Wacker Quay

Cornish Ports and Harbours

Assessing heritage significance, threats, protection and opportunities

Historic England

CORNWALL COUNCIL

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Cover illustration: *Wacker Quay (photo: TVAONB)*

1 Introduction

Within a broader 'Cornish Ports and Harbours' project examining the heritage significance, protection and implications from forces for change affecting Cornwall's ports and harbours, Wacker Quay has been chosen for detailed study as a good example of a small military harbour. Discussion of the approach and working methods applied during the execution of the project can be found in the overall Project Report.

Wacker Quay is located on the River Lynher, a tributary of the River Tamar in south east Cornwall (Fig 1). It originated as a small timber quay for the import of limestone in the latter decades of the 18th century (Fig 2). However, a military decision to build Tregantle and Scraesdon Forts in the late 19th century added increased demands to meet the practicalities of construction, supply and maintenance of such massive fortifications. The quay was enlarged and a light military railway was built from Wacker Quay to Tregantle Down Battery via Scraesdon Fort, a line length of 2.5 miles (4 km). The line extends from the Quay, eastwards around the coast and at a point north of Scraesdon Fort, turns to go uphill via an incline railway to Scraesdon Fort and beyond to Tregantle Fort. Built between 1886 and 1893, the quay and railway were out of use by 1905 though the quay saw some refurbishment in 1944 to serve the D Day preparations. Since the 1970s the area has been managed as car park and picnic site with the quay mainly used for leisure activities.

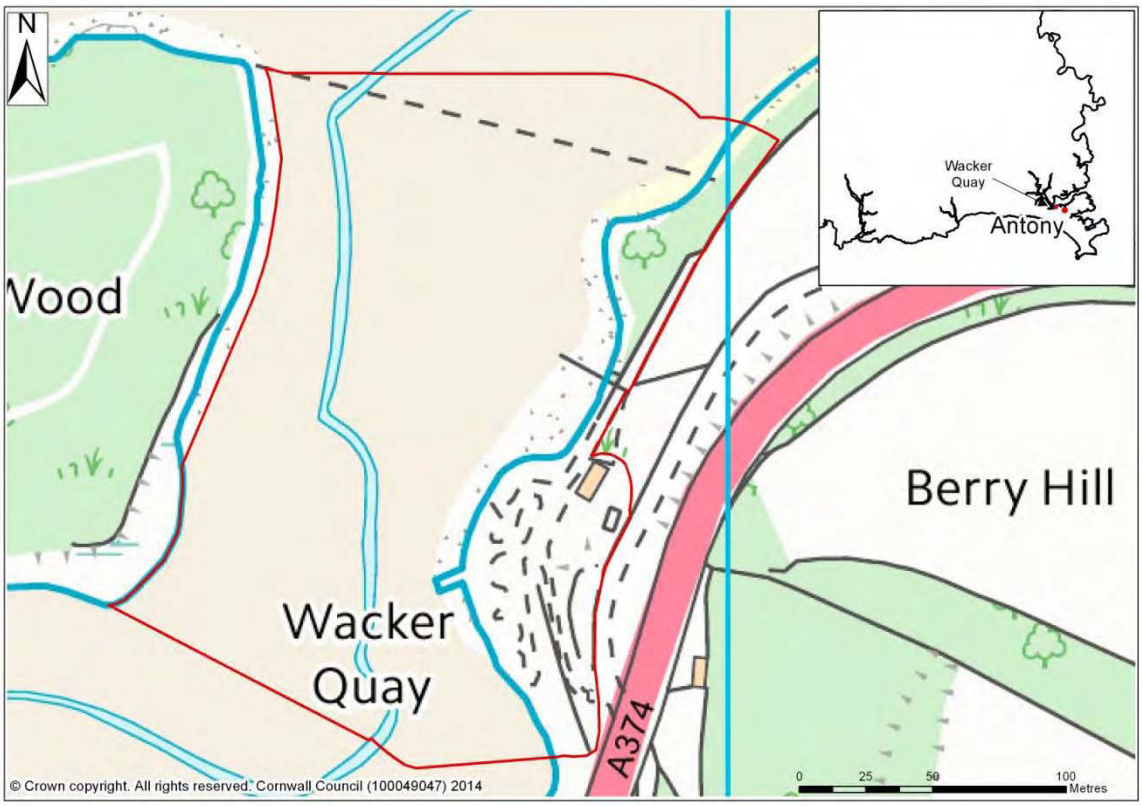

Fig 1 Location map. The red line denotes the study area.

2 Outline history

2.1 Early origins

Wacker Quay probably originated in the later 18th century as a small timber jetty for unloading limestone which was brought on barges from Plymouth for burning in the nearby lime kiln. It may have also have been used for bringing in agricultural supplies. The *c* 1841 Tithe Map for Antony parish (Fig 3) shows the quay, access route and the lime kiln which may have been operated in conjunction with the adjacent Wacker tidal mill until the mid 1860s.

2.2 The military years

Cornwall's Rame Peninsula has been an area of great strategic military importance since at least the 16th century; ostensibly related to the military protection of Devonport and its naval importance nationally, the ongoing development and expansion of its naval facilities from the 1690s added further impetus. The military threat waxed and waned until 1860, when a report from the Royal Commission finally recommended that the Naval Dockyards of Devonport should be ringed with lines of fortifications. In effect, there was to be a large semi-circle of defences: commencing on the Cornish coast at Tregantle and ending at Staddon and Fort Bovisand on the eastern side of Plymouth.

The rural light-industrial character of Wacker Quay was dramatically transformed by the construction of the great Palmerstonian forts of Tregantle and Scraesdon which had already commenced in 1859. These two large forts comprised the western defences of Plymouth and were intended to protect the Maker peninsula, Whitsand Bay and the Lynher estuary from military occupation and bombardment of the dockyard.

Tregantle Fort is octagonal in shape and constructed on two levels. The lower site with barracks for 2000 men, and the upper included a number of embrasure positions for 68 pounders and siege howitzers. The centre had a self-defensible keep. It was completed in 1865 with barracks accommodation for 1,000 men and provision for 35 large guns. In the event, far smaller establishments have been based there, with only six gunners in 1882. In 1893 the guns consisted of five RBL 7 inch Armstrong guns and 19 RML 64-pounders, together with a number of SBBL 32-pounders being tested.

Scraesdon Fort, completed in 1868, was simpler and smaller, although of a similar octagonal design, again on two levels. It was enclosed by a deep ditch and 10m high scarp, flanked by caponiers and galleries with barracks accommodation for up to 400 men (Payton 1988, 16). In 1885 five 7-inch rifled breech-loading guns were mounted: one 64-pounder rifled muzzle-loader, two 5-inch breech-loaders and two 32-pounder smooth bore breech-loading guns. Three more were added in 1893 (Pye and Woodward 1996, 84).

Granite, and a great many of the other materials required for the construction of the forts, would have been shipped to Wacker Quay on Admiralty barges and there is evidence to suggest that inclines were built to transport the materials from the quay to Scraesdon and Tregantle during 1859–60 and this method of transport probably continued in use until 1886 (Payton 1988, 20).

However, there was a need for more efficient provision of armaments and victuals to the forts and also for transport of construction materials for Tregantle Down Battery in the 1890s. This need was met by the construction of the Tregantle Military Railway by the Royal Engineers between 1886 and 1893, utilising the route of the earlier incline but incorporating a new section from the road down to the turntables to meet the railway line from Wacker Quay (Fig 4). The trucks and track were originally designed for the Sudanese Campaign but were shipped home after the fall of Khartoum in 1885. Contemporary maps show that the railway ran onto the south-western pier, enabling materials for the forts to be lifted directly from the Admiralty barges to railway trucks at high tide, possibly using a steam crane. The pier further to the north (Fig 5) was

apparently built after 1896, but before 1905, possibly due to the degree of dredging needed to keep the original pier/dock clear of silt.

The 2.5 mile (4km) long railway line was standard gauge (4ft 8.5ins) and went around the headland until it met two turntables at the base of the incline. The eastern turntable connected to the 1 in 7 gradient cable incline which went under the (re-aligned) A374 road and new bridge. The western turntable provided access to a shunting siding which also provided access to the incline winder engine house, mainly for coal supplies. Water for the stationary winding steam engine was provided by a large covered water tank. Passing loops were located near Wacker Quay, the incline itself (pictured in Rawlings 1967 and Hunt 2011), and near Scraesdon Farm (for the second engine that worked above the incline from Scraesdon to Tregantle fort).

Changing military priorities together with the high cost of operating and maintaining these two western forts (although they were never fully armed nor manned), dredging the barge routes and operating the railway, resulted in its closure by the War Department at the turn of the 20th century. The guns were dismantled and removed using the railway; some were perhaps buried. The railway finally closed in 1905. Some sections of line were removed at that time, as well as the turntables and winding engine, although some remained until the munitions drive of 1916 (Fig 4).

From the early 20th century Scraesdon Fort was used for a variety of purposes: as a First World War training camp, as a Field Hospital and later for Second World War training. After temporary re-use during the First World War, Tregantle Fort returned to more permanent use by the Americans from 1942 to 1945 (Payton 1988, 16).

A significant modification to Wacker Quay was the construction (or strengthening) of the existing concrete pier in 1944 for loading tanks onto barges or landing craft during the D-Day preparations. In addition another working pier or hard-standing of tarmac and stone was constructed to form a secure landing/working space. A small cottage was built on the site between 1907 and 1914.

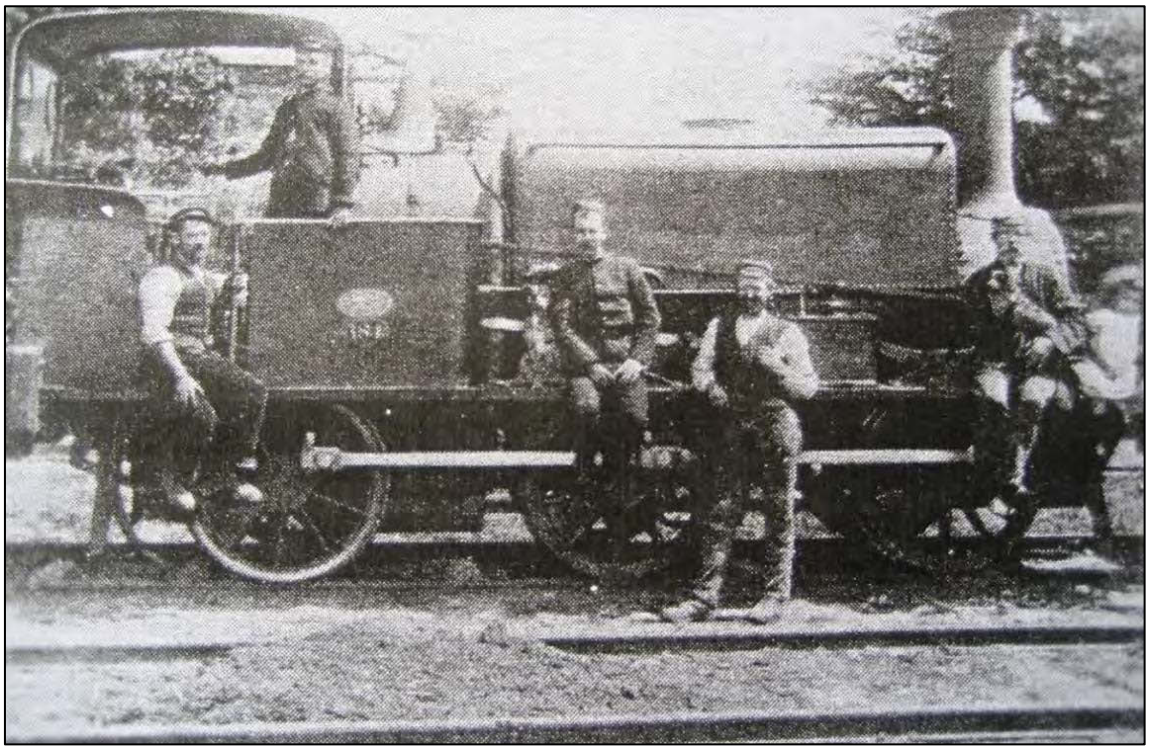

Fig 2 Locomotive Manning Wardle 0-6-OST No. 967 (WD No. 384) in Scraesdon Yard. (Reproduced from Payton 1988)

2.3 Modern use

In the mid-1980s, Cornwall Highways, then later Caradon District Council, made the site more presentable for recreational visitors and formed a driveable route for cars to park and turn around, for picnicking and other leisure activities. At about this time the corrugated-iron engine shed was dismantled, the engine having been dismantled for scrap in the 1930s (Payton 1988, 31).

In recent years the site had become rather run down but since October 2011 it has been managed by the Tamar Community Trust (TCT). In early 2012, Tamar Valley Area of Outstanding Natural Beauty (TVAONB), with the aid of volunteers (funded by Natural England), formed a trail along the route of the railway line from Wacker Quay, past the base of the incline and its turntables and engine house site, further along the coastline and up a permissive footpath to Antony Village.

More recently, in 2014, the wider TVAONB-managed 'Helping Hands for Heritage' project funded by the HLF has included vegetation management and excavation of leaf mould from the incline turntables and footings of the engine house on the site.

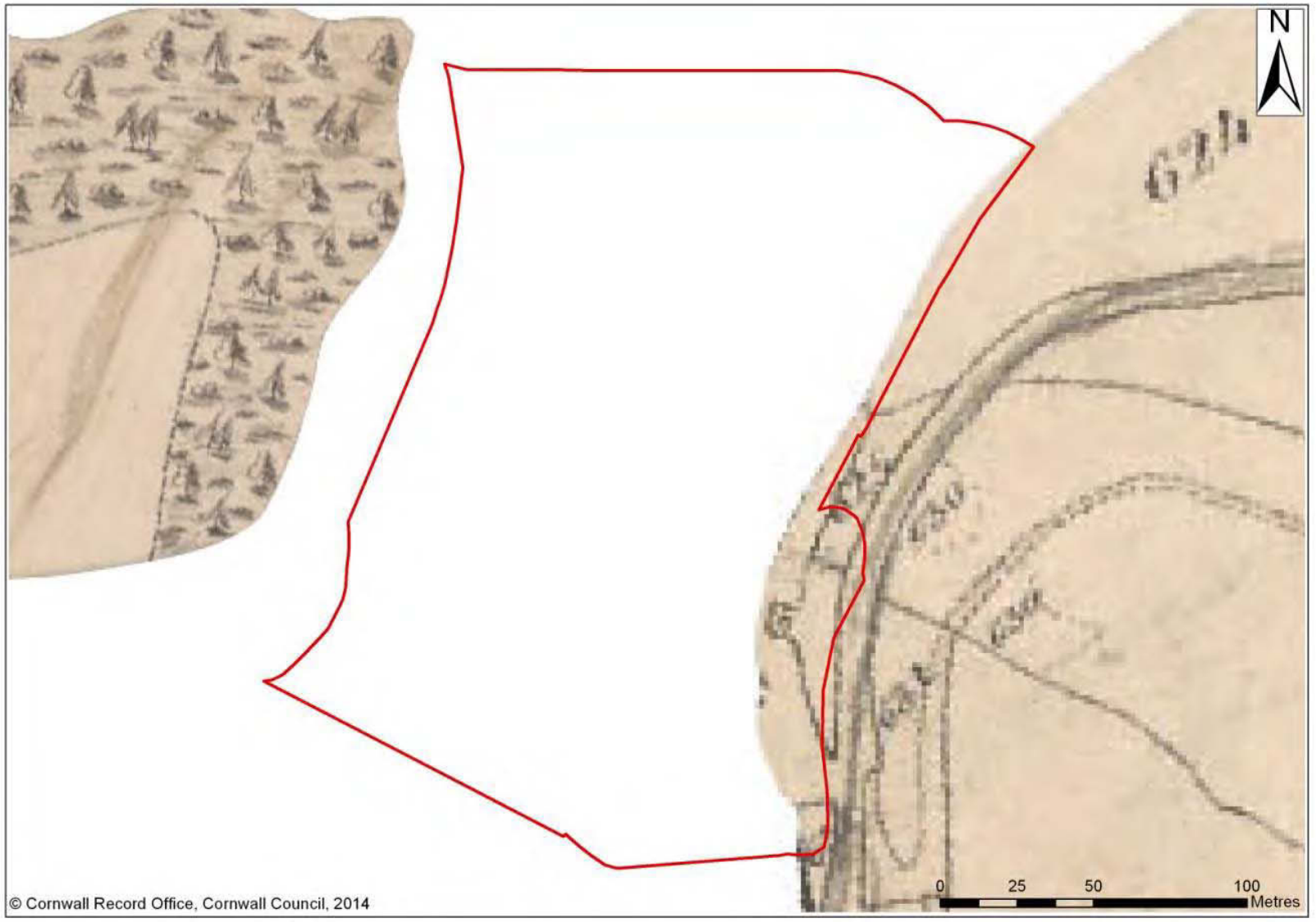

Fig 3 Detail from the c 1841 Tithe Map for Antony parish. The study area is outlined in red.

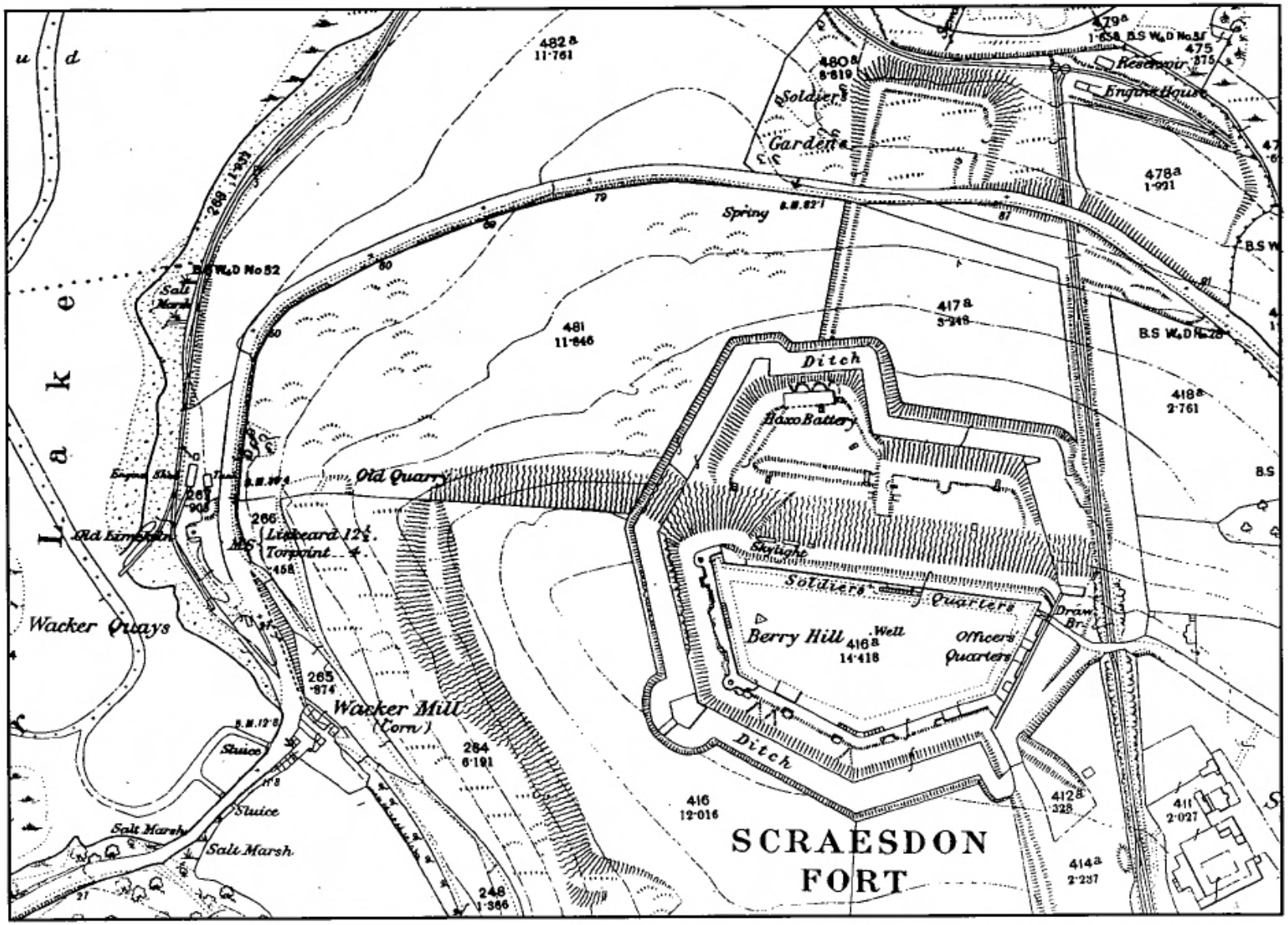

Fig. 39: Scraesdon Fort in 1896 (PRO: WO 78/2314)

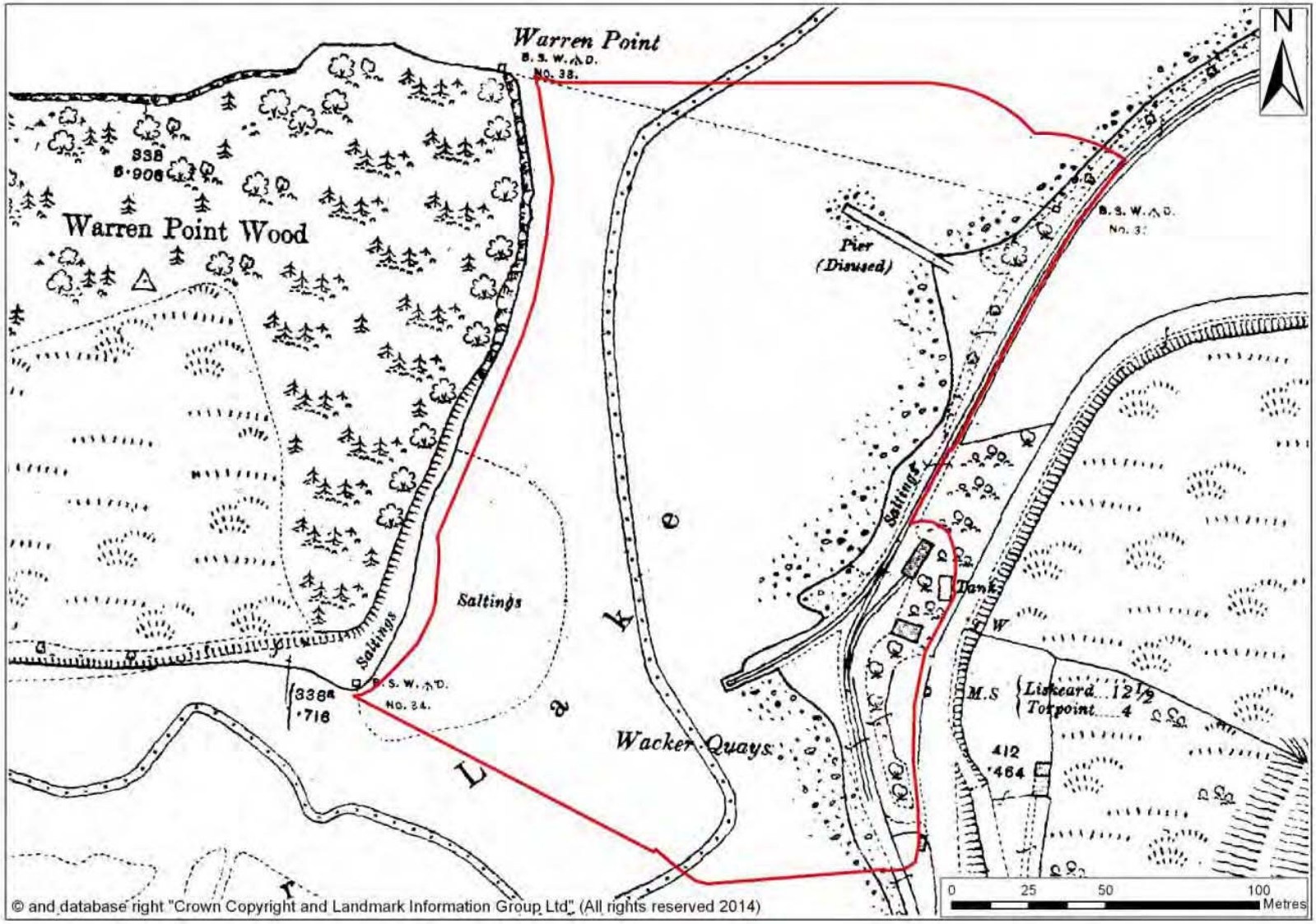

Fig 5 Second Edition of the Ordnance Survey 25 Inch Map, c 1914 (Revised).

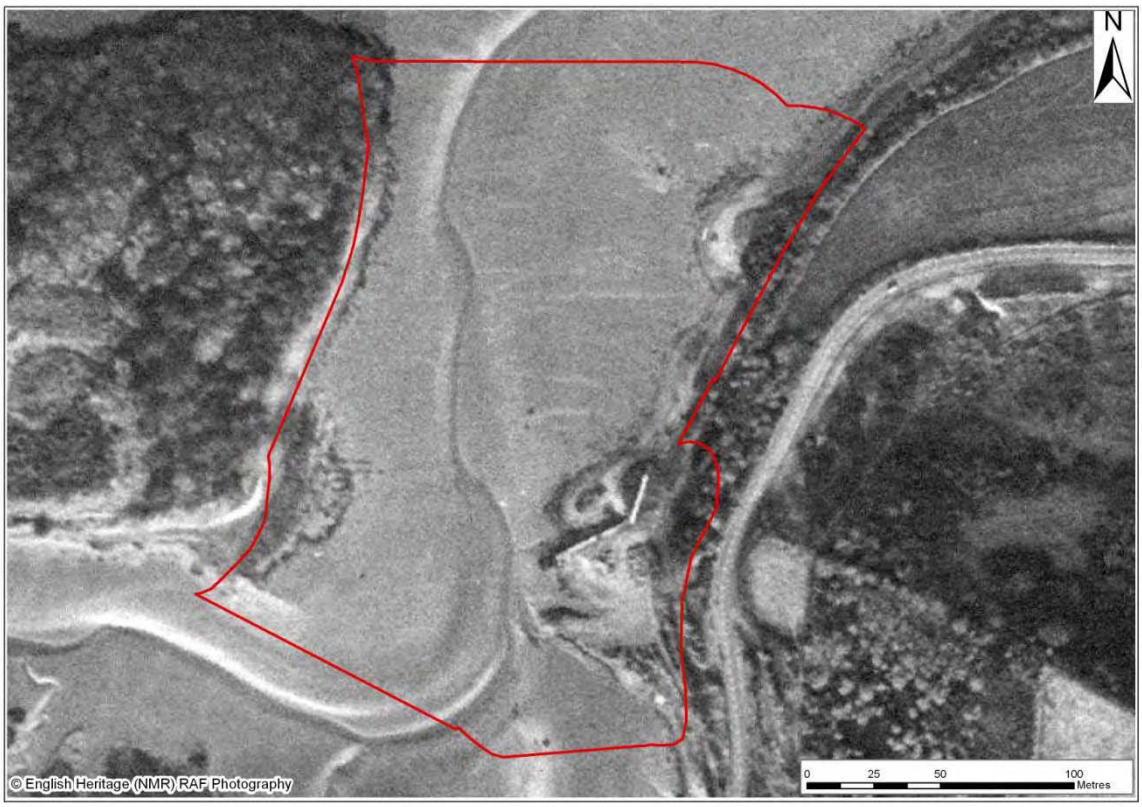

Fig 6 RAF aerial photograph (1946: Ref No E29 2155 12/10/1946).

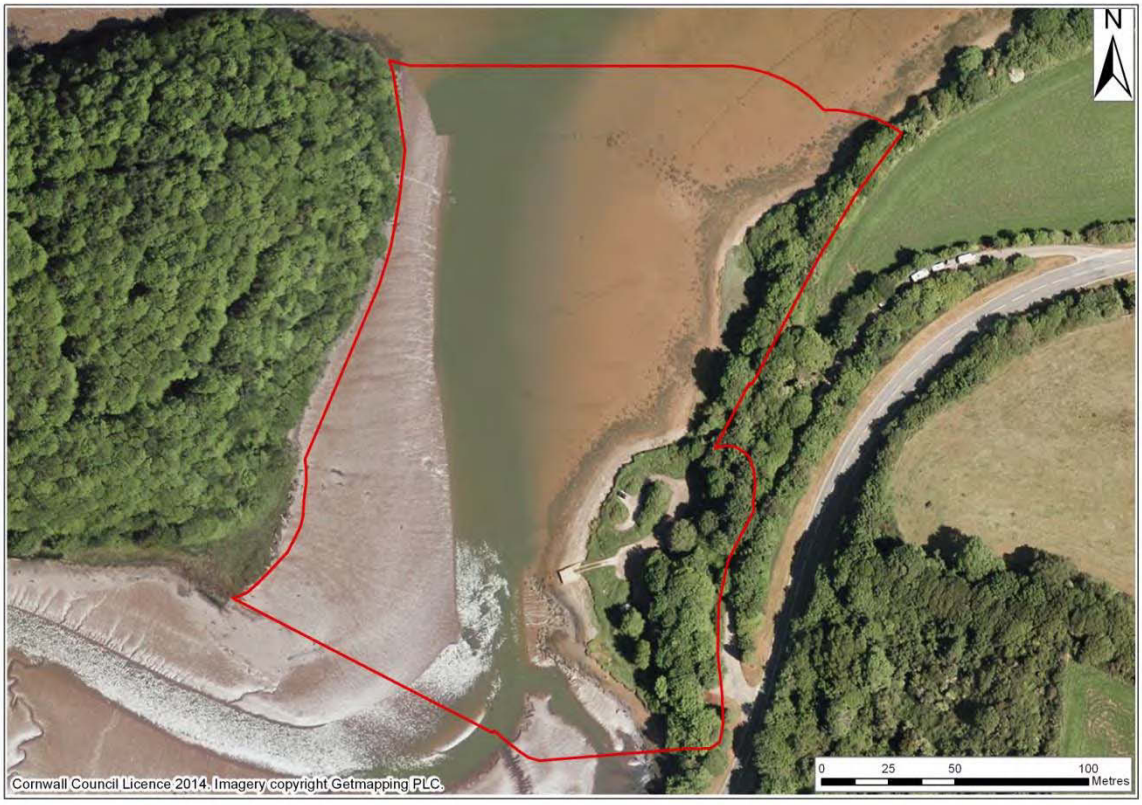

Fig 7 Aerial photograph (Cornwall Council 2005).

Fig 8 General view looking north along Wacker Quay; in the foreground is the site of the railway siding (Site 4) and eroding along the shoreline are the remains of a hard standing (Site 17).

Fig 9 Detailed view of the timbers of the military railway quay (Site 5) and the concrete shuttered Second World War jetty (Site 16).

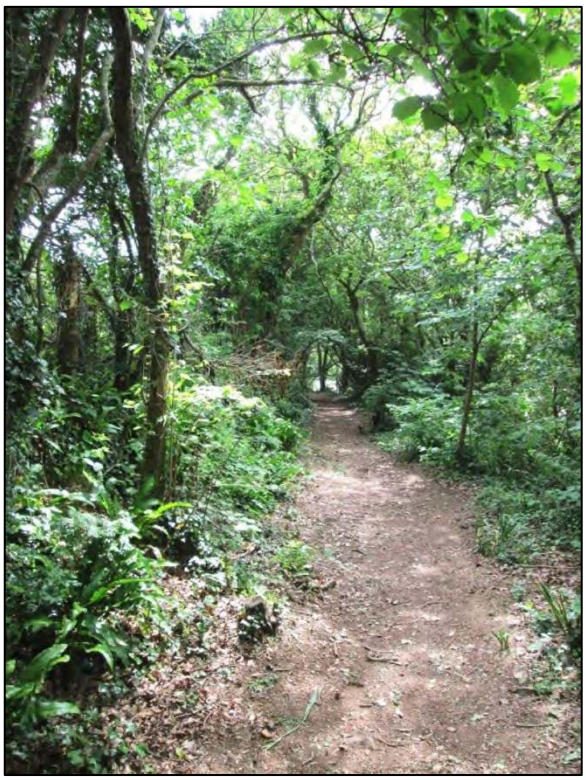

Fig 10 The military railway trackbed (Site 9) looking south westwards towards the quay

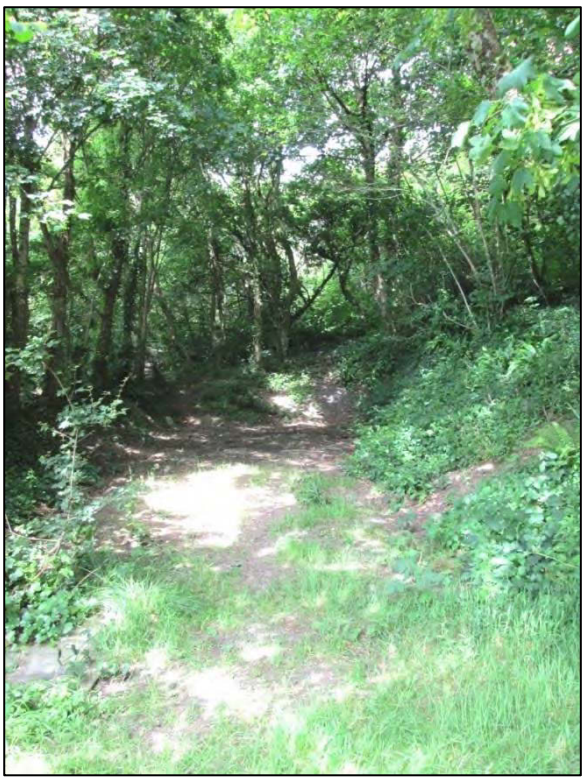

Fig 11 The site of the engine shed (Site 10) viewed from the west

3 Description

Wacker Quay (SX 3890 5509) is sited on the west side of Berry Hill adjacent to the east side of Wacker Lake, a small inlet which extends up to the east side of Sheviock. Although deeply silted up, this small quay lies north of Wacker tidal mill, and south of the deeper and wider St Germans or Lynher River estuary, itself a tributary of the River Tamar. The landscape surrounding the site is rolling hills within a wooded and pastoral setting. Close to the river edges, inter-tidal salt marsh predominates.

The study area comprises the quay, the foreshore and coastal hinterland, and the breadth of the River Lynher across to Warren Point. Components include the navigation channel (site 6), the site of the lime kiln and its surrounds (site 2), and roadway (site 1) and military features such as jetties, quays and piers (sites 3, 5, 13 and 16) hard-standing (site 17), the railway lines with sidings (site 4), the site of the railway engine shed, with an ash pit and adjacent extant water tank (site 10), and the site of the water tower (site 12) which served the railway engine that travelled only from the quay to the bottom of the incline. The latter engine house retained the original steam engine, one of a pair both 0-6-0 saddle tanks, until the 1930s. The components are listed below in the Gazetteer.

3.1 Gazetteer

No.	Site type	MCO	NGR (SX)	Period	Description	Designation & Grade
1	RETAINING WALL	-	38948 55023 38929 55084	EARLY MODERN	Extant vertical stone retaining wall (up to 4m high), to form roadway down to the quay (probably built for access to/from the original lime kiln)	None
2	LIME KILN	44996	38941 55090	EARLY MODERN	Site of lime kiln, foundations/lower walls likely to survive below ground Adjacent coal store marked on 1865 OS map	None
3	JETTIES	-	38878 55080	EARLY MODERN	Approximate site of timber jetties as shown on the 1865 OS map	None
4	RAILWAY SIDING	-	38918 55089 38930 55045	EARLY MODERN	Surface area mostly visible	None
5	RAILWAY QUAY/ WORKING PIER	4940	38878 55080 38891 55084	EARLY MODERN	Timber upright remnants of the late C19th military railway quay (the first section from the shoreline has been destroyed/reformed by the later WWII concrete jetty, Site 17)	None
6	DREDGED AREA	-	38880 55175	EARLY MODERN	Dredging for to access pier (Site 6) & dock (Site 9)	None

No.	Site type	MCO	NGR (SX)	Period	Description	Designation & Grade
7	MOORING POST	-	38895 55097	EARLY MODERN	Solitary timber mooring post — may be the last remnant of a dredged dock on north side of the working pier (Site 4)	None
8	DOCK	-	38894 55091	EARLY MODERN	Silt-infilled dock on north side of the working pier (Site 5) & jetty (Site 6)	None
9	MILITARY RAILWAY	23276	39325 59364 39584 55094	EARLY MODERN	Late C19th military railway track bed visible with extant wire fence & posts. Footings of two turntables & engine house at bottom of incline & track (SX 39584 55094)	None
10	RAILWAY ENGINE SHED	-	38949 55124	EARLY MODERN	Site of former engine shed (corrugated steel sides & roof) with ash pit (infilled). Walls & roof in storage.	None
11	WATER RESERVOIR	-	38957 55108	EARLY MODERN	Extant covered concrete water reservoir tank. Originally built to supply water (via a sluice) to the water tower (Site 11)	None
12	RAILWAY WATER TOWER	-	38958 55130	EARLY MODERN	Site of water tower for railway engine — foundations may survive below ground level.	None
13	WORKING PIER/JETTY	29432	38954 55218 38926 55236	EARLY MODERN	Timber upright remnants of the late C19th or early C20th timber working pier. Shown on the OS 1907 map & built near the turn of the century as original Dock (Site 7), presumably silted up	None
14	RAILWAY CRANE		38968 55209	EARLY MODERN	Possible site of a crane or lifting gear as track bed approximately 2.2m above pier level	None
15	WATER	-	38964 55160	MODERN	Small galvanised steel tank next to	None

No.	Site type	MCO	NGR (SX)	Period	Description	Designation & Grade
	TANK				track bed. Concrete feature nearby. Both presumably related to the railway.	
16	JETTY	-	38891 55084 38900 55087	MODERN	A concrete shuttered WWII jetty (8m X 3.5m) built on the same alignment as the earlier railway quay	None
17	WORKING PIER/HARD STANDING	29432	38954 55218 38926 55236	MODERN	1946 and 2005 AP's (Figs 6 & 7) suggest an earth/stone pier or hard standing was formed the south of the south pier (Site 17) during WW2. Its shore alignment of may confirm this & there may have been a possible dock related to this feature	None
18	COTTAGE	-	38949 55098	MODERN	Site of small cottage built between 1906 and 1914. Extant until *c* 1960s. No extant structural remains.	None
19	LANDING POINT	-	38920 55060	EARLY MODERN/ MODERN	Overall combination of present day visual site components (Sites 1, 5-6, 8, 10-18)	None

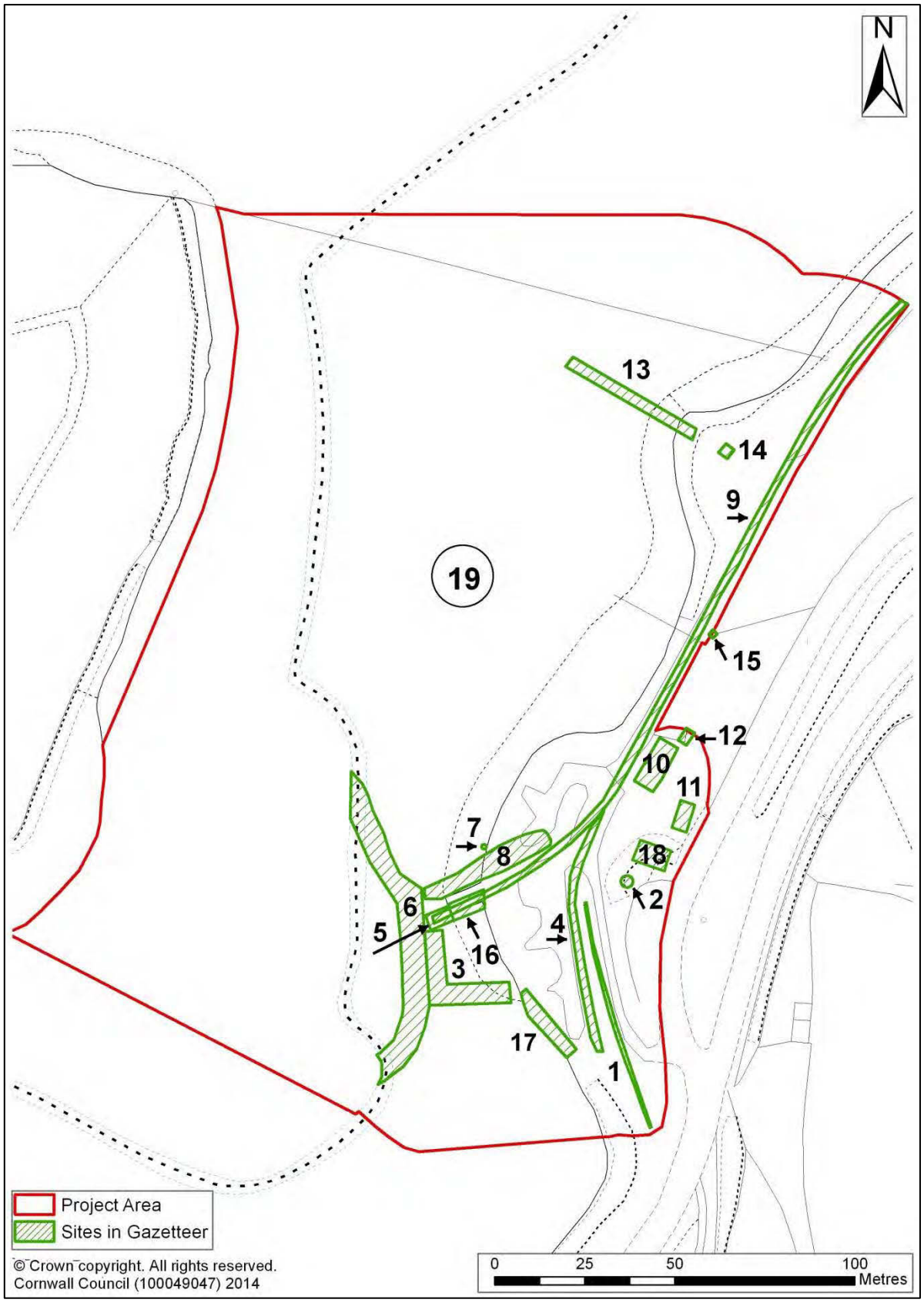

Fig 12 Plan showing Gazetteer entries.

3.2 Historic character

The following sub-sections present the results of a rapid characterisation of the study area using information from three 'previous' time-slices based on: *c* 1841 Tithe mapping and the *c* 1880's First and Second Edition Ordnance Survey mapping (mid to late 19th century character); *c* 1907 Second Edition Ordnance Survey mapping and 1946 RAF vertical photographs (early to mid-20th century character) with present character based on 2014 Ordnance Survey digital mapping. The characterisation mapping is shown at Sub-Type level, the lowest hierarchy of historic characterisation. These component parts or site types are discussed below within a broader context of characterisation aimed predominantly at 'Broad Type' level.

3.2.1 Late 18th to mid 19th century character

Fig 13 Late 18th to mid 19th century previous character map showing characterisation to Sub-Type level, based on the c 1841 Tithe Map and later 19th century OS mapping.

The late 18th to mid 19th century character of Wacker Quay (Fig 13) reflects the period of transition from its original 18th century function as a small local trading quay on a tidal inlet of the River Lynher, still with a working lime kiln, to a military quay serving the construction of Tregantle and Scraesdon Forts.

There are no visible remains of the earliest timber pier associated with the lime kiln (site 2), although it may have stood close to where the timber uprights of the later railway jetty (site 5) can still be seen today (Figs 8 and 9). By the mid-19th century this pier had been replaced by a larger quay which is shown on the *c* 1865 First Edition OS map. This quay was accessed via a newly formed navigation channel and docking area. Together these early features are characterised under Broad Type 'Water Transport', Sub-Type 'Quay'. The footprint of the early quay can still be discerned within the present foreshore and is particularly evident in aerial photographs (see Figs 6 and 7). The consolidated ground on which it was constructed was partly re-used for building the later military jetties and hard standings in this area.

The 18th century lime kiln, coal store and associated working areas, characterised as Broad Type 'Processing Industry', Sub-Type 'Lime Kiln', occupied much of the area now covered by regenerated woodland to the east of the present day quay. The retaining wall constructed along the access road to the lime kiln respected the edge of the former rocky foreshore and continued in use as part of the later military depot, bordering the railway siding. This wall survives today, preserving the historic change in ground levels where the landward ground ran down to the foreshore

Prior to the military extension of Wacker Quay the foreshore was largely tidal saltings or saltmarsh that extended between the new Wacker Quays and the edge of the rocky foreshore, later the line of the military railway. This 'cultural topography', physical in form but adapted and shaped by humans, is characterised under the Broad Type 'Cultural Topography (Intertidal)', Sub-Types 'Saltmarsh', 'Intertidal Mudflats' and 'Foreshore (Rocky)'.

The changing use of Wacker Quay over the course of the 19th and 20th centuries has preserved elements of the earlier cultural topography in parts of the site, which in its turn has influenced how Wacker Quay has developed in both form and function.

3.2.2 Late 19th to early 20th century character

Fig 14 Late 19th to early 20th century previous character map showing characterisation to Sub-Type level, based on the c 1907 OS map and 1946 Aerial Photographs.

The predominant historic character of Wacker Quay during the late 19th to early 20th century was military in nature (Broad Type 'Defence'), reflecting its expanding role to accommodate the manning of Scraesdon and Tregantle Forts and the provision of supplies and munitions, as well as the later re-use of the quay during the Second World War (Fig 14). In addition to the construction of the railway (site 9) and railway jetties (site 5) an area of former saltmarsh was consolidated to create a larger working area, broadly resulting in the built form of Wacker Quay still visible today. The newly constructed railway respected the line of the former rocky foreshore, preserving the point at which the landward ground sloped down to the shoreline.

The railway and railway jetty are characterised as Broad Type 'Defence', Sub-Type 'Military Railway'; historic map evidence suggests that the timber jetty and later stone jetty serving the railway may have been constructed within, or close to, the footprint of the earlier quay. Dredging of the channel during the late 19th century created a new navigation channel (Sub-Type 'Active Navigation Channel') and dock (Sub-Type 'Wet Dock') adjacent to this former quay, characterised as Broad Type 'Water Transport'.

The buildings and adjacent zones of military activity on the area of extended quay are characterised as Sub-Type 'Military Depot' to reflect the broader activity of provision and supply and the infrastructure (buildings and railway sidings) to implement this. The military depot extended across part of the working area of the former lime kiln but the *c* 1907 OS map indicates the beginnings of some woodland regeneration in the southeast of the site by this point. The retaining wall constructed along the access road to the lime kiln was, however, utilised by the wider military depot to form the supporting back wall to the railway sidings.

The foreshore bordering Wacker Quay was still largely tidal saltings or saltmarsh (Broad Type 'Cultural Topography (Intertidal)', Sub-Type 'Saltmarsh') in the early 20th century; the saltmarsh was greater in historic extent than the present day shingle foreshore. The *c* 1907 OS map shows that the short-lived pier (Sub-Type 'Working Pier') constructed to the west of the railway was initially accessed via the tidal saltings, these later becoming an area of regenerated woodland.

Wacker Quay played a role in the D-Day landing offensive during the Second World War when an artificial hard-standing was constructed to form a pier or jetty (site 16) that extended northwards along the foreshore towards the railway jetties; the aerial photograph of *c* 1946 suggests some consolidation of the foreshore in this area, partly respecting the footprint of the earlier quay (Fig 6). Part of the structure is still visible today but its historic built form and extent is unclear. Its intended military purpose (Broad Type 'Defence') is characterised as Character Type 'Military Installation', Sub-Type 'Embarkation Point'.

3.2.3 Present character

The present character of Wacker Quay (Fig 15) is predominantly that of a broad function leisure and recreation space. Its current form has been shaped by surviving elements of past use; the quaysides, jetties, lime kiln, military railway and ancillary buildings. The wider topography of the site, the river inlet that forms Wacker Lake and the foreshore bordering the quay for example, also bears the consequences of historic change through man-made intervention; the altered course of the navigation channel, the original line of the rocky foreshore now lost beneath the hard standing of the quay and the changing nature of the lower foreshore, formerly tidal saltings or saltmarsh, now a mix of sand and shingle. The context for the changing topography of the area is characterised under Broad Type 'Cultural Topography (Intertidal)', Sub-Types 'Intertidal Mudflats and Foreshore (Shingle)'.

These constituent parts currently combine to provide the setting for leisure and recreation facilities; Wacker Lake has reverted to a quiet backwater creek used by small craft and pleasure boats, the level hard standings of the historic quay and military railway depot have paved the way for the laying out of car parking facilities and picnic tables. The course of the former military railway has been adopted to create a wooded leisure trail. Figure 15 captures the wider leisure and recreational character of this small former military port today through the Broad Type 'Recreation' and Character Type 'Seaside Recreation'. Its component parts (Sub-Types) comprise the 'Recreational Open Ground' created out of the former quayside and military railway depot and the 'Leisure Trail' created from the course of the former railway.

On the landward side of Wacker Quay areas of woodland and scrub, characterised as Sub-Type 'Regenerated Woodland', have become established as a consequence of changes in activity across some parts of the quayside from the late 19th century onwards. The remains of the former military railway buildings are still visible in places amongst the trees and scrub in the southeast of the site, bordering the access road and

car parking areas. An additional area of regenerated woodland in the northwest of the site contains part of the leisure trail created from the course of the former railway line.

On the seaward side of Wacker Quay the foreshore above Mean High Water is now a mix of sand and shingle, Sub-Type 'Foreshore (Shingle)'; the combined result of drift deposits and ongoing consolidation of the former saltmarsh during the active lifespan of the quays and jetties. On the south side of the quay there are the eroded remains of the artificial hard standing or jetty (site 17) constructed as an embarkation point for the D-Day landings in 1944. Today the tidal reaches of the creek adjacent to Wacker Quay form a quiet backwater, small craft and pleasure boats replacing the hubbub of historic maritime activity. Within the creek the cessation of historic dredging has resulted in the navigation channel (Sub-Type 'Active Navigation Channel') that allows passage even at Mean Low Water shifting away from Wacker Quay to follow a more central course than it did during the 19th and early 20th centuries.

Fig 15 Present character map showing characterisation to Sub-Type level, based on OS digital mapping (2014).

4 Designation, ownership and management

4.1 Designations

4.1.1 Heritage designations

Scheduled Monuments

A Scheduled Monument is one designated by statute as a site of national importance and is protected by The Ancient Monuments and Archaeological Areas Act 1979, as amended by The National Heritage Act 1983. By law, any proposed work affecting such sites requires Scheduled Monument Consent from the Secretary of State for Culture, Media and Sport.

There are no Scheduled Monuments in the study area.

Listed Buildings

In England and Wales the authority for listing is granted to the Secretary of State by the Planning (Listed Buildings and Conservation) Act 1990.

There are no Listed Buildings in the study area.

The Historic England (HE) South West office is in Bristol. HE provides input and advice on heritage matters for Listed Buildings and Scheduled Monuments, together with strategic overviews and support at local, regional and national levels.

Heritage at Risk

There are no sites or buildings in the study area that are listed on Historic England's *Heritage at Risk Register 2015*.

Local Lists

Local heritage listing is means for a community and a local authority to jointly identify heritage assets that are valued as distinctive elements of the local historic environment. There is no local list for this area apart from sites recorded in the HER. Cornwall Council supports the development of local lists and is currently looking at a standard way of assessing criteria for inclusion on lists by neighbourhood groups based on the 'Good Practice Guide for Local Heritage Listing' (English Heritage 2012).

4.1.2 Other designations

A large proportion of the land area, rivers and estuaries in Great Britain is under the protection of conservation designations. Statutory designations broadly fall into three categories: nature conservation, landscape conservation and natural heritage conservation, which protects wildlife, landscape and cultural aspects of the countryside. Wacker Quay is included within the following conservation designations:

- Tamar Valley Area of Outstanding Natural Beauty (TVAONB);
- Area of Great Scientific Value (AGSV: 99, CL13);
- Area of Great Historic Value (AGHV: Rame Forts CL18);
- Plymouth Sound and Tamar Estuaries European Marine Site (UKOO13111);
- Tamar Estuaries Complex (UK9010141);
- County Wildlife Site (Lower Lynher Estuary CN9.1);
- Site of Special Scientific Interest (SSSI: Lynher Estuary 1004001);
- Special Area of Conservation (SAC: Tidal mudflats);
- Special Protected Area (SPA) under the Birds Directive 79/409/EEC;
- Bio-diversity Action Plan (BAP: Woodland habitat ID1643).

4.2 Ownership

All of the quay area is still owned by the MOD and the quay is used to train new recruits to HMS Raleigh. From the 1970s it was managed by Cornwall County Council as a car park and picnic site.

The site, together with the railway line and the pathway to Antony village is currently leased by the Tamar Community Trust (TCT) who holds a ten-year arrangement for management and maintenance. The Trust was formed to support the AONB partnership to obtain new access, recreation and tourism-based facilities and services. The TVAONB Action Framework for strategic priorities over the next five years includes promoting and supporting the Valley Volunteers and TCT, and encouraging them to promote, research, record and maintain the Valley's heritage by creating a volunteering strategy and developing projects to involve the community in protecting and enhancing the landscape. Regular conservation task days are held at various heritage sites across the Tamar Valley including Wacker Quay.

4.3 Planning arrangements

4.3.1 The Marine Management Organisation (MMO)

Marine activities in the seas around England and Wales are licensed, regulated and planned by the Marine Management Organisation (MMO) so that they are carried out in a sustainable way. Their responsibilities include planning and licensing for marine construction, deposits and dredging that may have an environmental, economic or

social impact and producing marine plans to include all marine activities, including those they do not directly regulate. The study area will come under the South West Inshore Plan which will be completed by 2021.

4.3.2 The National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) is the national planning policy document for England and Wales. This national guidance is applied at a more local level by Councils (also known as Local Planning Authorities), who form area specific policies and proposals that reflect the broad guidance of the NPPF, but with more locally specific detail.

4.3.3 Cornwall Local Plan

In Cornwall the main policy document is the emerging Cornwall Local Plan, which aims to control and influence the use of land in the public interest by identifying areas where development can and cannot take place. Sitting underneath the Cornwall Local Plan are area-based policies for settlements, reflecting the specific character and needs of each place. These are referred to as either Town Frameworks or Neighbourhood Plans — Neighbourhood Planning is now a potential way ahead for bringing positive management actions forwards.

The NPPF requires that Local Plans 'be prepared with the objective of contributing to the achievement of sustainable development.' Local Plans should cover a 20 year period, and be able to demonstrate that the content of the Plan is deliverable, meaning that a sufficient number of sites have been identified to achieve the objectives of the Plan.

From 1 April 2009, the six District Councils and the County Council became a unitary authority - Cornwall Council. Many of the planning policies that were used by the former districts have been saved until such time that a county wide Local Plan is adopted. These policies will be used to determine planning applications that are submitted to Cornwall Council, albeit that the national guidance of the NPPF will be given greatest weight in decision making if the saved policies are considered out-of-date.

4.3.4 The Cornwall Maritime Strategy 2012–2030

'*A future for Maritime Cornwall: The Cornwall Maritime Strategy 2012-2030'* was adopted by Cornwall Council in August 2012. It is the first, and to date the only, high-level maritime strategy to be produced by a local authority. Section 1.4 of the Strategy identifies strong roles for landscape and seascape character in building Cornwall's future sustainable economic and community development. The following objectives of the Strategy are of particular relevance to this study:

- Objective E: To recognise, protect and further develop the 'working harbour' role of Cornwall's estuaries, ports and harbours;
- Objective F: To better connect Cornwall's coastal communities and destinations and support sustainable, low carbon transport; and
- Objective G: Ensure Cornwall's natural and historic maritime environment and culture is renowned worldwide, and is a source of pride and inspiration to residents and visitors.

4.3.5 Cornwall Devolution Deal

The Devolution Deal gives Cornwall greater powers over public sector funding and is the first stage of a longer journey towards delivering the full Case for Cornwall, sets out details of the additional powers and freedoms we want from the new Government.

The Deal was officially signed by the Prime Minister, the Secretary of State for Communities and Local Government, the Leader of Cornwall Council and others on 16 July 2015.

Under the terms of the Deal, which is based on the proposals set out in the Case for Cornwall which were formally agreed by the full Council, Cornwall will have greater

powers over areas of public spending which are currently controlled by London. The deal covers a range of key areas including Heritage and Culture:

44. The Government recognises Cornwall's rich and unique heritage, including its historic revived language and passionate communities, and that this cultural distinctiveness is an important factor in Cornwall's local economy. It underpins tourism and is a key driver that attracts other business to the location.

45. In order to support the cultural heritage of the local area Cornwall Council, Cornwall and Isles of Scilly Local Enterprise Partnership and Government agree to:

- Invite local partners to create a Cornish Heritage Environment Forum so that Cornwall can develop their vision for heritage at a more local level. Cornwall would be able also to use this group to explore links to the local tourism agenda. This forum would build on the work of the existing South West Heritage Environment Forum.
- Cornwall Council and Historic England will jointly produce a study of the cultural distinctiveness of Cornwall's historic environment. This will inform the work of the new Cornish Historic Environment Forum and the development of the Framework Convention for National Minorities (FCNM).
- Engage Government, through the Department for Culture, Media and Sport, on how to best support tourism in Cornwall.

5 Forces for change

Average global temperature and sea level have risen since the late 19th century and at an increased rate over the past few decades. Average UK temperature has risen since the mid 20th century, as have average sea level and sea surface temperature around the UK coast. Over the same time period, trends in precipitation and storminess are harder to identify (UK Climate Projections (UKCP09)). Future sea-level rise around the UK is estimated to be between 12 and 76cm by 2090–2099 (Lowe *et al* 2009). This range is based on projections using low, medium and high scenarios for greenhouse gas emissions, and the central estimate for the medium scenario is 37cm by 2100, although this should not be taken as the most likely projection.

The Paris Agreement of November 2015 represented a historic moment in the fight against climate change. An enduring, legally-binding treaty, it is the first to commit all countries to cutting carbon emissions. 187 countries will reduce carbon emissions, starting in 2020, once 55 countries covering 55% of global emissions have acceded to it.

The impacts of climate change have the potential to alter or put pressure on the historic environment of Wacker Quay: the piers and other features might be damaged by flooding; increased storminess, rain and high winds might damage historic structures.

Lack of dredging may lead to the silting up of the navigation channel and loss of quays and landing points, although dredging could also be very damaging to the historic features buried in the silts.

Increased recreational use can put pressure on the landscape, infrastructure and parking facilities, with implications for the continuing management of the site.

Wacker Quay is currently covered by two management plans, the TVAONB Management Plan 2014-19 and the Tamar Estuaries Management Plan 2013-18, which are themselves a major force of change for the site. Their action plans aim to minimise negative impacts and promote the positive forces for change from the perspective of their overall objectives, such as projects for increased leisure pursuits, but the risks such projects may incur specifically for the historic environment need to be recognised and minimised. One of the priorities of the TVAONB management plan, relevant to Wacker Quay, is to 'Promote increased use of the river system and its cultural heritage as a focus for education' (section 6.7) and one of the policies is to encourage special

projects that improve awareness and understanding of undesignated heritage assets and encourage their inclusion in the HER (section 4.6).

Fig 16 Risk of flooding from rivers and sea at Wacker Quay (© Environment Agency copyright and database rights 2015. © Ordnance Survey Crown copyright. All rights reserved. Environment Agency, 100026380. Contains Royal Mail data © Royal Mail copyright and database right 2015).

The areas marked as 'High' on Figure 16 indicate that each year, this area has a chance of flooding of greater than 1 in 30 (3.3%). This takes into account the effect of any flood defences that may be in this area. Flood defences reduce, but do not completely stop the chance of flooding as they can be overtopped or fail.

6 Assessment of significance

In 2008, English Heritage published 'Conservation Principles', containing its framework and guidance for assessing the range of values pertaining to the historic environment (English Heritage 2008). This guidance identifies four main types of values: Evidential, Historical, Aesthetic and Communal and the following subsections present a preliminary assessment of the values and significance relating to Wacker Quay's port-related heritage.

6.1 Evidential

—'the potential of a place to yield evidence about past human activity'

The sites of all the main significant historic components and their related contexts are still visible: the track bed of the railway line to the extant 'working pier' remains of the timber quay posts in the estuary silt, and the site of the nearby railway sidings. These are tangible links to the past. Although the intervening spaces are either overgrown or converted to access routes and car parking there may still be considerable potential for surviving below ground remains.

There is also relatively good cartographic and documentary evidence for the phases of activity at Wacker Quay and some published material.

6.2 Historical

— 'the ways in which past people, events and aspects of life can be connected to the present (it tends to be illustrative or associative)'

The 18th century association of Wacker Quay with agricultural lime production in the Lynher Valley is of local historic interest.

Its later reuse at the end of the 19th century as a military quay with the only light military railway in Cornwall is highly significant and must be seen in the context of Tregantle and Scraesdon Forts and the wider defences of Plymouth which are of considerable national importance reflecting the status of the city as one of the country's principal naval bases. Plymouth Sound is the best location in Britain to see the evolution of coastal defences in a compact area.

The modification of the quay during the Second World War links Wacker Quay with the wider D-Day preparations and their national and international resonance.

6.3 Aesthetic

— 'the ways in which people draw sensory and intellectual stimulation from a place'

The AONB status reflects the aesthetic value placed on the Tamar Valley which is a protected landscape of great importance and natural beauty. Those factors, which contribute to the Tamar Valley's outstanding status in a national context, relate to its completeness, cultural development and human scale.

The area has long been a haunt for artists and travellers. Some notable writers and artists frequented the Valley, such as J.M.W. Turner. Often, visitors were as fascinated by the industrial environment as by the picturesque landscapes. Today there remains an active community of artists and craftspeople in the Valley.

The particular aesthetic appeal of Wacker Quay makes it a popular local recreational destination from the nearby Plymouth urban area. Various online guides emphasise scenic views across Wacker Lake, the interest of the military heritage, walks along the recently opened scenic trail to Antony village and the opportunities for bird watching.

6.4 Communal

— 'the meanings of a place for the people who relate to it or for whom it figures in their collective memory'

For many people Wacker Quay is a special place; as the site of the only light military railway in Cornwall it is special for military history and railway enthusiasts, for bird watchers, for the TCT volunteers who take part in the conservation task days it is special for good fellowship and a sense of achievement, for many people it is simply a special place to walk the dog or to relax in the quiet, tranquil setting and look at the estuarine view. That contrast with the nearby urban environment of Plymouth makes Wacker Quay a valuable resource for many.

7 Summary of recommendations

The three time slices identified for characterisation of Wacker Quay (the late 19th century, the early 20th century and the mid-20th century) demonstrate how the symbiotic relationship between historic form, function and topography has developed through time. The present day leisure and recreational character of Wacker Quay retains and relies on many visible elements of historic form and structure. These have created its present distinctiveness and have influenced how the site is currently used and appreciated: how the tangible presence of the past within the present form and character of the quayside enriches the visitor experience.

It is commendable that the Tamar Community Trust is managing the historic environment of the site positively and that one of the priorities of the TVAONB

Management Plan is to raise awareness, of and put into practice, the use of Landscape, Historic and Seascape Characterisation to aid decision making and planning within the Tamar Valley AONB team and with key partners (section 3.7). It is important that measures to address the forces for change through the future management of the site should be fully informed on its historic cultural heritage, the significance and sensitivity of that heritage, and the important contributions that heritage makes to the present character of Wacker Quay.

To help better understand the site, a digital measured survey should be undertaken of all visible features and archaeological remains within the defined project area. This should comprise a geo-referenced measured topographical survey undertaken with GNSS/GPS (to sub-centimetre accuracy) and/or total station equipment with supporting colour photographs taken with a digital SLR camera.

Monitoring and good maintenance of extant historic environment features is encouraged, as outlined in the TVAONB Management Plan (section 4.8).

The potential for the survival of buried features should be considered if any ground disturbance or dredging is planned and appropriate provision should be made for assessment and recording, e.g. evidence for the extent of the WW2 hard-standing (Site 18) could be revealed by turf removal in this area. Where work is subject to the planning process it will be considered within the context of the NPPF and may be subject to relevant conditions. Where there are conditions attached to any planning, listed building or conservation area approval or any other relevant approval requiring archaeological investigation and recording then this work is funded by the applicant as it is not supplied by the local planning authority. Similarly outside the planning system any investigation will require funding.

There is an interpretation board for the Wacker to Antony trail but no similar board for the history of Wacker Quay, although the provision of off-site information may be considered more appropriate such as walker's leaflets and downloadable web information (for example this report) via the TVAONB.

The results of this report should be used to enhance the HER entries for the lime kiln (MCO 44996), Wacker Quay (MCO4940) and the Tregantle Military Railway (MCO23276).

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Fig 16 TCT volunteers on a heritage conservation task day clearing out a turntable pit at Wacker Quay (photo: TVAONB)

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