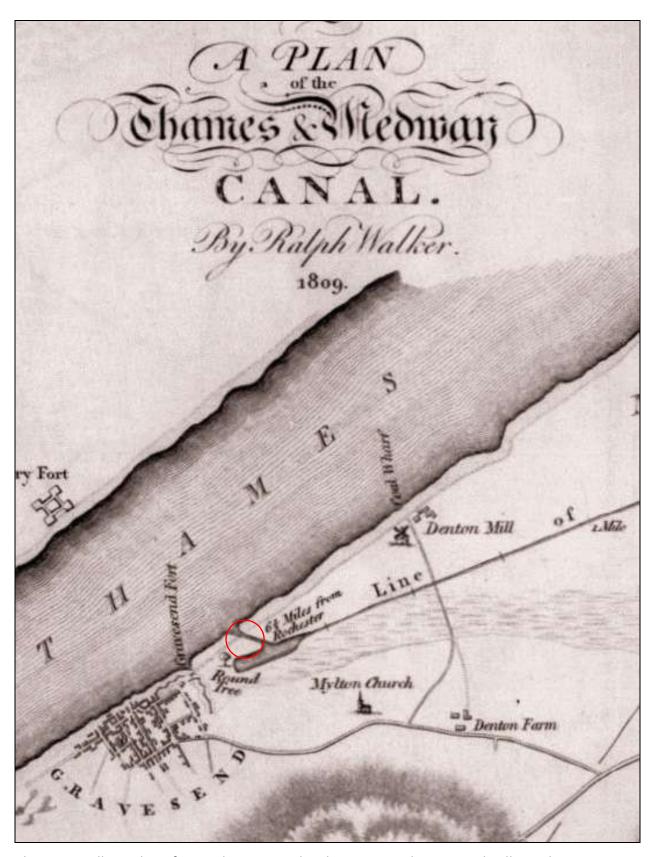


Plate 19. Walkers plan of 1809 showing no development on the PDA and still marsh

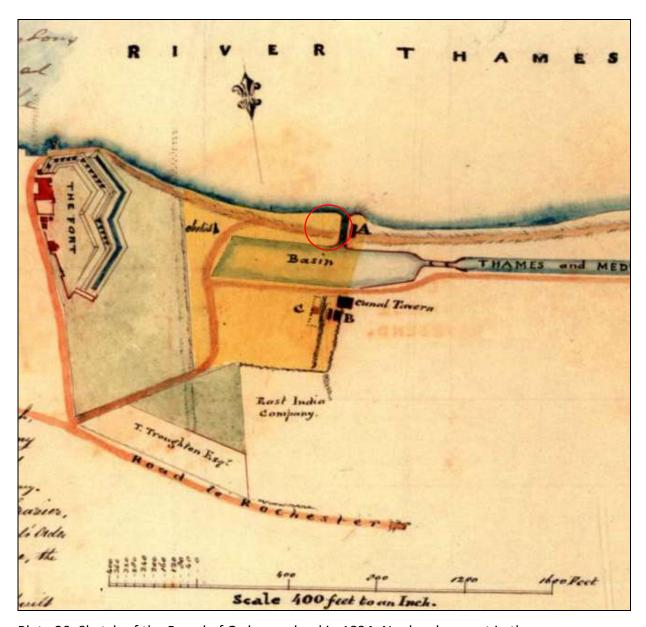


Plate 20. Sketch of the Board of Ordnance land in 1834. No development in the area of the PDA.

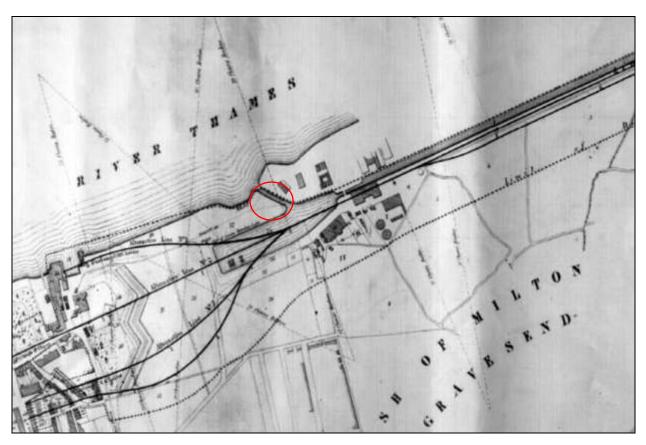
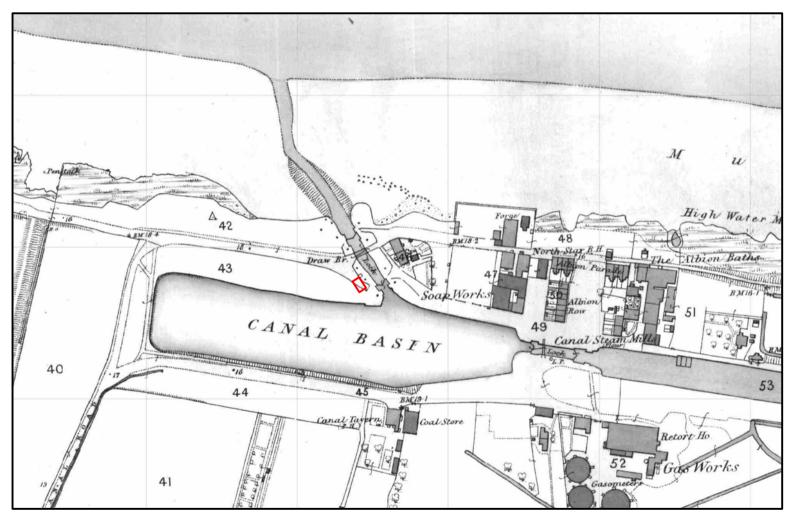


Plate 21. Plan of Gravesend Basin in 1844

+ 565390.0mE 174485.0mN





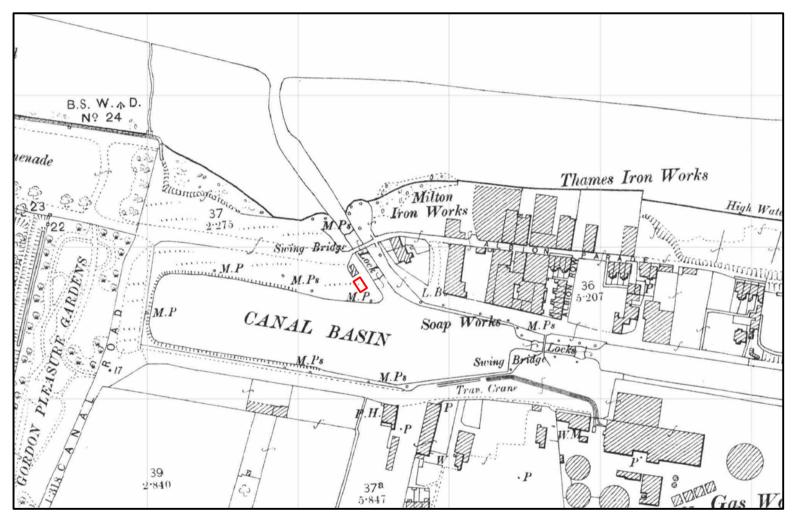
+ 565915.0mE 174110.0mN

Figure 1: Historic mapping 1866

0m 1:2500@A4

+ 565390.0mE 174485.0mN





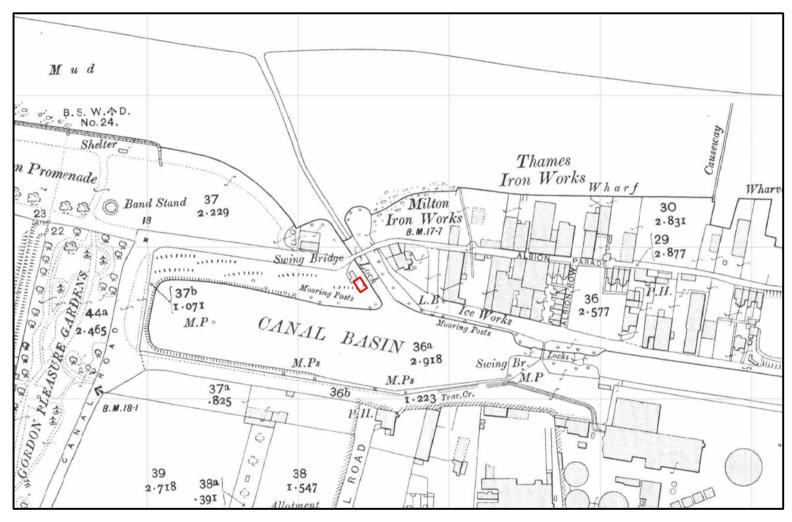
+ 565915.0mE 174110.0mN

Figure 2: Historic mapping 1897

0m 1:2500@A4 200m

→ 565390.0mE 174485.0mN





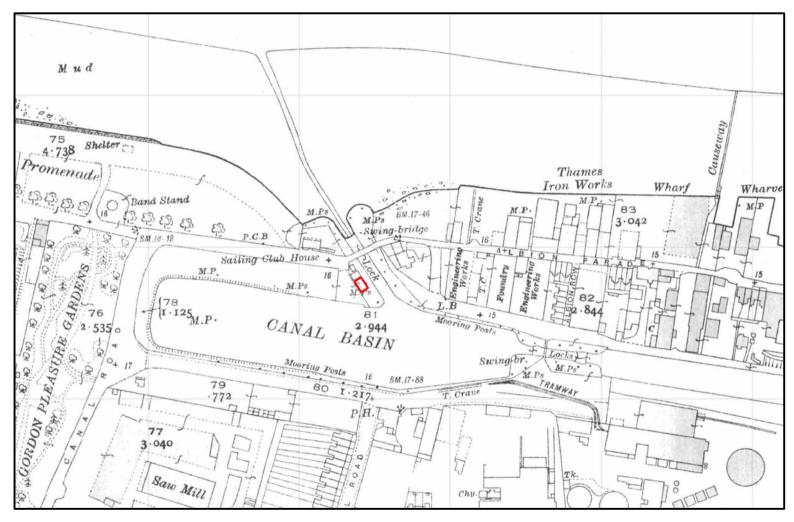
+ 565915.0mE 174110.0mN

Figure 3: Historic mapping 1909

0m 1:2500@A4 200m

+ 565390.0mE 174485.0mN





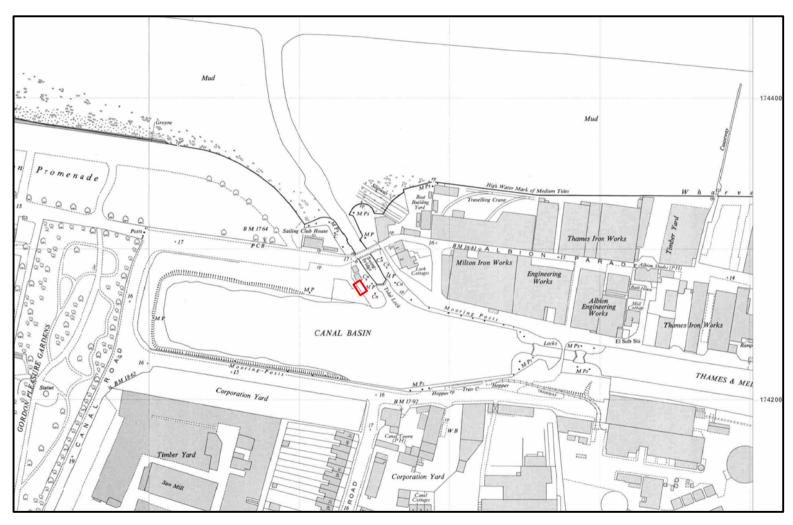
+ 565915.0mE 174110.0mN

Figure 4: Historic mapping 1932

0m 1:2500@A4

→ <sup>565390.0mE</sup> 174485.0mN



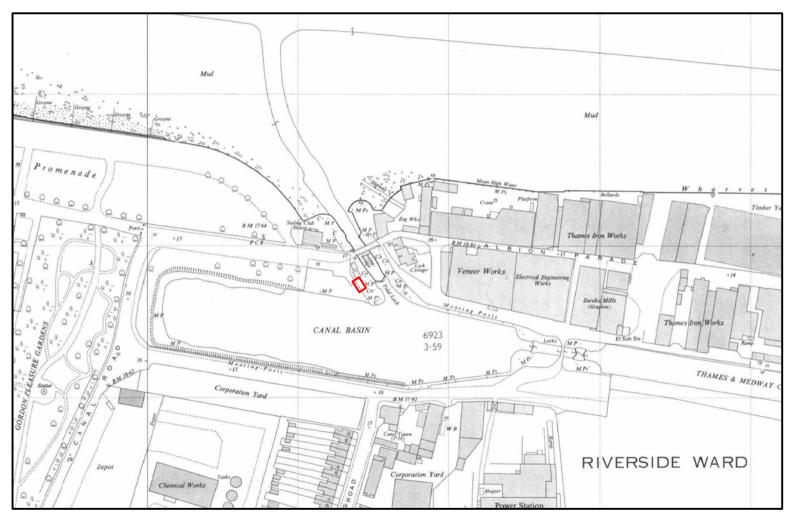


→ 565915.0mE 174110.0mN

Figure 5: Historic mapping 1953

0m 1:2500@A4



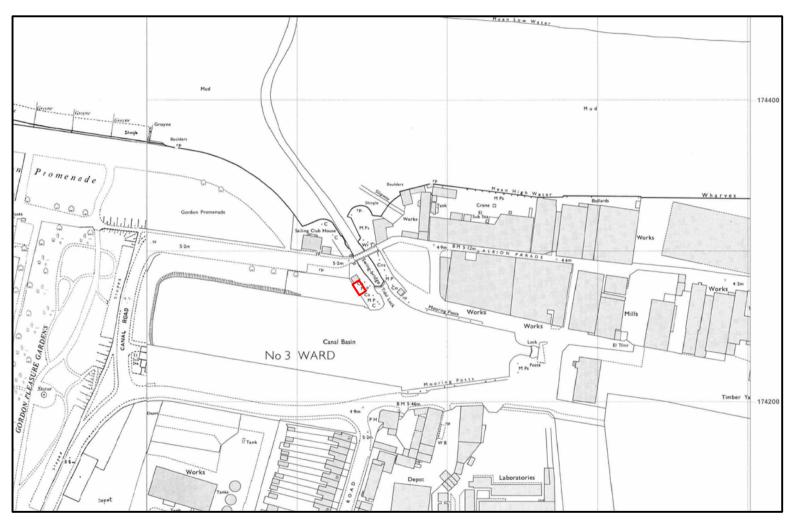


+ 565915.0mE 174110.0mN

Figure 6: Historic mapping 1964

0m 1:2500@A4



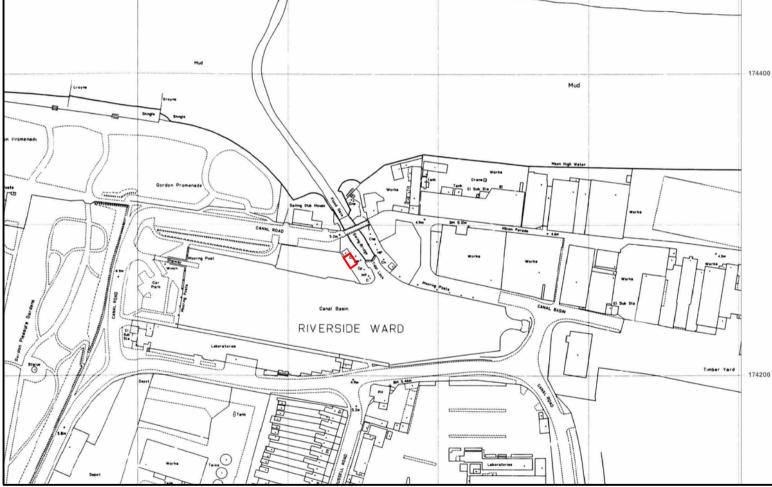


→ 565915.0mE 174110.0mN

Figure 7: Historic mapping 1980

0m 1:2500@A4 200m





+ 565915.0mE 174110.0mN

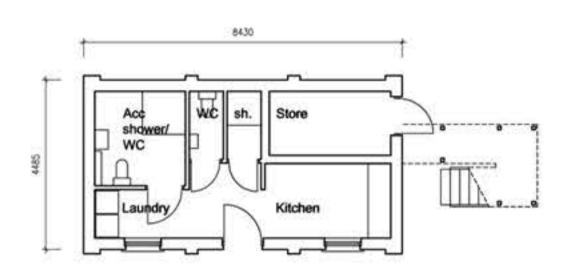
Figure 8: Historic mapping 1993

1:2500@A4 0m 200m

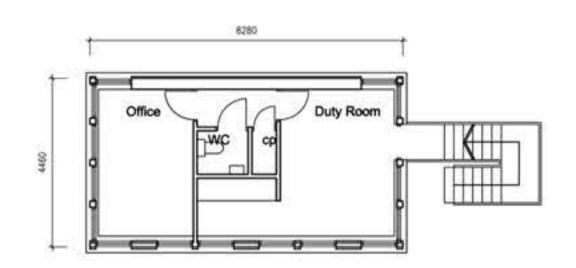








Proposed Ground Floor Plan 1:100



Proposed First Floor Plan 1:100



Proposed West Elevation 1:100



Proposed North Elevation 1:100

Rev.	Description	Int.	Date	Client
				S Brokenshaw
				Job Title Lock and Marina Facility



		1:200 scale bor		
0m	4.0m	8.0m	12.0m	16
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CDP origina	of printed to	scale. Prints fro	om PDF's could	distort
		1:100 scale bar		

Drawing Tit Propos		e Plan	
Floor F			
		X.	
Elevation	ons		

Scale @ A1	1:100/1:200	Preliminary/Comment
Drawn	MW	Planning
Date	Mar 2015	Building Regulations
Checked		□ Tender
		✓ Construction
		s As built