Rapid Coastal Zone Assessment Survey

Yorkshire and Lincolnshire: Phase 3

Historical Audit

Scarborough Harbour

Scarborough

North Yorkshire

ENGLISH HERITAGE

Humber Field Archaeology
Archaeological Consultants and Contractors

RAPID COASTAL ZONE ASSESSMENT

YORKSHIRE AND LINCOLNSHIRE

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PHASE 3

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1 SUMMARY

This Historical Audit of Scarborough Harbour and waterfront area was undertaken by Humber Field Archaeology on behalf of English Heritage as part of Phase 3 of the Rapid Coastal Zone Assessment (RCZA) of Yorkshire and Lincolnshire (Project 3729). This follows two previous phases of work in the area (Buglass & Brigham 2008, 2011).

The assessment takes into account the results of previous walkover surveys of the area undertaken for Phases 1 and 2, more detailed field recording, and an evaluation of documentary and cartographic sources. This has allowed an appraisal to be made of the potential importance of any surviving structural remains and features in the study area.

The survey has revealed features of potential archaeological or historical interest within the harbour and waterfront area, principally including the structural remains of the 18th- and 19th-century East Pier and Vincent's Pier, but also the more recent West Pier and North Wharf. In addition to these major structures, there are surviving local features which reflect the fact that this has been, and remains, a working port and fishing harbour. These include a variety of bollards, two capstans, and a series of buildings relating to the fishing industry located on West Pier. There are also elements reflecting the newer uses of the harbour as part of the tourist area of the town, although these are mainly located along the north side of Sandside. Here, a series of former merchants' houses and other properties have been converted to leisure use, including shops, public houses, and restaurants. The historic buildings provide an important setting for the harbour, and several have been listed in their own right as being of architectural significance.

The report concludes that efforts must be made to protect the remaining original fabric and features of the harbour and where possible enhance the area by controlling development. Recent development has included the addition of rock armour to the east side of the East Pier, necessary work which has nonetheless affected the setting of the harbour and also required structural alterations to the pier. Redevelopment of the West Pier is also underway, and care should be taken to retain important elements such as the late 19th-century and interwar fishsellers' offices at the north end.

Finally, interpretation of the harbour area would greatly benefit the town's tourist industry; this may take the form of interpretation boards or a history trail highlighting the past development of the harbour and its more historic features.

2 INTRODUCTION

2.1 Background

This Historical Audit is intended to assess the historical, architectural and archaeological resource of the area of Scarborough harbour.

2.2 Definition of the study area

The study area is defined as the area of the historic harbour shown on Figure 1, although the surrounding area has also been examined to determine its relationship with the harbour and whether any dispersed related elements are present.

The individual elements of the harbour are described in Section 4 and discussed in Section 5.

2.3 Statutory Status

The whole of Scarborough Harbour falls within Scarborough Conservation Area (Relevant Local Plan Policy: E23. Additional relevant Local Plan Policies: E27, E34, S14). Any work in a Conservation Area requires Conservation Area Consent.

East Pier, Old Pier/Vincent's Pier and West Pier are group listed Grade II (LBS 443957). The lighthouse on Vincent's Pier is also a Grade II listed building (LBS 443958), and there is a Grade II listed Police Telephone Box immediately north of the harbour (LBS 447785). Any works affecting or potentially affecting either site or their environs would require Listed Building Consent.

There are several Grade II buildings along the north side of Sandside and the area between Sandside and Quay Street; although these would not be directly affected by any potential harbour works, their setting must be considered.

Scarborough Castle is a Scheduled Monument (SM 13300); although the harbour is outside the curtilage of the Monument, English Heritage would need to be consulted with regard to works which may affect the setting.

2.4 Objectives

The general aim of this Historical Audit is to collate information relating to the known or potential cultural heritage resource within the study area, including where possible its character and extent, date, integrity, state of preservation and relative quality.

This will contribute significantly towards the overall aim, which is to provide sufficient information for planning purposes to enable the formulation of a strategy to ensure the recording, preservation or management of any significant built cultural heritage feature.

3 METHODOLOGY

3.1 Introduction

The information upon which this study is based was collated from existing written, published, graphic and unpublished information, directly or indirectly relating to archaeological remains of features of historical interest within the study area. A field survey of the area has supplemented the other sources.

The sources of information consulted are noted below and the data derived from them are presented in the discussion (Section 5). Additional published and unpublished sources are quoted in the report text and their details are noted in the bibliography.

A plan showing the dated development of the harbour has been created and included in the report (Figure 2) together with two further plans showing the results of the field survey (Figures 4, 5) and two figures comprising detailed elevations of bollards and other features encountered (Figures 6, 7).

3.2 Sources

Various cultural heritage research and other sources were consulted during this assessment, which included:

- The National Monuments Record events and monuments databases
- The National Monuments Record aerial photographic collections
- North Yorkshire Archives
- Scarborough Library

Cultural heritage information for the study area is summarised in Section 5. A selection of photographs taken as part of the survey has been included in the plates bound at the end of the report, together with a series of historical maps.

4 FIELD SURVEY

4.1 Introduction and methodology

The field survey of the area in and immediately adjacent to Scarborough Harbour consisted of a systematic walkover survey with detailed photography of both individual features and general panoramas of the harbour and its setting. Unfortunately due to the commercial nature of the harbour much of the detail of the harbour walls was obscured by a range of commercial and pleasure craft. This prevented a more detailed assessment of the evidence for the different phases of construction to be made. Several visits were, however made, in July and November 2012 by John Buglass and in January 2013 by David Rawson, allowing a range of photographs to be taken under different conditions. This improved the opportunity to record details which were not visible at other times and revisit features which proved to be more significant than initially apparent.

The field survey also located all the surviving small features of interest, such as mooring bollards and capstans, using a handheld GPS system.

The area had been visited previously as part of Phases 1 and 2 of the RCZA.

4.2 The survey

The field survey undertaken in and around Scarborough Harbour recorded a number of details relating to the more recent aspects of the harbour's use and development (Plates 1–142). The development of the various piers can be clearly seen in the various cartographic sources (Plates 143–61) with the main phases of both the East and West Piers occurring from the mid 18th century onwards and is discussed in more detail below (also summarised in Fig 2). In most cases, development of the harbour since that period has removed or covered any traces of medieval to earlier 18th-century installations, including earlier island piers within what is now the inner harbour. The project concentrated on investigating elements of the existing piers and wharves, together with quayside installations, particularly bollards and capstans (Figs 6, 7).

The following narrative follows the harbour in an anti-clockwise direction from East Pier to West Pier, followed by a brief description of the Sandside area north of the harbour. As mentioned, a plan showing the various constituent parts of the harbour and their date of construction or significant alteration is included in this report (Fig 2) and should be consulted as part of the general background. The general layout of the harbour is best seen from Scarborough Castle headland (Plates 1, 2) or the St Mary's Church area.

The majority of the current form of the piers is obscured by modern surfacing (either concrete or re-laid historic stone flags) which appears to have acted to raise and hence cover earlier features. Similarly the flanks of the various piers are partially obscured by a combination of modern timberwork and moored vessels which made it very difficult to observe any evidence for different phases of construction, while parts of the harbour, particularly West Pier and the island pier at the south end of Vincent's Pier, have been substantially rebuilt, mainly at the ends and outer faces. Rock armour has also recently been added to the outer face of the East Pier, the original fabric of which is therefore no longer visible.

Most of the smaller features recorded were various types of bollard; the majority were of three principal types of circular cast iron single-bitt bollard with a smaller number of

non-standard types and several earlier wooden bollards or mooring posts (Figs 6, 7). Of the three main types, two have mushroom tops (Type A and B) and one has a stepped, flared top (Type C). Type A was found on the West Pier, Types B and C on the North Wharf, Types B and C on Vincent's Pier, Type C on the East Pier. Of the mushroom-topped types the difference between the two was that the top of Type A (Fig 6a, Plate 115) was 160mm narrower and 100mm shorter than Type B (Fig 6b, Plate 2). The Type C bollard had a distinctive stepped top which increased in size from 450mm to 540mm (Fig 6c, Plate 44).

In addition to the three types described above there were a large number of circular cast iron bollards of 400mm diameter where in place of a shaped head was a slightly domed concrete top which filled the top of the hollow casting (Plate 45). It would appear that these are the remains of standard bollards whose tops have been broken off or deliberately cut and replaced with concrete; it is possible, however, that they are a separate, distinct type in their own right. A small number of surviving wooden bollards were also present.

East Pier

East Pier is of very distinctive construction, although only the inner (western) facing is now visible due to the deposition of rock armour along the east side in the 2000s.

The pier was built using extremely large blocks of stone quarried from nearby White Nab and transported across the bay on floats; progressively larger blocks were used towards the base; this was a deliberate attempt to try and counter the exceptional force of the waves against this very exposed pier (Plates 3–8). The surface of the pier was originally also of stone, which still survives at the south end with more recent repairs (Plates 18–25). The original surfacing blocks here still show narrow rectangular lifting holes characteristic of the use of three-legged lewis clamps (Plate 19): two triangular wedges were put in place at either end of the lifting hole with a rectangular wedge driven between to lock them in place. A few others contain small circular holes which are also present on a number of modern replacement blocks (Plate 20); these reflect the use of a split-pin lewis, consisting, as the name suggests, of a circular pin divided into two. The blocks have been replaced by concrete surfacing in the central and northern sections of the pier, possibly to prevent rain and seawater entering the pier structure (Plates 10–12). The facing of these sections of the pier is badly eroded, with many joints widened and plugged with brick, concrete and modern stone (Plates 5–7). As this face of the pier is protected from direct wave action, this is likely to have been caused by water penetration from the outer face and top of the pier, dissolving the mortar and causing the joints to spall. There are three original stone landing stairs, centrally and at the north and south ends (Plates 4, 5, 8, 9).

The pier wall is fitted at intervals with wooden frames which act as fenders (Plate 8), and timbers are present for the same purpose either side of the south entrance. Here, arrangements of vertical beams on the side of the East Pier and the corresponding end of Vincent's Pier allows for substantial planks to be dropped between to stank off the entrance (Plates 51, 54). A scaffold bridge section is usually stored on the pier (Plate 23) which can be put in place when the entrance is blocked; this was the case during a final visit in January 2013 (Plates 52, 53).

Along the top of the outer side of the pier is a high stone parapet which can be reached by steps set at intervals. The northernmost section and two sections to the south, including that at the south end of the pier, are original, with an outer row of plugged sockets where cast iron railings have been removed (Plate 17). The northern

section (Plate 12) consists of three courses of large blocks with a vertical inner face; at the top is a concrete coping and surface supporting a decorative cast iron railing which originally continued along the Marine Drive before a modern parapet was added to improve wave protection. The two sections of original parapet towards the south end of the pier (Plates 14, 15, 23–6) consist of three to four stepped course ending in a shaped terminal (Plate 24). There are two sections of modern parapet consisting of new ashlar blocks which may eventually weather to match the old parapet. These were put in place when the rock armour was added to support the top of the armouring and create continuous wave protection for the outer harbour; the northernmost of these new sections is lengthy (Plates 3–5, 7, 8, 10) and is keyed in at both ends (Plates 13, 26), with steps and railings added at intervals (Plates 3, 8). The southern section is much shorter (Plate 16) and was put in place between existing parapets to support the top of the extensive rock armouring which runs the full length of the pier and Marine Drive (Plates 14, 15).

There is relatively little surviving pier furniture and both the 1852 1:1056 and 1893 1:500 Ordnance Survey plans suggest that this was historically the case, with mooring posts originally only present in the southern half, mainly single bollards and an occasional pair situated along the centreline of the pier. Three capstans are shown near the outer harbour entrance at the south end on both editions, but of these there is now no sign; these would have been used in warping vessels in and out of the outer harbour.

On the western side of the pier at the corner of a substantial bend in the pier near the south end is a Type C bollard with its distinctive flat-topped circular cap (Fig 6c: Plate 25).

Two wooden bollards were recorded on the East Pier. The first of these (Type E) had iron strap supports (80 x 2340mm) but in this instance was square with a distinctive taper from 500mm to 420mm at the base and stood 700mm tall (Fig 6e: Plates 26, 27).

The final wooden bollard on the East Pier (Type F) was a simple circular structure of 400mm diameter standing 500mm tall with a domed top (Fig 6f, Plate 28). There was a slight ‘waist’ to the bollard but this was probably caused by the wear of ropes during use.

It is assumed that the pier has been cleared of furniture to remove obstructions, allowing vehicles access to its full length, although this may not have been the original purpose. The use of the outer harbour is now by small yachts moored to buoys and a post-war staging within the harbour, or occasionally to the frames attached to the pier side; mooring posts are therefore redundant, and it is probable that mooring against the pier is not as actively encouraged as previously to prevent swamping and damage caused by frequent overtopping waves.

Between East Pier and Vincent’s Pier

The short distance between the north end of East Pier and Vincent’s Pier is dominated by the extensive timber platform for Luna Park amusements (Plates 29, 30) and a slipway (Plates 30–2). The platform was built in the 1930s on a sloping area of beach, extending a landing built as part of the 1897–1907 Marine Drive improvements, which included rerouting and widening the east end of Sandside at this point, moving the seawall considerably further south. Before the road was widened, there had been a wooden platform between the piers, present in 1852, but removed by 1892, probably to allow an initial widening of Sandside to improve

access to the East Pier. The neighbouring slipway almost certainly dates from this initial widening, surviving the more substantial remodelling of 1897–1907. A similar slipway was added on the west side of the pier at the same time; this also still survives. The eastern slipway still has its original stone retaining wall and surface of stone setts. A number of stone posts sunk into the surface along the eastern edge were presumably to prevent vehicles from straying into the harbour (Plates 32, 33).

Built partly on the slipway and partly on Vincent's Pier is a small stuccoed brick public convenience of possible 1920s date. Like many minor public buildings of the period, this has some architectural pretensions, with half-timbering and a red plain tile roof in small-scale 'Tudorbethan' styling (Plates 30–2). A passage beneath may originally have been a wave-cleansed sewer, predating connection to the piped sewerage system; a similar arrangement has been recorded in an underground convenience next to Crane Wharf, Bridlington; alternatively it may have been intended to provide safe passage for pedestrians while the slipway was in use. The building has utilitarian 20th-century flat-roofed entrance extensions at the north and south ends.

Vincent's Pier

Vincent's Pier consists of two distinct sections: the main structure, also known as the 'Old Pier' and an island section, sometimes referred to as the 'Lighthouse Pier'. These are linked by the modern Captain Sydney Smith Bridge (Plates 37, 38), which has a commemorative plaque nearby (Plate 41), but there are still clear signs of the original wooden drawbridge in the form of large recesses in the end of the piers either side of the gap (Plates 38, 39).

The Old Pier is substantial and built of coursed limestone blocks; these are much better finished than those of the East Pier, although the northern section of the Old Pier was both earlier and originally formed the outer pier, bearing the full force of the waves (Plates 34–6). A change of construction is visible some distance along the Old Pier (Plate 35), which is a reflection of the fact that the pier was built in several stages and also undoubtedly repaired many times.

The Lighthouse Pier is identical in construction, with a landing stair built into the inner angle (Plate 55). The outer face of the Lighthouse Pier, however, has been entirely encased in modern steel sheeting with concrete copings (Plate 50), although the original battered face can clearly be seen at the outer harbour entrance (Plates 51, 52), where there is the facility (as mentioned previously) to block the opening with stop planks (Plates 52, 53). The new facing has a built-in landing stair (Plate 57).

The Old Pier has largely been resurfaced with a strip of stone setts along the centre flanked either side by tarmac and wooden rails (Plate 42). An area of original or replaced stone flags or slabs still exists at the south end, however (Plate 37), where there is a small mid 19th-century Water House, of some historic interest (Plate 40); these slabs also entirely cover the surface of the Lighthouse Pier (Plates 56, 58).

The 1852 1:1056 OS shows that the pier had a considerable number of bollards located singly and in pairs either side of the centreline, but rarely right at the edges; this remained the case in 1892. All of the original bollards were, however, removed in the 20th century and replaced by more modern versions situated along the sides. A considerable number of Type B and C bollards are present along the Old Pier (e,g. Plates 42, 43–5); also present are concrete-filled examples where the original cap of one of the standard types has presumably been removed, including several on the Lighthouse Pier (Plates 40, 50). Two wooden bollards were recorded on the eastern side. Type D, was a simple round post of 440mm diameter and 800mm tall with four

iron strap supports (80 x 240mm) evenly spaced around the base. Further north a substantial square wooden bollard (Type E) was located on the west side of the Old Pier (Plate 46) and a single iron mooring ring was also recorded (Plate 47). The other principal feature of the Old Pier is a large modern boat crane situated on the west side (Plate 42).

In contrast to the functional bollards described above there was a more elaborate example (Fig 7a, Plates 66, 67) on the Lighthouse Pier. It appears to be a simple wooden bollard the top of which had been shaped to take a decorated cast iron cap (Plate 66). The decoration takes the form of an elaborate compass rose with a simplified fleur-de-lys to indicate north (Plate 67). This does not appear on the 1892 1:500 OS, and must therefore be later.

A second feature with a decorative cap was a small cast iron capstan, probably best described as a 'facetted mushroom' in shape, partly sunk into the modern surface (Fig 7b, Plate 68). As with the previous example the cap also has a cast compass rose, but in this case of a much simpler design (Plate 69). The capstan had a single row of six evenly-spaced sockets for the capstan bars. The small size of this capstan suggests that this was only used for smaller vessels. However, as the capstan bars would be located too close to the ground to make this capstan useable it is likely that this feature has been resited for decorative effect, although it is in a similar position to one shown on the 1852 1:1056 and the 1892 1:500 OS editions.

Also located at the south end of the Lighthouse Pier is a larger cast iron capstan (Fig 7c, Plate 70); this does not appear on the 1892 OS and must be a very late 19th- or early 20th-century addition.. The capstan has two rows of eight capstan bar sockets arranged around the top portion with eight barrel whelps evenly spaced below. The pawl ring at the base of the capstan had 15 evenly-spaced slots with four pawls (Plate 71). The slightly domed top of the capstan appears to have once had an extra metal plate on it which may have contained the manufacturer's details, although this is either badly corroded or partly removed (Plate 72). The capstan is sited on a hexagonal concrete base with six evenly spaced square iron 'studs' or boltheads to fix the capstan base firmly to the pier. This feature is a reused ships' capstan, with the upper bars used to weigh anchor, the lower bars for deck use.

Near the east end of the southern part of the Lighthouse Pier is a navalised 1914 issue 13-pdr Mark V Vickers quick-firing (QF) gun and mounting (Plates 62–4). The gun was recovered in 1982 from the wreck of the *SS Hornsund* which was torpedoed on the 23rd September 1917 (Plate 65).

An important building specifically related to the development of the harbour is the Grade 2 listed lighthouse itself (LBS 443958: Plates 58–60). The present tower replaced the original 1801–06 version destroyed in 1914 by German shelling, and was completed in 1931, with a more recent lantern the light is now fully automated. The harbourmaster's house is the original mid 19th-century structure, with some rebuilding. The structure is in apparent good condition.

Finally, a modern sculpture, the 'Diving Belle' decorates the pier south of the lighthouse.

North Wharf

The term 'North Wharf' has been adopted here for the entire section of the north side of the harbour between West Pier and Vincent's Pier (Plates 73–81). At the east end is a 19th-century slipway at the west side of Vincent's Pier, built into an early 20th-

century stone arched bridge which was intended to carry the widened Sandside across the north-east corner of the harbour to the new Marine Drive (Plate 75). Immediately west of this is a short section of modern steel-fronted wharf which was originally stone (Plate 76), and which was built in front of the new harbour wall. This little wharf is now surfaced with brick pavers (Plate 82) and is the location of several Type B bollards (Plates 82, 83). A slipway extends from the west end of this wharf. The harbour wall behind and immediately to the west of the slipway are still of stone (Plate 77), and the slipway itself is surfaced with stone setts with a Type B bollard at the top of the slope (Plates 84–5). Also at the top are several small kiosks selling boat ride tickets (Plate 84).

The next section consists of an extensive purpose-built landing stage built in front of the late 19th-century stone wall in 1928 (Plates 78–81) and continuing as far west as a late 19th- or early 20th-century slipway abutting the West Pier (Plate 81). The wharf is concrete surfaced (Plates 86, 88). It supports several large ships' mooring bollards along the edge, a relic of the once-extensive timber trade when vessels registered at various Baltic ports moored here to unload; there were two types, a larger one distinguished by a square baseplate, with a teardrop-shaped top (Fig 6g: Plates 86, 89) and a smaller version with a bent top and circular baseplate (Fig 6h: Plate 90). There is still evidence for small-scale fishing and crab or lobster catching on the wharf in the form of post and nets (Plates 87, 88).

West of the North Wharf, the fan-shaped western slipway retains the original stone setts (Plate 91), with a large timber mooring post set into a circle of smaller stones (Plate 92).

Several other features of interest are present. The first of these is a grade 2 listed 1920s police box at TA 04813 88785 (LBS 447785: Plate 139) which is located on the quayside near the western slipway, and is a good example of a once common sight. The structure is of wooden construction, square in plan, with a window to each face. The wall surfaces are divided into panels. The box has a triglyph frieze to the cornice below the shallow pyramidal roof which also has iron ogee-section guttering, capped by the police call sign.

The second item is located just to the south-west of the police box and is a WW2 sea mine (Plate 140). As with the police box these were once a common feature in many coastal towns, especially along the east coast and were seen as a reminder of the extensive mine fields that were deployed along the shipping lanes of the North Sea during the two world wars. As with many of the other sea mines the one at Scarborough had been modified for use as a collecting box for the *Shipwrecked Fishermen & Mariners Royal Benevolent Society* (Plate 141).

West Pier

The West Pier was largely rebuilt in the late 19th century and widened along the western edge subsequently, although early 19th-century masonry survives at the landward end of the eastern face (Plate 91). The Pier includes early examples of concrete facing dating to 1877–80 (Plates 93, 94). The wharf surface is a mixture of concrete and tarmac (Plates 102–06 etc).

The West Pier includes an interesting selection of buildings relating to fishing which chart the development of the industry in Scarborough between the late 19th and early 21st centuries, mostly situated along the eastern edge (Plates 93–8). Located on the landward end of the pier is a late 19th-century 'Jacobethan' two-storey multi-gabled building which superficially has the appearance of a set of almshouses, but was

originally built as fish sellers' offices c 1896, the first permanent building on the pier following its rebuilding in 1877–80 (Plates 99–102). The offices are constructed of dark red brick with a cast iron balcony at first floor level. There are rows of large windows and doorways to individual offices at both ground and first floor level with stone surrounds, mullions and transoms, and with five-centred arched doorways, also with stone jambs and lintels, and it is particularly these elements which give the appearance of almshouses. The steeply-pitched tiled roof supports several large brick chimney stacks characteristic of the style. South of the 1896 building is an interwar set of offices in stripped-down Queen Anne style (Plates 103–05), with a substantial two-storey fish market building dated 1990 to the south of that (Plates 106–08). Despite the differing dates and architectural styles, all three show similar features, a clear reflection of function defining form. Further single-storey market buildings and sheds of various materials and 20th-century dates extend to the end of the pier along the east side (Plates 109, 110).

At the south-west corner of the pier at the time of the visit was a surviving two-storey brick 'bait shed', one of two (Plates 111, 112); one was demolished by January 2011 and the second was due to follow, to be replaced by temporary car parking. Much of the remaining west side of the pier is already a car park (Plates 113, 114).

Although the 1892 1:500 OS shows a number of mooring posts along both sides of the West Pier, none of these now survive. The pier does, however, support a number of modern Type A bollards along the western side (Plates 112, 113, 115), but on the eastern there are also several large ship's bollards similar to those on the North Wharf (Plate 104) including those types recorded as Figs 6g and 6h (Plates 95) as well as a large 'Hammerhead' type (Plates 96, 104, 116).

Sandside

A photographic survey was undertaken along Sandside from its junction with the late 19th-/early 20th-century Marine Drive in the east to Eastborough in the west. A selection of photographs has been included at the end of this report (Plates 117–42). Many of these buildings have been individually or group listed, and they date from the late medieval period onwards, representing a wide range of architectural styles and varied use of materials.

At the east end is the neo-Gothic South Toll House, built at the same time as the Marine Drive (1897–1907), in the form of a medieval gatehouse, with a circular lantern tower topped by a half-timbered building over a pointed archway (Plates 117, 118). The tower and arch are stone clad, the half-timber element has brick nogging. As the name suggests, tolls were once collected here to allow access to the Marine Drive, but the building is currently used by HM Coastguard.

West of the Toll House, but outside the study area, is the entrance to Quay Street, which marks the line of the early medieval shoreline (Plate 119); this street contains several original early timber-framed buildings, including the Grade II listed Nos 2 & 4, the former 'Lancaster Inn' (No 45) and the 'Three Mariners' (Nos 47–49). Continuing west of the entrance along the north side of Sandside are blocks of largely late 19th-century buildings, now given over almost entirely to amusement arcades, shops and eating houses, varying from takeaways to sit-down restaurants (Plates 120–138), but also including three established public houses, 'The Lancaster' (No 45: Plate 122), 'The Golden Ball' (No 31: Plate 128) and at No 13 the Grade II listed 'Newcastle Packet' (LBS 447127: Plate 134). The latter was built on the site of a 17th-century custom house, and was formerly called 'The Five Man Boat', a reference to the

sailing yawls which were widely used for long-distance fishing from the mid 19th century into the early 20th century and traditionally carried a crew of five fishermen.

There are a number of other buildings of note, many Grade II listed. The earliest extant building on Sandside is No 24, the 'King Richard III House' (LBS 447131: Plate 130). Of three stories and an attic, the building is a late medieval merchant's dwelling, constructed of stone with a steep pantiled roof which presumably replaced earlier thatch or flat tiles some time after the later 17th century. The building was altered in the early post-medieval period, and has been restored, but still gives the impression of a late medieval/Tudor townhouse. The building was constructed in front of the earlier waterfronts on reclaimed ground immediately behind the late medieval quay which then seems to have moved little locally until the 19th century; the irregular line of Sandside formed a wharf and connecting thoroughfare until that period.

Other notable buildings, and next in date, include Nos 32–35, a compact block of pinkish-red brick townhouses with three storeys and an attic storey above cellars (LBS 447226, LBS 447227: Plates 126, 127). This attractive pantiled block is of early 18th-century date, with brick string courses typical of the late 17th/early 18th century. There are deeds for the building dating back to 1724, but it may well be slightly earlier. Another early 18th-century building is to be found at No 9 (LBS 447125: Plates 135, 136). The brickwork is very similar to Nos 32–35, but this narrow building has sandstone quoins and string courses. The gable includes an arch-headed window lighting the attic storey. Both buildings have been cleaned and restored, greatly enhancing their appearance.

Nos 11–12 have been considerably altered, disguising a possible late 17th- or early 18th-century origin (LBS 447126: Plate 134). The ground floor is a modern shopfront, with a stuccoed first floor; there is a gable over the right-hand section .The building retains four early 19th-century renewed sash windows on the 1st floor frontage. The gabled section has an old pantiled roof. There are traces of timber framing in the painted brick rear elevation.

Of later 18th-century date is Nos 25–26 Sandside (LBS 447225: Plate 130), standing next to the King Richard III house. Of painted stone, this appears to have been a matching pair of townhouses, with the pantiled roof disguised by a tall parapet to make the building appear more 'modern' or 'polite'. It is not impossible that this was a remodelled earlier building. Nos 21–23 also appear to be of late 18th-century date, with much modification (LBS 447130: Plate 131). Of stuccoed brick, the pantiled roofs are once again disguised by parapets. No 23 has flat bow windows of early 19th-century appearance at first and second floor level, although the listing text states that these are modern, replacing two pairs of sliding sashes.

No 15 is a late 18th century corner block, of painted brick (LBS 447128: Plate 133). The ground floor is a shop, with two floors and an attic above below a gable end roof with a stone coping. The main west front on East Sandgate has symmetrical, altered sashes and modern casements with a central fielded panel door below a blind semi-circular fanlight, set in a doorcase of fluted pilasters with a broken entablature and open pediment, moulded ornament to frieze. One of the first floor windows is a rectangular stuccoed bay with a cornice and sash window.

Also of note is the former Bethel Mission Chapel, No 20 (Plate 132). This unlisted late 19th-century building is of pale yellow brick with contrasting red brick triple arches at ground floor level and an enormous arch above. This building has been

restored and is now a restaurant, with the original main window removed and replaced by much larger panes.

Important to the history of shipbuilding and repair is the site of the last boatbuilding yard, the former Scarborough Marine Engineering, No 36 (Plate 125). This closed as recently as 2008 and the 20th-century industrial-style building is little altered, but now used as an indoor market.

Close to this building is the final reminder of Scarborough's maritime past in the form of a cast iron Admiralty pattern anchor (Plate 142). The Admiralty style was originally developed in 1841 and the early ones had a wooden stock which was later replaced with an iron one. The example at Scarborough would appear to date from the later 19th or 20th century (Upham 1983, 20).

Marine Drive

North of the harbour, beyond the Gothic tollhouse (Plate 117) is the sweeping curve of the Marine Drive, built 1897–1907 to connect with the existing Royal Albert Drive in North Bay, which had been completed in 1890. The seawall is now largely hidden by recent rock armouring, which continues along East Pier. There is now a full-length parapet, replacing the previous original cast iron railings.

The inner side of the Drive includes a robust late 20th-century masonry wall built to contain the frequent rockfalls from Castle Cliff.

Foreshore Road

South of the harbour is Foreshore Road, which lies almost at beach level, but is fronted by a low stone wall with cast iron railings; there is no parapet, allowing high storm tides to roll across the road under certain conditions. This wide carriageway was built in 1878 to link Ramsdale Valley and the Spa to the harbour area. The buildings along the northern side are mainly related to the tourist industry, including amusements, restaurants, cafés, takeaways and souvenir shops, continuing the theme of Sandside. A number of the buildings along the north side pre-date the construction of the roadway, including the Grade II listed former St Thomas's Hospital of 1858–60 (LBS 445165), while others which appear to be conversions. Along the south side is the present lifeboat house.

At the south end, Foreshore Road meets Valley Road, spanned by the Grade II listed Spa Bridge of 1826 (LBS 443954). This consists of four segmental braced iron arches on plain tapering stone piers with stone abutments. The sidewalks of bridge have been altered though not affecting the original design. Originally a toll bridge built to give access to 'Spaw' and its mineral spring.

5 ARCHAEOLOGICAL POTENTIAL OF THE STUDY AREA

Much of the following discussion is derived from reports relating to phases 1 and 2 of the RCZA (Buglass & Brigham 2008; 2010), and also more directly from Pearson 2005, particularly Chapter 10: Harbour, reflecting the extensive work of Scarborough Archaeological and Historical Society (SAHS) and others.

5.1 Geology and topography

The underlying solid geology of the coastal aspect of the parish area is a complex of Oolitic formations from the middle Jurassic (British Geological Survey 2001), which reflect the gradual tilting upwards of this coastline from south to north (for details on the complexity of the various deltaic and fully marine transgressions see Myerscough 1991, 10 and King 1965). The solid geology is overlain by a drift geology of glacial till from the Quaternary period (British Geological Survey 1977). The soils in the parish are unclassified due to their urban nature (Soil Survey of England and Wales 1983).

The topography of the coastal section of this parish is dramatic. The Castle headland is the dominant feature, dividing the area into two bays. The diamond-shaped top is relatively flat, and measures 500m north–south and 250m across, protected by steep cliffs, except on the south-west side where a steep hill makes access difficult. The sweeps of both North and South Bay are backed by a steeply rising landscape up to over 100m OD. Some sections of the coastline are composed of steep cliffs with a wave-cut rock foreshore whilst others, notably in the two bays, have a sandy foreshore. The land use is now almost exclusively urban with a mixture of residential, light industrial and recreational areas.

5.2 Historical and Archaeological Background

Early history

A Neolithic macehead has previously been found as a casual findspot from the area south of the harbour. A late Bronze Age/early Iron Age settlement on the Castle headland was identified during excavations in the 1920s, including a number of bronze socketed axes and other artefacts; early Beaker pottery was also apparently present, suggesting activity from before c 2000 BC. A middle Bronze Age spearhead has also been found in the town, although its exact provenance is unknown.

The settlement on the Castle headland indicated two phases of Iron Age settlement, the earliest of the 7th century BC with Hallstatt influences, and a second slightly later, in the 6th century BC. A number of tools and other artefacts were found, and there was evidence for bronzeworking. There were a number of hearths and many pits, some probably for water storage, as well as fragmentary human remains. The site may have become a promontory fort, although the later castle has destroyed any potential evidence for defensive works across the neck of the headland, which was the only area not protected by almost unscaleable cliffs. Additionally, a ‘Hallstatt type’ armlet or bracelet was found in Paradise Street, which may well be related to the settlement above.

The next significant activity is represented by a Roman signal station, constructed on the Castle headland c AD 370. This had a tower c 15m square at the base, and possibly 30m high. This is one of a number along the Yorkshire coast and one of the best preserved. Although there has been some suggestion that these were in fact small forts or refuges (Wilson 1989), this seems highly unlikely to have been their primary purpose, since they were clearly designed and located to act as watchtowers

and early warning systems for military garrisons and the local population, in much the same way as their Elizabethan, Napoleonic and World War 2 counterparts. The route of the road to the signal station from Malton could be 'fossilised' in the line of Castle Road, as there are several sites on the ridge along which it runs.

A possible Roman wall was found at Eastborough/West Sandgate, and there have been other findspots in the area of the present town. Several of these locations are close to the waterfront which would seem to strongly suggest some form of quay or landing at some stage, although this has probably been left in a more landward position by the continual reclamation of the waterfront during the medieval period.

The port and harbour

There is no reference to Scarborough in Domesday Book, and it appears likely that at the time it was a relatively insignificant settlement forming part of the manor of Falsgrave which lay a mile inland and was the seat of a royal manor with jurisdiction over twenty-one other named settlements (Pearson 2005, 6). Scarborough does appear in a Yorkshire charter granting rights from Henry III to the burgesses of the town (Early Yorkshire Charters 364) dated c 1160 as *Escardeburg* (Ekwall 1974, 406). The town is also named in the 12th-century *Kormakssaga* as *Skarthborg*, in the early 13th-century *Orkneyingasaga* as *Skarthabork*, 'Skarthi's stronghold'. Although relatively late, both sagas refer to a much earlier period: the brothers Kormak and Þorgils Skarði ('harelip'), characters in the former, were in the service of King Harald Grafeld ('greyhide'), king of Norway from c AD 960. Both men took part in an expedition to England in AD 966–7, at which time Þorgils supposedly founded the town, but the accuracy of the story cannot be proven, and may well be apocryphal given the time elapsed between the events and the saga itself. The initial placename element 'scar-' could equally be derived from *skarth* ('gap'), possibly a topographical reference to the cliffs falling away on the south side of the Castle headland or even to Ramsdale valley, with the tale invented as a form of 'folk etymology' (an attempt to explain a placename by attaching a legend).

Local archaeologist Peter Farmer recorded evidence on several sites in the 1960s and 1970s: closest to the harbour, including possible 10th-/11th-century waterlogged deposits and organic artefacts excavated in Eastborough/Sandgate in 1975–6 overlying natural beach sand. An early chapel was built c 1000 on the Castle headland on the site of a later medieval chapel, and has been considered as potentially part of the settlement allegedly destroyed by Tostig and Harald Hardrada in 1066; a number of burials dated by contemporary artefacts were also excavated, suggesting that there was a local community, possibly part of a separate enclave rather than relating to a village engaged in fishing and trading on the waterfront. There was a similar distinction between the waterside settlement of Whitby and the adjacent but separate village of *Prestby* on the Abbey headland (Buglass & Brigham 2008).

The development of the later medieval town is well attested to both in documentary terms and physical remains, although there may have been an early planned settlement laid out by William le Gros, Earl of Aumale (Albermarle), contemporary with the construction of Scarborough Castle in the second quarter of the 12th century. This settlement probably stretched along the high neck of land leading from the castle gates along Castle Road, and incorporating the first St Mary's Church. There was probably a small waterfront enclave near West Sandgate (Pearson 2005, 8), since Scarborough is known to have had a port prior to 1155, and as mentioned, Farmer potentially identified early remains in the area.

The most obvious features of the medieval town are the street layout, St Mary's Church and the castle, which had mid 12th-century origins. The modern town is usually considered to have begun with the creation of *Oldborough*, the original core of the present old town, to the west and south-west of the Castle headland. Oldborough was probably founded shortly after 1155, with le Gros' original settlement left as a series of nearly empty tenements. The new town consisted of a grid of streets and alleys extending down the steep cliff between the church and the waterfront, most of which survive in the present town layout. The cliff was terraced to form house platforms, and terrace walls and levelling deposits have been located on several development sites, principally those on an east–west axis, such as Longwestgate and Sandgate.

Oldborough was defended on the west and south side by town walls, ditches and ramparts. The original south wall was thought to run along the cliff north of Merchants Row, excluding the harbour area, but one of the town's gates, *Sandgate*, is thought to have been uncovered by Farmer in 1976 at the foot of the cliff, which suggests the curtain wall was in the same area.

Oldborough was extended westward shortly afterwards to create *Newborough* with the original west rampart now redundant. The town's defences were extended around the north and west sides of the new area, probably after 1225.

The new town quickly became a thriving settlement with a busy port which figured prominently in the fishing industry and merchant trade. Although market charters had been granted in 1155 and 1163, by 1235 Scarborough also had a chartered fair established by Henry III, with a six-week trading festival held between Assumption Day (15th August), and Michaelmas Day (29th September) to attract merchants from all over Europe; the Fair continued to be held for 500 years, from the 11th to the 18th century.

Although thriving, being in the top 35 tax-paying towns in 1334 and 1337 (Pearson 2005, 12), and supporting three large friaries, there was little suburban growth outside the borough walls. There were plenty of empty properties, particularly in the north, and increasingly after 1350, when economic decline set in, perhaps partially as a result of the Black Death. Settlement was concentrated in areas south of Longwestgate around the waterfront and harbour. Any developments in this area therefore have a high potential for encountering evidence for the maritime development of the town.

This economic decline continued to affect the town into the 16th century, and although the medieval street plan was maintained, there were still empty tenements, particularly in the north in the Castle Road/Paradise area. The Dissolution of the Monasteries in 1538–9, saw the demolition of many of the town's medieval institutions, including the friaries, hospitals, chantries, and the chapel at the Castle, and there is evidence that some sites were not built on for some time, although others were redeveloped more rapidly.

The modern harbour is the result of centuries of alterations and extensions, with the northern part of Vincent's Pier (the 'Old Pier') in particular having antecedents (Pearson 2005, 59–63).

It is quite clear that the relatively sheltered area south of the headland was used in the early medieval period, as in 1252, Henry III granted Scarborough the right to levy customs duties on boats already using the harbour for a period of five years, in order to raise sums for the construction of 'a certain new port with timber and stone

towards the sea whereby all ships arriving thither may enter and sail out without danger as well at the beginning of flood as at high water…' (Rowntree 1931, 165). Crucially, this shows that a deepwater facility was envisaged. Earlier vessels constructed in the northern European clinker tradition, derived from the types of vessels used for centuries around the North Sea and Baltic, were designed to be beached, but the development of more modern types of vessel in the 12th and 13th centuries, such as improved hulks and cogs, began to demand the provision of quays to moor against for loading and unloading. A wider variety of vessels appeared in the 15th century, such as the caravel, carrack and hoy, mainly round-bottomed, and increasingly larger with higher sides (Unger 1980). Ships therefore became progressively less suitable for beaching, although coastal traders equipped with sails were still being beached along the north-east coast in the late 19th and early 20th centuries.

Several excavations from Quay Street in the north to the original Sandside frontage in the south have recorded the remains of groundraising dumps and medieval quays, reflecting the extent of reclamation which has occurred since the medieval period between East Sandgate and the Old Pier. The need for reclamation may have been driven partly by economic factors as populations and trade expanded rapidly, talking advantage of the prime development land being created on flatter ground close to the harbour. This was almost certainly the driver behind reclamation in other towns, with comparable examples including Kingston upon Hull and the City of London.

As the wharf advanced, buildings were constructed on the south side of Quay Street and lanes were developed to give continuing access to the harbour, with new properties developed alongside. The greatest area of reclamation seems to have taken place east of the present 'Golden Ball' public house; this is still apparent from Vincent's 1747 map and the 1852 1:1056 Ordnance Survey map, which show large reclaimed areas south of Sandgate in this area, whereas in the western half of the harbour, Sandside formed the quay until the construction of the Corporation Quay in the early 19th century; this was almost certainly due to the increased rate of sand and shingle deposition in the eastern area (see below).

Another major reason for reclamation was the natural deposition of sand, shingle and the dumping or accumulation of waste materials, restricting the depth of water over time as well as causing potential navigation hazards. In the case of Scarborough, the construction of the Old Pier at least as early as the mid 14th century (see below) is likely to have caused the build up of sand or shingle where it would previously have been scoured away by tides surging around the headland. The problem was referred to repeatedly in documentary sources, and in the 18th and 19th century, gaps or channels were cut through both piers to improve the flow of water.

Certainly from the 14th and 15th centuries onwards, sand and shingle formed a series of low dunes or mounds in front of the town quays, apparent from references to *Mastus* ('masthouse') *hill*, *Sandhill*, *Eastsandhill* and *Smiddy Hill*, still appearing under the same or different names well into the 18th century. To compound the problem, industrial and domestic waste material was deposited in the area in front of the wharf as well, and in 1697 Scarborough Corporation required that manure and rubbish dumped on Smiddy Hill and the staithes as far east as the Old Pier was to be removed, with no more to be deposited in future; rubbish was to be disposed of from the pier outside the harbour for the sea to scour naturally.

The presence of mounds of shingle would have become a major obstacle to ships wishing to dock directly against a wharf and to related quayside industries such as shipbuilding. The answer to the problem was either to make a virtue of the mounds

by using them or to enclose them within a new quay as part of the ongoing reclamation process; both of these solutions were adopted at different times.

The original natural shoreline at high water and by inference, the approximate position of the earliest 12th-/13th-century wharf, lay broadly along an east–west line followed by Quay Street and The Bolts. Although the exact location of the post-1252 waterfront is not known, documentary records referring to the rebuilding of the 'new quay' between 1341–71 place its mid 14th-century successor 24–36ft (7.3–11m) south of Quay Street (Pearson 2005, 61); this would have been sufficient to construct buildings on the wharf. A 16th-/17th-century alignment was constructed north of Sandside. There were almost certainly localised variations in the dates and extents of the various advances between the first and last pre-modern wharves, giving the frontage an irregular appearance. This is certainly the impression given by the blocks of buildings forming the south side of Quay Street and the strongly indented frontage of Sandside where the old wharf is now only represented as a series of cut-off forecourts and seating areas north of the early 20th-century carriageway.

Excavations in 2003 at the east end of Quay Street (No 58) revealed medieval sand and clay dumps over the natural shore sands. There was a later quay wall, probably of mid 16th-century date, with mooring rings attached. In the centre of Quay Street (No 23) a 14th-/15th-century cellar excavated in 2006 seems to have been integral with a quay. On the south side of the street, No 47 (former 'Three Mariners Inn') was apparently built directly on sand behind a 13th-century waterfront revealed below an amusement arcade immediately to the south in 1975–6.

In the centre of the area, excavations by SAHS in 2008–09 below Scarborough Marine Engineers revealed a fairly complete transect through the waterfront between Quay Street and Sandside. The evidence included a late medieval cottage at the northern (Quay Street) frontage, with up to 2.5m of probable 14th-century reclamation to the south, dumped over an underlying natural sand mound behind a robbed-out masonry seawall. There were 16th-/17th-century dumps extending to the south behind the next advance, where the contemporary wharf supported the early 18th-century Nos 34–35 Sandgate. A little to the west, the late medieval 'King Richard III House' (Plate 130) was constructed north of a contemporary quay.

To the west of this heavily reclaimed area, work beneath the 'Newcastle Packet' public house (No 13 Sandgate) in 2000 revealed 13th-/14th-century reclamation and a contemporary retaining wall, suggesting that the early and late medieval waterfronts were closer together in this area.

Boat construction and repair was carried out in the harbour area, probably for much of the medieval and post-medieval periods, with yards extending along the waterfront between the Old Pier and Sandgate. Certainly by the late 17th century, many of these concerns were based on the shingle mounds in front of the contemporary quay, which provided a relatively dry elevated platform for building or repairing vessels and for constructing launch slipways. The positions of family-run yards became fixed with the names of the firm often attached to the mound or 'hill'. Several occupied similar positions after the final areas were reclaimed in the 18th and 19th centuries (see below). As already mentioned, the engineer William Vincent's 1745 map of the harbour (engraved in 1747) shows a substantial bulge in the waterfront between the eponymous Vincent's Pier and the block containing the 'King Richard III' house (Pearson 2005, fig 35, 60), and still clear on Chapman's 1800 and 1831 plans (Plates 146, 147) and the 1852 1:1056 Ordnance Survey (Plate 148). The bulge appears to have originated through the incorporation of Sandhill and other former 'dunes' into the wharf, making the area available for building south of Sandside.

Despite being sheltered from the north and north-west, the site was extremely vulnerable to easterly to southerly winds, and a breakwater roughly in the location of the present Vincent's Pier would have been a necessity, extending from an existing natural rock extension, 'The Naval', from which the later East Pier also sprang (Pearson 2005, 60). A pier was already in existence by 1362 which was probably of standard construction for the period, with a frame of timber cells faced with planking and containing stone rubble; such was the case in Bridlington until the late 18th century (Brigham & Jobling 2012) and probably at South Landing, Flamborough (Brigham & Fraser 2012). In 1489, 300 oak trees were felled in Pickering forest to rebuild the quay and pier, suggesting damage to structures heavily reliant on timber. A c 1538 *plat* or map view of the town (British Library Cotton Augustus I. ii. 1: Plate 143) appears to show the waterfront and pier consisting of stonework supported by timbers, with large cobbles clearly indicated within the pier, on which stands a cannon and a small building, presumably a watch house. The pier has been estimated to have been c 800ft (244m) in length (Skempton 2002, 749).

In 1546 (Hinderwell 1832, 146–7), an act was passed to repair the harbour stating that:

> '…the said quay or pier within the said haven, by the flood and rage of the sea insurging over and upon it, had freated and broken down, and marvellously worn away the said quay or pier, insomuch that the haven was not of late years as frequented as formerly, to the great impoverishment of the inhabitants…'.

Substantial investment was made in 1564–5 to rebuild the Old Pier to an increased height of 6.1m (20ft), accompanied by an extended quay. The Crown granted £500 towards the cost, together with 100 tons of timber and 6 tons of iron (presumably for nails and clamps). The quantity of timber implies that the pier and quay were still timber-framed rather than solid masonry. The rebuilt pier was already in poor condition by 1605, and there were calls for a new duty on coal to fund repairs, one of the few sources of funding available outside royal grants (Hinderwell 1832, 147–9; Chapman 1800, 6); powers were granted to build a stone pier in 1614 (ibid, 7). The remains of an undated north-east to south-west aligned pier were reportedly uncovered during harbour works associated with the Old Pier in 1816, consisting of dressed stone blocks with mortar on the inner (western) side which may well belong to this structure rather than the Elizabethan timber-and-stone composite version (Pearson 2005, 62). The 17th-century Old Pier remained in use into the early 18th century, although undoubtedly repaired or rebuilt more than once. Maps by cartographer John Cossin (1725: Plate 145), and the engineers William Vincent (1747) and William Chapman (1800: Plate 146) all show a protuberance halfway along the west side of the Old Pier supporting a 'Locker House', which presumably housed harbour tackle, such as cables and hawsers; both features had gone by the time Chapman drew a revised plan in 1831 (Plate 147). This protuberance could represent the original end of the 16th-/17th-century pier.

The 1538 *plat* also shows a freestanding pier in the centre of the harbour; this was an antecedent of the Inner Island Pier removed in 1819 (see below), and it is not clear if the latter was a later rebuild or coincidentally built in a similar location. The 1538 inner pier is shown as a double row of tall piles surrounding a structure of unknown build which was presumably used as a protective anchorage: several vessels are shown moored behind (Plate 143). The structure may have been built in this form to protect the harbour area behind the Old Pier, but there is a possibility that it represents the surviving isolated portion of an early version of the Old Pier which

collapsed and/or had been partly removed, leaving a 'marooned' section; Chapman suggests this origin for the 18th-century Inner Island Pier. There is a third possibility, that the island pier was the end of a hitherto unknown western pier curving from the Sandgate area. Interestingly, a c 1595 view of the castle and harbour, formerly in Lord Burghley's possession, now in the British Library (Royal MS 18 D.III fols 64–5) shows two piers; the 'Old Pier' and a second curving from the west, although there is no evidence to suggest that this bears any relation to the real situation (Plate 144).

Chapman suggests that the Inner Island Pier as it survived in the 18th and early 19th centuries was a relic of an early version of the Old Pier which was cut through, leaving the isolated section; the Locker House protuberance was, he suggested the point of divergence (1800, 7–8). He considered that the Inner Island Pier was of similar construction to the Old Pier: large rounded stones with smaller stones pushed into the interstices. Chapman also mentions the presence of a reef of stone between the Old Pier and the Inner Island Pier, where the intervening section of masonry may have been removed, and which caused a grounding hazard to vessels. This must have taken place prior to 1725, since Cossin's map of that date shows that the Inner Island Pier was already isolated (Plate 145), and it is therefore possible that it is a rebuild of the 1539 structure, with the protuberance at the Locker House perhaps marking the original end of the 16th-/early 17th-century Old Pier. Both Cossin and Vincent (1747) show the Inner Island Pier as a long straight structure (the 'Little Pier'), quite different to the short irregular stump shown on Chapman's plan of 1800. The Inner Island Pier was finally removed in 1819 and replaced by rows of dolphins, but Chapman's plan suggests this process had already started, with the eastern two-thirds of the inner pier replaced by three dolphins, leaving a short length which Chapman's later map confirms had gone completely by 1831 (cf Plates 146, 147).

A second freestanding wharf near the south side of the harbour, the Outer Island Pier, certainly originated as the end of a later version of the Old Pier, probably that built some time after the 1614 Act. This long curved alignment of the Old Pier is clearly shown on Cossin's map, drawn less than a decade before rebuilding started (Plate 145). By contrast, Vincent's plan of 1747 shows the isolated pier and the new outswept end of the pier as it was rebuilt following a new Act passed in 1732. This piece of legislation allowed the extension of the Old Pier from the point where it curved strongly westwards and also provided for the construction of a new East Pier to protect the older structure and moorings within the harbour from the full force of the North Sea. The original end section of the Old Pier was left in place as the Outer Island Pier to prevent waves from sweeping round the end of the new pier. The gap between 'Vincent's Pier' and the Outer Island Pier was known as the 'Pet Hole'; the Outer Island Pier was finally demolished in 1879–80 to make way for the extension of the West Pier.

Under the terms of the 1732 act, the new construction work was to be financed by harbour dues, including a toll of ½d per chaldron of coals from Newcastle. A new extension to the Old Pier was accordingly begun for the Corporation under the direction of William Lellam, succeeded after his death in 1733 by Robert Wilkins, and in 1734 by William Vincent (Skempton 2002, 749), commencing at the point where the previous pier had curved to the west opposite the Outer Island Pier. The extension was intended to be 440ft (134m) in length, 60ft (18.3m) wide at the base and 20ft (6.1m) at the top, being 35ft (10.7m) high; in the event, Vincent was asked in 1744 to work no further than the extent of the foundation already reached, which had already reached the required 6ft (1.83m) depth of water at a distance of 320ft (97.5m) and 'Vincent's Pier' was therefore completed to this length, bringing the pier to its current length south of the lighthouse, but without the present gap and L-shaped extension, both of which postdate 1800 (Plate 146). A change in construction

is apparent part way along the pier and this may have been at the junction of Vincent's work and that of his immediate predecessor, or simply reflect a temporary stopping point (Plate 35).

The Old Pier seems to have caused problems with silting in the harbour due to reduced water circulation. Sometime before Cossin's 1725 map was published, a substantial 6.4m (21ft) section of the northern part of the pier had been removed (the 'Docker Hole') to allow water to flow through and also enable small vessels to enter the inner harbour. This may have improved water circulation, but probably accelerated the deposition of sand further west against the town quay. A moveable bridge maintained access between the two sections of the pier, and there was also a facility for dropping planks to close the gap; this was mainly done in winter to reduce storm-force waves from passing through. In 1761, the Harbour Commissioners ordered stones to be deposited outside the Docker Hole because of the force of water entering, despite the East Pier having been started by that time (Chapman 1800, 8). A gap bridged by a drawbridge had also been left in Vincent's Pier near the south end to allow ships to enter, probably referring to the present gap which separates the Lighthouse Pier, although this is not clear from 18th-century maps (ibid). Thomas Hinderwell's *History and Antiquities of Scarborough*, however, suggests a gap was proposed to a width of 35–40ft to be constructed after the time he wrote his enlarged 3rd edition (1832, 151), to allow the larger vessels of the day to pass between the completed inner and outer harbours; it is assumed that the existing opening was expanded as a wider 'Docker Hole' is clearly named and shown on the 1852 1:1056 OS (Plate 156). The Docker Hole had been filled in by 1893 (Plate 157) and its position below an interwar public convenience (Plate 31) means that the site is not visible.

Chapman suggested demolishing several further sections of Vincent's Pier once the east pier was completed to allow free passage through for vessels, stating that the end of the pier was in poor condition and required removal to enlarge the harbour entrance (Chapman 1800, 32). Instead, the end of the pier was rebuilt and an eastward extension built to create the present Lighthouse Pier some time before Chapman's 1831 plan of the harbour was published, narrowing rather than enlarging the harbour entrance (Plate 147). This clearly shows the oblique cut through Vincent's Pier north of the lighthouse. A study of the present pier suggests that the gap was an integral feature of the rebuilt pier, although it may be in the same location as the gap referred to by Chapman in 1800 (but not shown on his accompanying plan). It was certainly used as an alternative main entrance to the Outer Harbour and had a wooden drawbridge for pedestrian access like the 18th-century gap. Traces of the abutments can still be seen in the opposing pier walls, although the modern Sydney Smith Bridge stands there now.

A brick lighthouse tower was built on the isolated section of the pier south of the gap between 1801–06, and remained operative until the 1914 bombardment of the town. The tower was initially lit by a coal fire within a brazier, later replaced by candles contained in a reflective tin. There were flag signals by day, replaced by a black ball, which was raised and lowered to show when there was a sufficient depth of water at the harbour entrance. In 1840, the candles were finally replaced by a gaslight, and permanent living accommodation for the harbourmaster was added in 1843; the tower itself was raised by 5m to make the light more visible.

Around this time, Vincent started work on the East Pier which continued until his departure in 1752, and was designed both to protect the existing pier and create an enclosed outer harbour (Skempton 2002, 749). In order to ensure the structure was robust enough to survive in such an exposed position, a strong curvature was

required, with massive foundations. The pier was not entirely new, there apparently being a 73ft (22m) section of an existing structure there before work started, presumably of earlier 18th-century date, which was incorporated into the new pier (Chapman 1800, 9). By the time Vincent left to work in Sunderland the East Pier had reached a total length of 170ft (52m) with a 43ft (13m) section of foundation laid beyond that. According to Chapman, it had reached 630ft (283m) by 1800, at his recommendation attaining 1380ft (420m) upon final completion in 1826 to ensure protection from south-easterly winds (ibid, 12), the end curving inwards towards Vincent's Pier. The foundation was 60ft (18.3m) in breadth, and at the most exposed section, the tightest part of the north-eastern curve, it was slightly broader at 63ft (19.2m). The sides were battered, the top being 42ft (12.8m), and the overall height 40ft (12.2m) with a parapet along the east side. The pier required massive stones capable of resisting movement, and these were quarried locally at White Nab at the opposite end of South Bay, many of them weighing 20–30 tons, transported to site on 'floats' (Theakston 1841, 100–01).

There was little protection to the harbour area west of Vincent's Pier, other than the Outer Island Pier, and the West Pier was consequently built between 1817–22 under the supervision of William Barry (Plates 148, 159). The remains of the Outer Island Pier were finally removed in 1819 to make way for the end of the new pier, which reused some of the stone in the core. The importance of the West Pier was recognised as being the most accessible part of the harbour from the town and a short section of protected roadway was accordingly built in 1862 from the foot of Eastborough to the pier.

In 1877 the Port and Harbour Commissioners considered the feasibility of extending the harbour westwards to increase the available water area by 9 acres) 3.64ha, but as this would have involved losing a stretch of the sands, the Corporation refused, and the Commissioners settled for a reconstruction of the West Pier. The pier was both widened, heightened and lengthened in 1877–80 to a design by John Howkins, as part of a wider scheme which involved the replacement of the large existing dolphins with tethered buoys and the deepening of the harbour floor by dredging (Howkins 1881: Plate 149); Foreshore Road was also built at this time, linking the harbour area to Ramsdale Valley and the Spa (see below). The extensions created a pier which was increased in width from 27ft (8.2m) to 70ft (21m), with the length increased from 500ft (152m) to 700ft (213m). The pier extensions, unusually, eschewed stone facings for interlocking panels of concrete, a new and relatively untried material; the foundations of the early 19th-century stone pier were also underpinned using concrete, as they lay in part above the base of the newly dredged harbour (ibid, 325–6). The first permanent building on the pier was a 'Jacobethan' building housing fish-sellers offices at the north end (Plates 99–102), followed by a succession of others from the interwar period onwards (Plates 103–12).

The pier was further widened along the western side c 1900, presumably as part of the scheme of improvements which included the construction of the new Sandside carriageway and the Marine Drive, the last link in a new route through Scarborough and around the seafront to Peasholm (Plate 150).

Although the stretch of foreshore between the Spa and Bland's Cliff was almost entirely undeveloped, the section between Bland's Cliff and Sandgate was certainly occupied in the post-medieval period, with an almost continuous line of buildings shown, for example, on John Harris's 1735 panorama of the town and maps of the period. The area included boatbuilding and repair yards, timber yards and fish stores.

Shipbuilding and other industries continued to be important throughout the late 18th and 19th centuries. By 1787 there were 1500 seamen belonging to the port, 500 of whom sailed in the East India Service. The number of ships registered at Scarborough at the end of the 18th century was 165 with a combined displacement of c 25,600 tons. Exports included agricultural products such as grain, butter, meat and locally caught salted fish. Imports included coal from the north-eastern collieries, as well as timber, hemp, flax, and iron, much of it used in local shipbuilding, although Baltic timber was also used in the construction industry from the medieval period onwards; the timber trade continued into the late 20th century, operating from the Corporation Quay, built in 1826 along the south side of Sandside and extended in 1928 to form the present North Wharf (Plate 151).

By the beginning of the 19th century, Scarborough had become one of the principal shipbuilding centres on the east coast, with 209 ships built between 1785–1810, having a combined displacement of c 35,600 tons. Shipyards and slipways were located along Sandside between Vincent's Pier and Sandgate, taking advantage of the presence of mounds of sand or shingle ('hills') for building, but as already mentioned, there were related facilities as far west as Bland's Cliff. Regarding the build up of sand and the use of the resultant mounds, Chapman (1800, 8) quotes a printed circular letter to the Harbour Commissioners, from a Mr. McGeorge, dated July 17th 1787 'that many persons of credit remember fishing in 5 or 6 feet water (at high water) behind the spot whereon ships are now built high and dry on the Sand.'

Some of the mounds took on the names of shipbuilding families as a result, including *Bilbrough*, *Fowler*, *Cooper* and *Tindall Hills*. The Tindalls were the most prominent shipbuilding family, living at one time in the 'King Richard III' house, with William Tindall first mentioned in 1682 based at *Smiddy Hill* below modern Sandside. The family continued to construct and also operate vessels into the 19th century, with as many as 21 in their fleet in 1851. The last of the line, Robert Tindall, died in 1871, with the 220-ton brig *Clyde* being the last of the family's launchings in 1863. The Tindall family alone accounted for c 42,000 tonnes of shipping between 1742–1879, with other yards building a further c 30,000 tonnes.

The 1st Edition 1852 1:1056 Ordnance Survey shows a series of three shipyards on reclaimed land extending between the Old Pier and the 'Golden Ball' with slipways, saw pits and a crane, one of them presumably Tindalls yard (Plate 148). Sandside at this time remained a winding lane between the shipyards and the buildings which had formerly fronted the wharf. Further yards may have been present on the 1826 Corporation Quay which was constructed to extend the wharf area between the 'Golden Ball' and East Sandgate, as sawpits, a crane and mooring posts are shown, although this area was presumably also used for trading.

In 1849, a company was formed to provide means for repairing ships at Scarborough and a floating dock was opened the following year, capable of taking ships up to c 300 tonnes, which was the size of many of the brigs built locally. The introduction of iron and steel to replace timber meant, however, that shipbuilding became increasingly difficult to maintain in small centres such as Scarborough, although fishing yawls and cobles continued to be built; a boat repair shop, Scarborough Marine Engineers, remained in use on Sandside until the late 20th century. An extract from Meadley (1890, 78) gives a retrospective impression of shipbuilding in the late 18th century:

> 'Until the Ramsdale Scar Pier (East Pier) was added, the outer pier (Old/Vincent's Pier) was called the Saltfish Pier, on account of persons drying saltfish upon it. This trade was carried on to a great extent at Scarborough,

and the fish was shipped off to the Mediterranean and other places. The next or inner pier is the older of the two, the shank of which still remains to show that it was first built of unsquared stone; and there was from the years 1786 to 1789, an old man named Ben Johnson, who was kept continually employed in gathering stones in a scuttle for the purpose of wedging them tightly in the piers. The portion of the ground adjoining the pier was occupied as a timber yard and went by the name of the Spars. In the next portion was a shade occupied by Mr Smiths, boat builder, and afterwards by the salters of fish. We next come to Mr Stephen Wharton's shipyard. The last vessel launched therefrom was called the "Vulnerable"; and was built with her head to the houses and was perhaps the only one so placed in Scarborough. Mr Wharton fitted out all his own vessels, being provided with his own shipyard, block shop, mast and timberyard, ropery, factories, bleach house, etc. His death caused a great stagnation in the town, there being above a hundred persons thrown out of work. A portion of the Foreshore beyond Mr Wharton's was occupied by Mr Smith, as ship and anchorsmith. The next site known as Fowler's Hill was occupied by Mr John Fowler, an eminent shipbuilder. We proceed further and find a large building running to the south, and further into the harbour, the dwelling of Mr Hopper, whose block and mastshop adjoined the said premises on the seaside. These premises remain standing, a portion of which is now converted into what is termed a "British Workman." We next come to the front known as Tindall's Hill, from which many first-class vessels have been launched. Adjoining was Mr Dale's ship stocks which was afterwards occupied by his nephew, Mr George Smith. Crossing East Sandgate, we arrive at the boat-builder's shade, occupied for many years by the family of Smiths, and another by Mr William Henry, and opposite to the Old Long Room was Heward's stocks, from which in 1794 a three masted vessel fell over with her masts fixed. We cross West Sandgate and come to Mr John Skelton's, boat builder, and passing along reach Bland's Cliff, where a number of warehouses for storing fish, fishing gear, and other shipping property were situated. Ships were built on the shore in three places between Mr Skelton's and Henderson's Cliff, the builders including Mr John Shore, Mr William Newham, and Mr George Riby.'

The town's development as a select tourist destination began in 1620 when spa water was discovered by Elizabeth Farrow, who claimed that the water had beneficial qualities. Although there would have been an interruption during the Civil War period, the spa was well known by the end of the century, and some facilities for the growing number of visitors would have been provided in the 17th and 18th centuries, with the greatest period of expansion in the following period. A wooden 'Spaw' building was constructed on the present Spa site c 1700, and was sufficiently well-established to encourage rebuilding following storm damage in 1735 and an earthquake in 1738. Horse racing, sea bathing and boating also developed to provide additional amusement. An engraving of 1635 shows bathing machines not dissimilar to those used in the 19th and early 20th centuries were already in use.

The early 19th century saw an increase in interest in the town as a fashionable destination, particularly with the development of the Spa. A series of disasters struck the site, with storm damage to the Spa in 1808 and 1836 leading to rebuilding works. The present buildings, designed by Sir Joseph Paxton, were completed in 1858, although a fire in 1876 again required extensive restoration works. A high seawall protected the Spa area continuing northwards along the seafront as far as Valley Road (Ramsdale Valley), where as Foreshore Road, built on the sands in 1878, it fell to just above beach level as far north as the harbour.

This wide roadway links the Spa and Ramsdale Valley to the harbour, and was completed at the same time the West Pier was extended and the harbour improved. Three cliff tramways linked the new road to the top of the cliff. Prior to that, properties along this part of the frontage between the harbour and Bland's Cliff (Neptune Terrace) appear from the evidence of the 1852 OS and earlier maps to have backed directly onto the upper beach. The area had been largely developed by the early 18th century, including mastyards, timber yards, and fish warehouses. Not surprisingly, a number of the buildings along the north side pre-date the construction of the roadway, some appear to be conversions, while others were built to replace earlier structures including the former St Thomas's Hospital (1858–60). A lifeboat house built in 1821 was located at the east end of Foreshore Road north of the present building which has been constructed on a platform to the south of the carriageway on the upper beach.

Strong interest in the seaside led to the development of many attractions and facilities including hotels (notably the Grand Hotel of 1867), boarding houses, the Rotunda Museum, seawater baths, theatres (e.g. the Olympia, becoming a ballroom in 1919, and Kiralfy's Arcadia of 1903, replaced by the Futurist in 1920), with a tramway running from the Spa to the harbour from 1904. The routes were replaced by buses in 1931, including an open-top seafront service. Cliff railways were also built, several of which survive.

Immediately north of the harbour, the Marine Drive was constructed between 1897 and 1907, opening in 1908 to provide a scenic driveway between the town and Peasholm, where oriental gardens and a boating lake opened in 1912; it linked to an existing promenade in the North Bay, the Royal Albert Drive, completed in 1890 largely to protect the cliff from further catastrophic slippages and erosion (Aytoun 1891). As part of these improvements, the construction of the Sandside carriageway across the front of the harbour to allow access to the Marine Drive entailed the demolition of a swathe of 18th- and 19th-century buildings constructed south of the original Sandside among the former shipyards. A new stone harbour wall was built along the south side of the new road, with several new or improved slipways to the foreshore (cf Plates 149, 150). The loss of much of the area of the old Corporation Quay and the shipyards for the roadway, however, left limited wharfage, although this was remedied by the construction of North Wharf in 1928 (Plate 151).

Scarborough was shelled by the German navy in 1914, causing some loss of life and considerable damage to the town and Castle; the tower of the lighthouse was another casualty, the replacement not opening until 1931. On the 16th December 1914 the tower was badly damaged by a German bombardment and was demolished three days later, leaving the adjoining house relatively intact. The tower was fully rebuilt in stone ashlar, largely restoring its original appearance, and reopened on the 23rd September 1931, with a foghorn added at the same time. The lantern, reconstructed in the 1980s, has a shallow lead dome with a ball finial, although the light itself was automated in 1997 and is now maintained by the harbourmaster's office. The harbourmaster's house is the original mid 19th-century two-storey rendered structure with five bays of sash windows and a flat roof. Not used as living accommodation since 1937, the building is now used by Scarborough Yacht Club.

In the north-east corner of the harbour between the two eastern piers, a late pre-war addition was decking for the Gala Land amusements, extending an existing landing (Plate 152).

Post-war additions have included some improvements to the harbour area, although the overall layout remains very much the same (Plate 153), but with the rapid decline

of both cargo handling, including the formerly significant Baltic timber trade and the fishing industry, particularly herring, the North Wharf is relatively little used and a new building containing a restaurant and tourist information centre were built there in the early 21st century, replacing earlier public toilets and a shelter.

The inner harbour remains a working facility for the fishing industry, although the number of home-based fishing boats has fallen dramatically and most now moor against West Pier. The harbour still retains a relatively thriving pleasure boat and fishing charter industry, as well as providing marina facilities in the outer harbour. There are plans to improve the facilities and redevelop parts of the harbour, which may lead to damage to some of the historic fabric; rock armour has already been added to the outer face of the East Pier, continuing around the late 19th-/early 20th-century Marine Drive to the North Bay. Alterations to the West Pier are planned, including the demolition of two existing 20th-century fishing sheds, one of which had been removed at time of writing.

The fact that the harbour has remained a working facility means that there has been considerable ongoing investment, which has inevitably led to the loss of redundant early historic features, the main exception being Vincent's Pier, where there are two capstans, and a few wooden bollards; a 13-pounder Vickers naval gun has also been mounted at the end of the pier. The historic fabric of the East Pier and Vincent's Pier also survives almost intact, although the exterior of the latter has been partly encased in modern concrete and steel facings. The late 19th-century fishsellers' offices on the West Pier are a great asset to the harbour, and to these should be added the unlisted interwar offices immediately to their south, and the 19th-century Water House on Vincent's Pier.

6 DISCUSSION & RECOMMENDATIONS

6.1 Discussion

The structural development of the present harbour is fairly well understood and dated, with the Old Pier/Vincent's Pier having the most complex history. The East Pier and Vincent's Pier both consist largely of original well-preserved 18th- and 19th-century masonry, with later additions, and in the case of the Old Pier section of Vincent's Pier, may also contain earlier material. The main elements of the harbour, with their known or inferred date of construction, is shown as Figure 2 of this report.

Although it is known that a pier has existed in Scarborough since at least the 13th century, together with a quay (Pearson 2005, 60) the many successive repairs and extensions/modifications to the harbour have removed any external evidence for it. The medieval pier is, however, likely to have been constructed in the same location as the present Vincent's Pier, the only logical place for such a structure, although early representations of the harbour are not, of course, accurate (Plates 143, 144). It is clear from documentary references that a pier was built on the site some time after an Act of Parliament was passed in 1614 (Plate 145); the pier built as a result of the succeeding 1732 Act was an extension and partial realignment of an existing structure (Plate 146) and it is possible, therefore, that there are the remains of earlier structures enclosed within the fabric of the 'Old Pier' which may become available for study should major engineering works be undertaken on them. There is a reference to an old section of a masonry pier being found in 1816 during alteration works to the Old Pier (ibid, 62), consisting of dressed stonework, which is quite likely to belong to a 17th-century pier, since previous medieval and Elizabethan structures were almost certainly timber-framed with stone infill, a construction type used in Bridlington and prone to failure through the decay of the oak frame and planking and the lack of structural integrity of the stone infill once the frame had gone. A modern equivalent is the stone-filled wire gabion cage now widely used in flood defences and as bank protection; once the cage has been compromised, the stone collapses.

Another early structure in the harbour area was the Inner Island Pier. There was a structure on the site of the pier by c 1538, although it is unclear whether this was the remains of a partly-dismantled land pier or had been built in freestanding form (Plate 143). It is also uncertain if this was same as the structure recorded in a similar position in the 18th century. Chapman presents a convincing argument for it having been part of an early version of the Old Pier, including similarities in construction between the oldest part of the Old Pier and the Inner Island Pier, and the fact that ships had been damaged when passing between the two, suggesting the presence of a 'reef' formed by residual remains of the pier foundation. Unfortunately, the staged removal of the remains of the pier in the late 18th and early 19th centuries (Plate 146), followed by dredging of the harbour in the late 19th century, will have removed any evidence for this.

The Outer Island Pier can certainly be identified as the end of the pre-1732 Old Pier (Plate 145) which was subsequently realigned towards the south and extended by Vincent (Plate 146), leaving the now-isolated end section to protect the harbour from waves passing around the out-turned end of 'Vincent's Pier'. That this arrangement was inadequate is apparent from the construction of the West Pier between 1817–22 (Plates 148, 159). The Port and Harbour Commissioners attempted to extend the harbour to the west in 1877, but were thwarted by the Corporation, and the West Pier was extended instead (Plate 149), followed by a further expansion along the west side around 1900 to create a large working area (Plate 150). This entailed removal of

the Outer Island Pier, and once again the remains of this will have been removed by dredging.

The construction of the Sandside carriageway c 1900 led to changes to the north side of the harbour, with construction of a new harbour wall and slipways (cf Plates 149, 150; also Plates 84, 85), followed in 1928 by the construction of North Wharf (Plate 151) to replace the Corporation Quay of 1826 (Plate 148). Slipways were, however, already in place either side of Vincent's Pier (Plates 30–3) and in the north-west corner of the harbour next to West Pier (Plates 91, 92).

A number of the buildings along Sandside are of 18th-century or earlier date. These include the late medieval No 24 'King Richard III House' (Plate 130), the early 18th-century No 9, Nos 11–12 (Plates 135–136) and Nos 32–35 (Plates 127, 128), and the later 18th-century No 15 (Plate 133), Nos 21–23 (Plate 131) and Nos 25–26 (Plate 130) Sandside. Although much altered, these essentially originated as houses of the merchant or shipowning classes and would have remained as such well into the 19th century, when the area became increasingly given over to the tourist trade.

In the harbour itself, the 19th-century Grade II listed lighthouse (Plates 58, 59) and the late 19th-century former fishsellers' offices and lavatories on West Pier (Plates 100–02) are important elements of the harbour, and the interwar office block to the south of the latter is also of historic interest (Plate 103); though unlisted, it does fall within the conservation area. On Vincent's Pier, the small 19th-century Water House is of historic interest (Plate 40).

Other structures such as the neo-Gothic South Toll House (also Grade II), built at the same time as the Marine Drive (1897–1907), is now used by HM Coastguard, and forms an important northern gateway to the harbour area (Plate 117).

The minor elements of the harbour, including bollards and capstans, are just as important in their own way, building up a picture of a working harbour, although the majority — if not all — of the bollards now extant are of 20th-century date (Figs 6, 7; various plates). The East Pier has been virtually cleared of all such features, possibly to allow parking or to remove trip hazards, although historic maps suggest it never had a large number of bollards, possibly to discourage mooring directly against the inner face. In the mid 19th century there were a number of mooring posts forming a row at intervals close to the centreline, with no less than three capstans on the straight section at the southern end. Only three bollards remain, two timber (Plates 26–8), the third of a type also seen on Vincent's Pier (Plate 25) but at least the East Pier retains substantial areas of stone surfacing at the south end (Plates 19–21) together with long sections of original parapet (Plates 14, 15, 17, 18, 21–4, 26).

Vincent's Pier retains many bollards of two principal types, but also has two wooden examples (Plate 46). The most important structures, though are on the Lighthouse Pier section, including a decorative bollard with a head cast in the form of a compass rose (Plates 66, 67), and two capstans. The smaller of the two has a single row of bar sockets and a small compass rose on the cap (Plates 68, 69), the larger capstan has a double row of sockets, indicating that it was a reused ships' capstan (Plates 70–2). The upper row would have been used to raise an anchor, the lower row for general deck use. A capstan is shown in virtually the same location as the smaller version on the 1852 1:1056 Ordnance Survey, with a second positioned to the west of the lighthouse, but the present version looks more recent. The larger capstan appears to have been moved to its present location after 1892, and it may be one of three originally located at the end of the East Pier.

The West Pier originally had a capstan at the end, but this and the original bollards were removed when the pier was extended, raised and widened in 1877–80. New bollards and a capstan — possibly the removed original — were put in place. None of these now survive.

Although the harbour largely retains its 19th- and early 20th-century layout the 20th century has seen many changes to the harbour, including the rebuilding of the outer face of the Lighthouse Pier. More recently, extensive rock armouring has seen the seawall of the Marine Drive and the outer face of the East Pier buried (Plate 16), although still intact. Changes relating to this process included raising a high parapet along the length of the Marine Drive and pier, retaining existing sections of masonry, but adding long new sections (Plates 3–5, 7, 8). This process was controversial, but enhanced sea protection was considered necessary to secure the future of the harbour and the Marine Drive. New moorings have been put in place in the Outer Harbour which have revitalised the facility (Plates 10, 11).

To summarise, the seafront and harbour represent an important concentration of buildings and installations relating to the town's history, both as a fishing and trading port and as a tourist destination. The 20th-century development of Scarborough as a tourist destination coupled with the decline in the fishing fleet has led to a widespread redevelopment of the harbour area along with many of its associated features and fittings. This in turn has resulted in the survival of a limited range of historic features – with cast iron bollards predominating. The resulting 'portscape' now superficially appears to be relatively modern with few historic features providing evidence of its development. There are, however, large extant areas of original masonry still visible.

6.2 Impact assessment

The harbour area is potentially vulnerable to change as a result of the normal cycle of maintenance and repair, standard development processes, and larger scale projects. Such schemes may include:

- localised alterations to piers and wharves
- redevelopment of properties adjoining the harbour
- strategic regeneration projects

Any of these could lead to the removal of or damage to installations and structures, whether major or minor.

There is a future possibility that a seawall will be built along Foreshore Road should rising sea levels and potential increased storm risk demand it; at present the beach is routinely regraded to remove sand which has built up against the existing wall to prevent waves rolling across the road into neighbouring properties. The construction of a seawall would pose a potential threat to the setting of the harbour from the south, as well as affecting the historic views of the buildings on the north side of the road.

Rock armouring of the East Pier and Marine Drive and construction of a continuous parapet has already been completed, obscuring the outer facing of the pier. Further work is unlikely in the harbour itself; a similar scheme is however proposed for the Spa Promenade, although this is outside the scope of this report.

There are a significant number of smaller features such as bollards, mooring pins, capstans, cranes, etc which are easily damaged or destroyed, or simply removed

during ‘tidying up’; the capstans and decorative bollards at the south end of Vincent’s Pier are particularly important. The past clearance of bollards and other features from the main section of the East Pier reflects the vulnerability of these small items to casual loss, even though they should be covered by the Grade II listing of the harbour.

Finally, there may be archaeological deposits and structures surviving within the northern part of Vincent’s Pier and beneath Sandside: these would, of course, potentially be affected by alterations to the pier and development north of the harbour. Those beneath Sandside potentially include timber and stone waterfront structures of differing dates. Fragile evidence for boatbuilding and repair is also likely to be present.

6.3 Recommendations

Enhancement of statutory protection

This historical audit has confirmed that the principal structures of interest are the East Pier and Vincent’s Piers, and the more recent West Pier and North Wharf, together with a number of slipways; these are already protected by Grade II listing of the harbour as a whole. However, itemising the more significant features such as the two capstans (Plates 68–72) and Water House (Plate 40) on Vincent’s Pier, and the earlier fishsellers’ offices on West Pier (Plates 101, 103) would assist in protecting them and possibly attract restoration grants.

The bollards as they currently exist are modern, with the exception of several wooden examples of late 19th-/early 20th-century date on West Pier and Vincent’s Pier, but they combine to give an impression of a working harbour; many of course remain in use, but where not (as on West Pier) they have been removed.

Cultural asset management

It is to be hoped that the results of the field survey carried out as part of this project will be used as a conservation management tool in advance of any schemes likely to affect the harbour or its setting. There is always a danger that areas are ‘tidied up’ either for aesthetic reasons or on real or perceived health and safety grounds, but such changes rarely contain the same ‘grain’ as the original, or have the capacity to weather, depending on materials. Resurfacing can be done more imaginatively to blend in over time using new or relaid materials: cf the modern surfaces on North Wharf (Plates 82, 83) with the nearby slipway (Plates 84, 85), or the original surfaces on East Pier (Plates 19–25) and possible relaid slabs on Vincent’s Pier (Plates 37, 38, 56, 58) with modern replacement materials (Plates 27, 28 and Plates 42–7 respectively).

Any work carried out in the harbour area should be properly considered and include:

- Monitoring of any intrusive works on or adjacent to known historic structures e.g. the piers and buildings relating to the various uses of the harbour, as well as monitoring of work beneath Sandside to record and assess potential archaeological features and deposits;
- Conservation assessment of the capstans, bollards and other ‘minor features’ with a view to preservation *in situ* or removal to a suitable repository where potentially under threat; the smaller capstan would benefit from resetting and restoration.

Raising public awareness

It is suggested that public awareness and interest in the harbour could be fostered by the judicious use of information panels, which may include a historic trail.

There are many paintings, maps, line drawings and good historical photographs of the harbour dating from the 19th to late 20th centuries, including many showing it in use by fishermen, cargo vessels, day trippers and holidaymakers. Reproducing these as part of on-site interpretation would enhance the experience of visitors. As an example, boards explaining the method of warping vessels into the harbour using the capstans and bollards would be of interest and assist in ensuring the restoration and maintenance of features. Both capstans on the end of Vincent's Pier could be restored to original working condition for potential demonstrations.

Information regarding aspects of the harbour such as fishing and boatbuilding should be included in any displays, including the work of the various families of shipbuilders documented from the late 17th century, perhaps using the Tindalls as a case study, given their connection to the King Richard III house and the adjacent wharf.

The East Pier, Vincent's Pier, West Pier and North Wharf would all be suitable locations for general information panels, supplemented by small plaques of uniform design to draw attention to individual features. QS 'patches', web pages, and self guided walks could also be considered.

ACKNOWLEDGEMENTS

This Historical Audit was commissioned and carried out on behalf of English Heritage. Data for the report were provided principally by the Humber Sites and Monuments Record, the National Monuments Record, East Riding Archives, and Hull City Archives.

Field recording for this report was undertaken by John Buglass, assisted by Dave Rawson. Both provided the photographs selected for this report, and undertook additional research.

The field survey text and some of the recommendations were written by John Buglass and supplemented and edited by Trevor Brigham. Figure 1 was produced by Dave Atkinson, Figures 2 to 7 by Doug Jobling.

Administrative support was provided by June Rooney.

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Appendix 1: Map and Archive Sources

Source	Description	Date	Scale
Historic maps and charts	Ordnance Survey Town Plan	1852	1:1056
	Ordnance Survey Town Plan	1892	1:500
	Ordnance Survey	1893	1:2500
	Ordnance Survey	1912	1:2500
	Ordnance Survey	1929	1:2500
	Ordnance Survey	1939	1:2500
	Ordnance Survey	1966–7	1:2500
	British Library, Cotton Augustus I.ii fol 1, bird's eye view of Scarborough	C 1538	–
	British Library, Royal MS 18 D.III fols 64–5, plan of Scarborough Castle and harbour	C 1595	–
	John Cossin, 'A New and Exact Plan of Scarborough'	1725	–
	John Harris, panorama of Scarborough from the south	1735	–
	William Vincent, plan of harbour	1747	–
	Thomas Hinderwell, 'A Plan of Scarborough'	1798	–
	William Chapman, 'A Plan of Scarborough Harbour'	1800	–
	William Chapman, 'A Plan of Scarborough Harbour'	1831	–
	John Howkins, 'Scarborough Harbour Improvement'	1881	–
	Scarborough Archaeological Society, 'Development of Scarborough's harbour 1565–present'	2003	–

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Scarborough Harbour

Figure 2

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Metres

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Figure 1 Site location plan

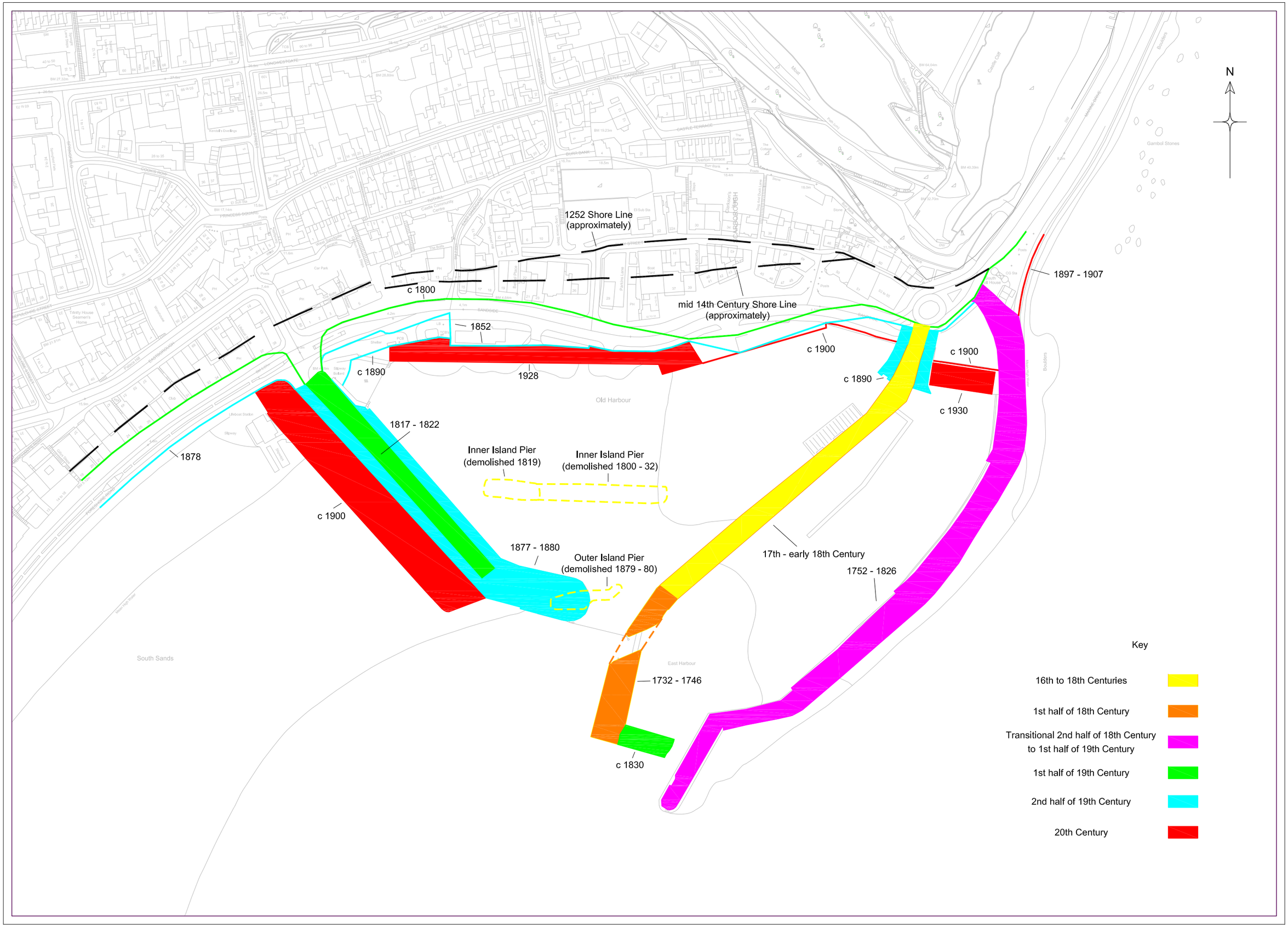

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Figure 2 The development of Scarborough Harbour

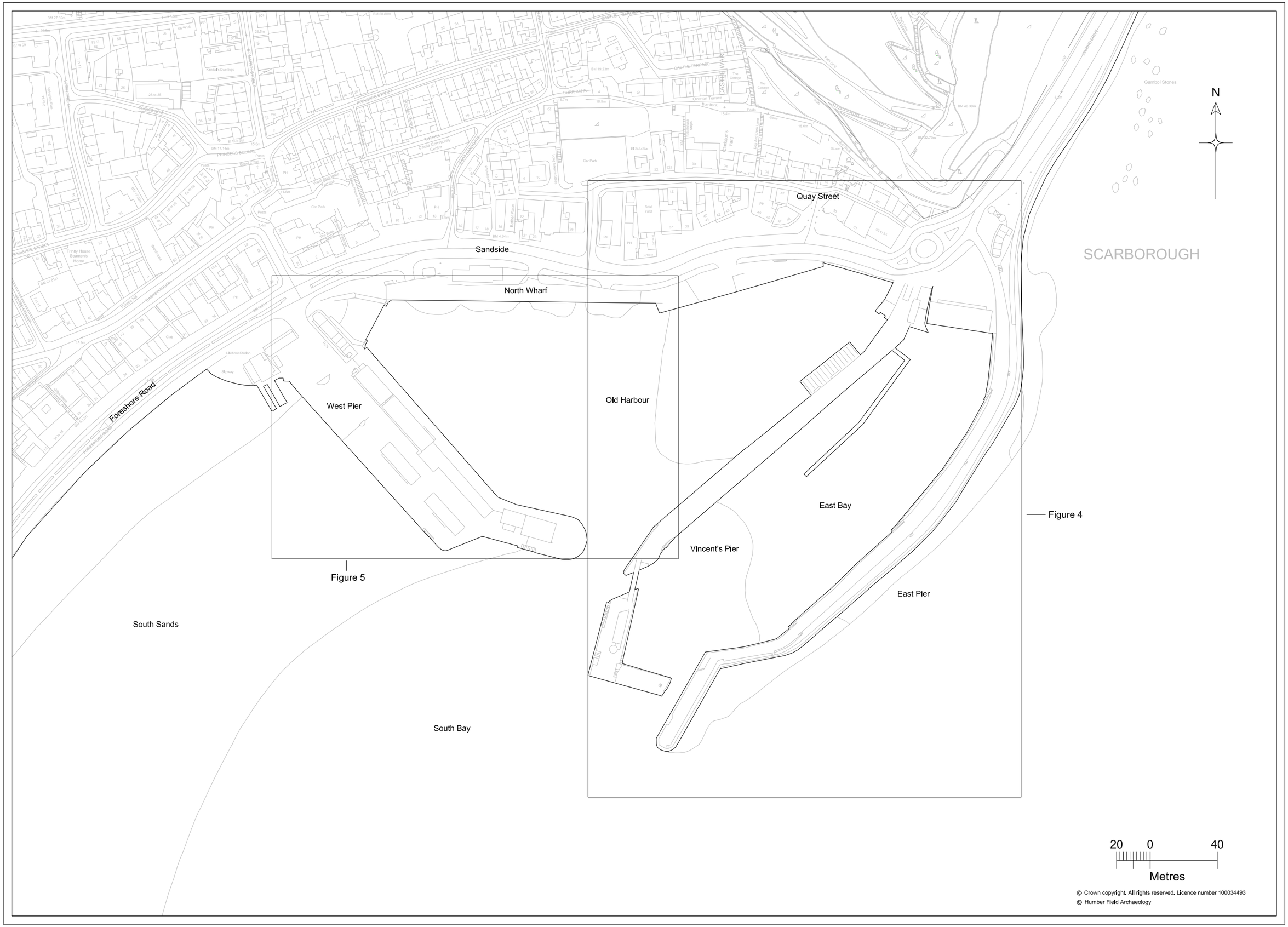

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Figure 3 Plan of Scarborough Harbour showing figure locations

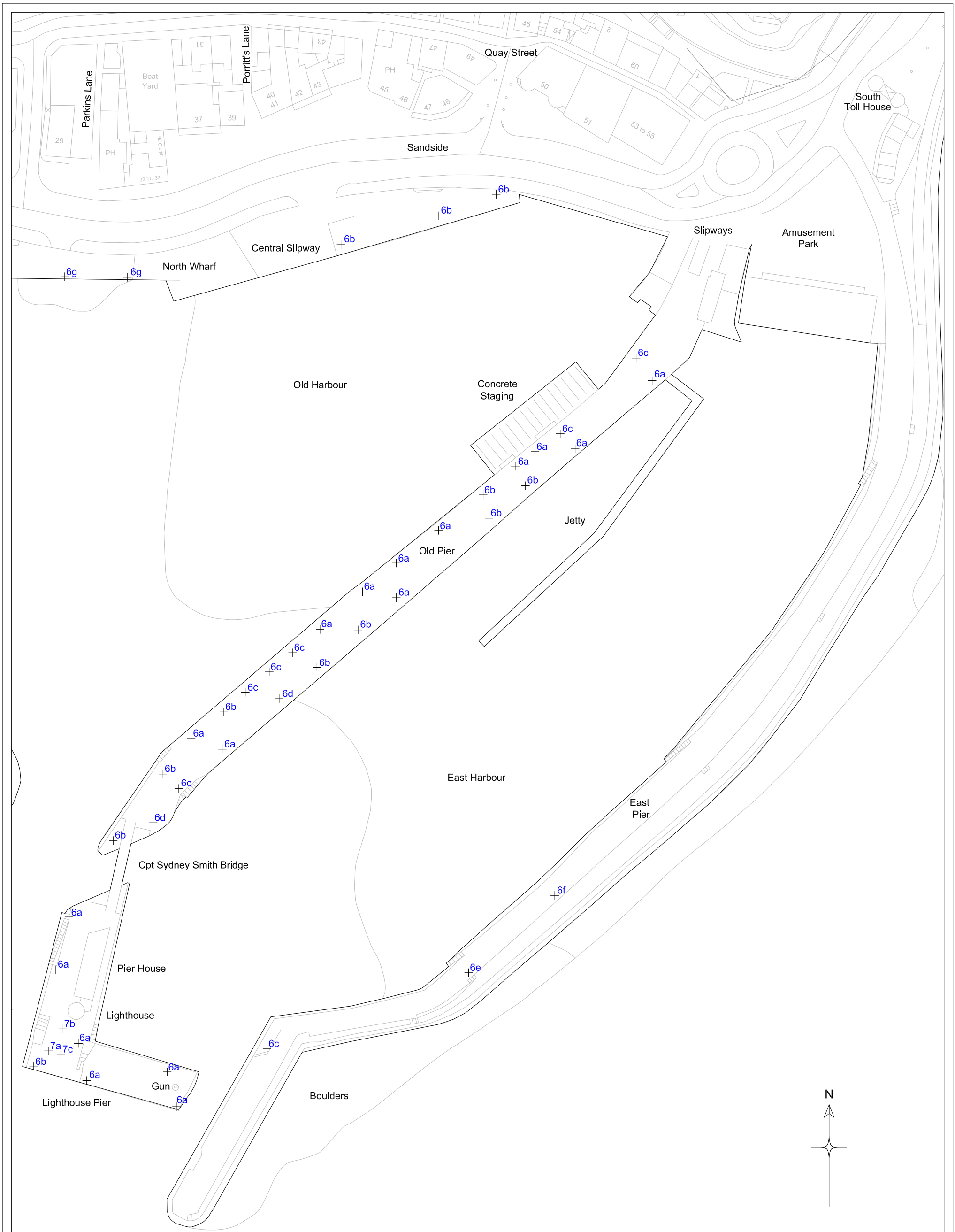

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Figure 4 East Pier and Vincent's Pier (Old Pier and Lighthouse Pier) and harbour furniture

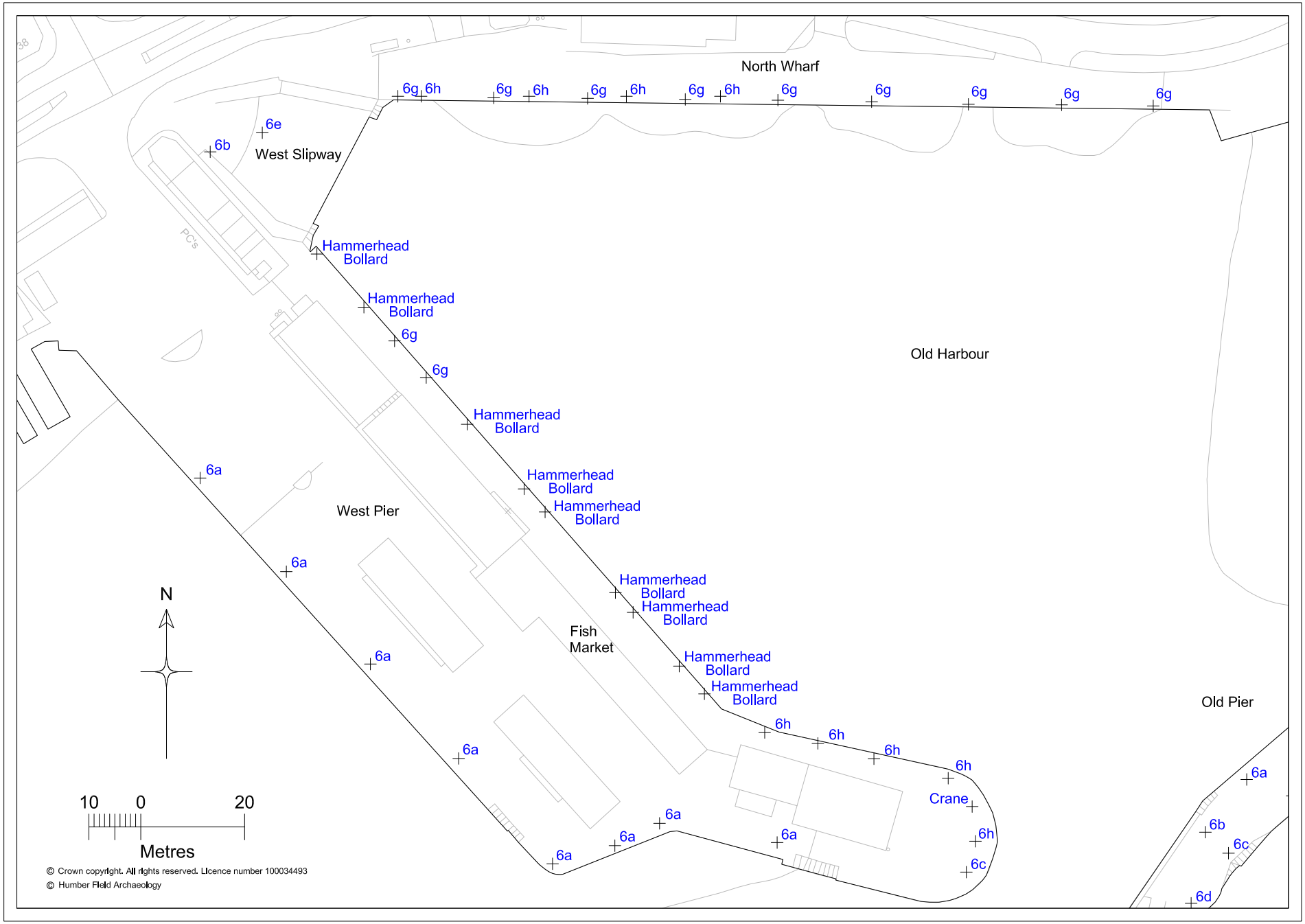

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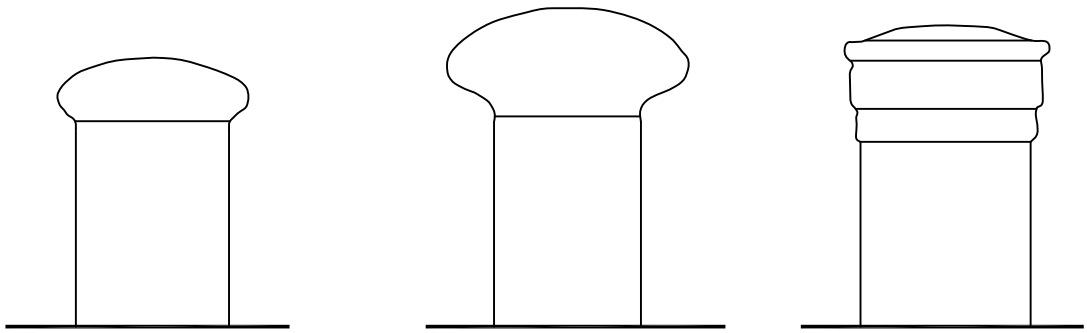
Figure 5 North Wharf and West Pier with harbour furniture



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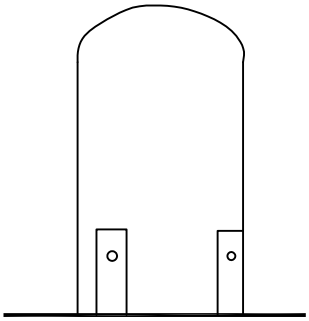

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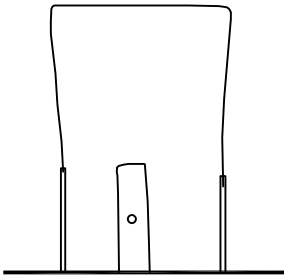

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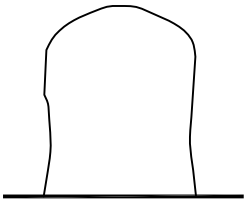

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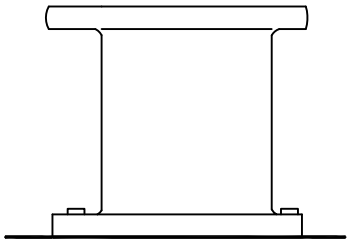

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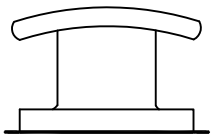

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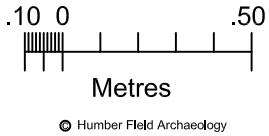

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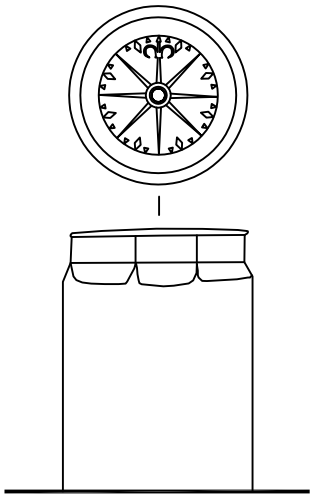
Figure 6 Bollards at Scarborough Harbour



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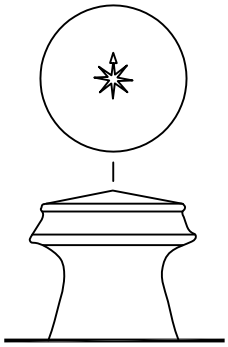

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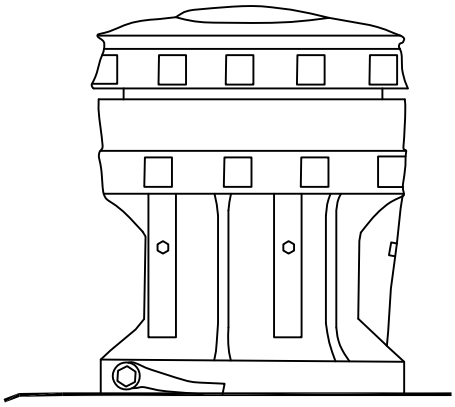

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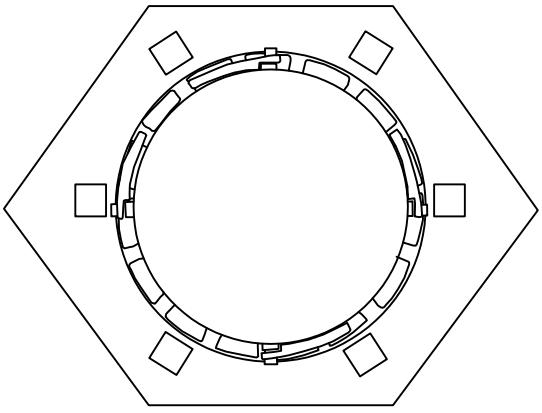

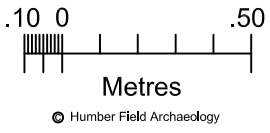

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Figure 7 Bollards and a capstan at Scarborough Harbour

Plate 1 Overall view of harbour from Castle Headland

Plate 2 Overall view of inner harbour from Castle Headland

Plate 3 East Pier, inner face of northern section next to Luna Park, showing stone blocks decreasing in size towards top, and northern part of new parapet, looking east

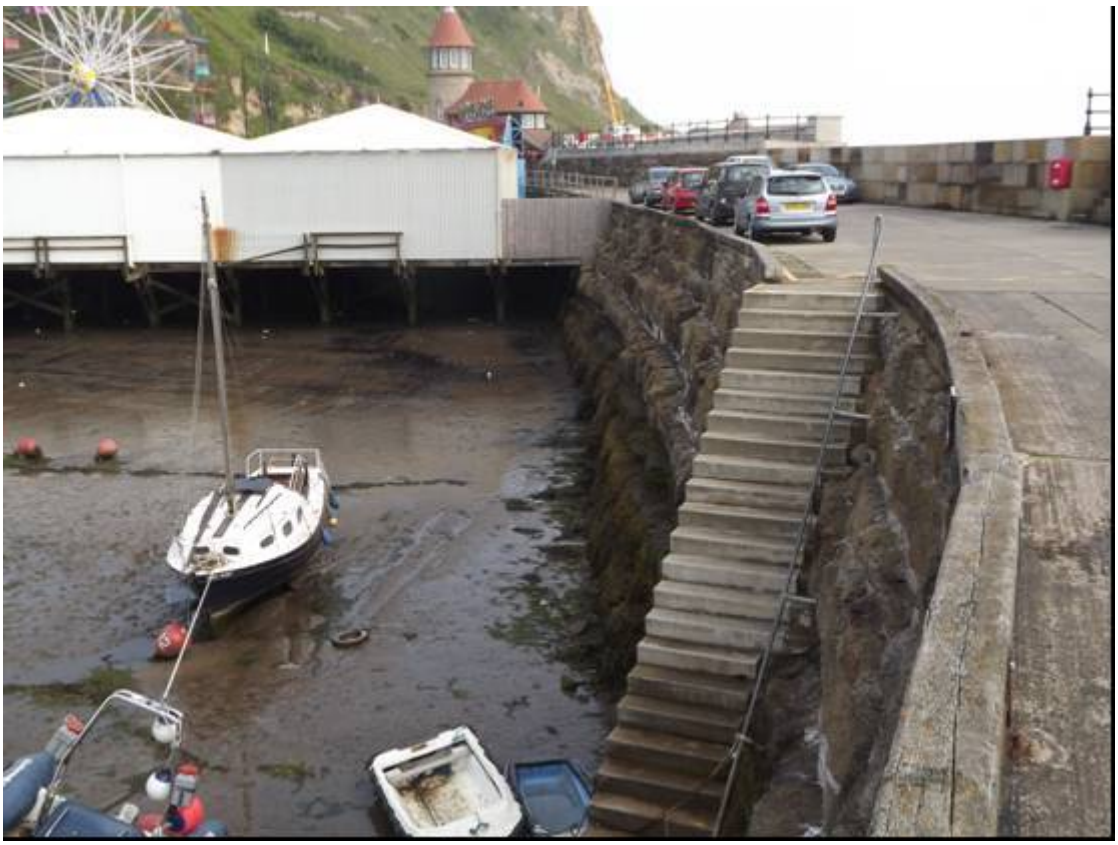

Plate 4 East Pier, overhead view of rebuilt northern landing stair, looking north-east

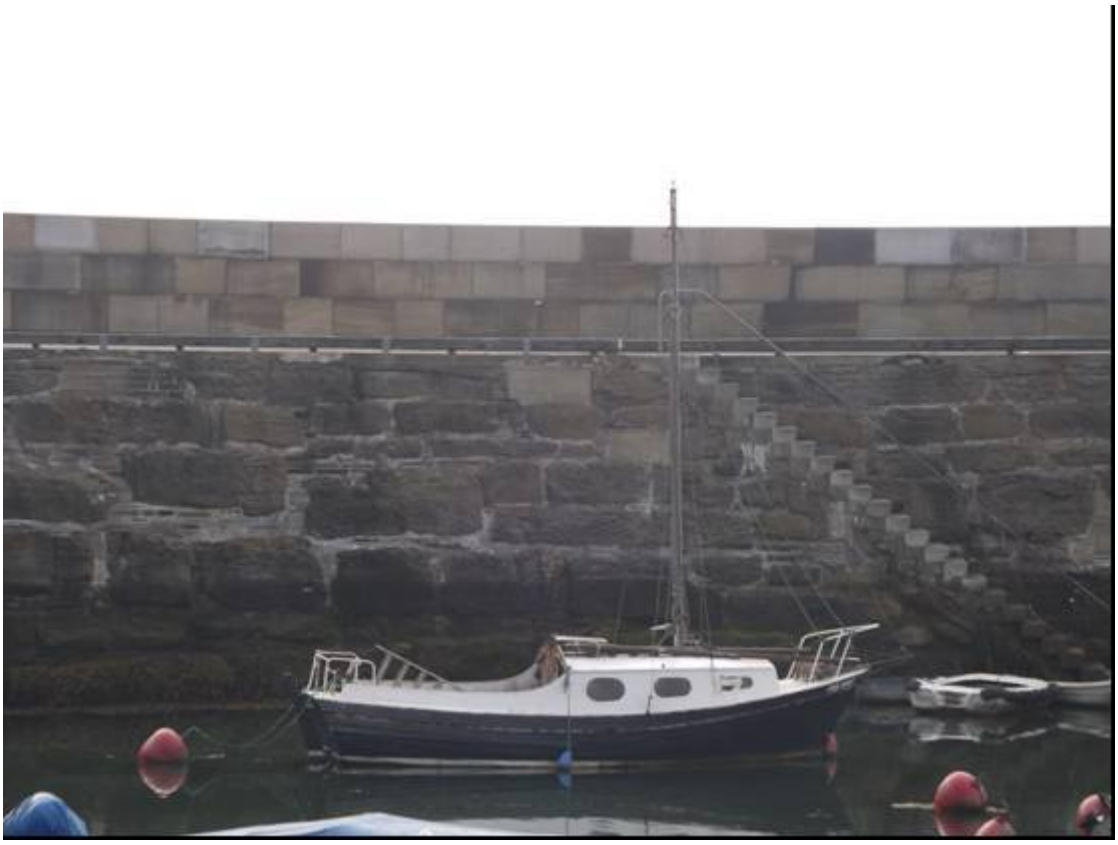

Plate 5 East Pier, detail of rebuilt northern landing stair on east side, with new parapet, looking east

Plate 6 East Pier, detail of inner face, looking south-west

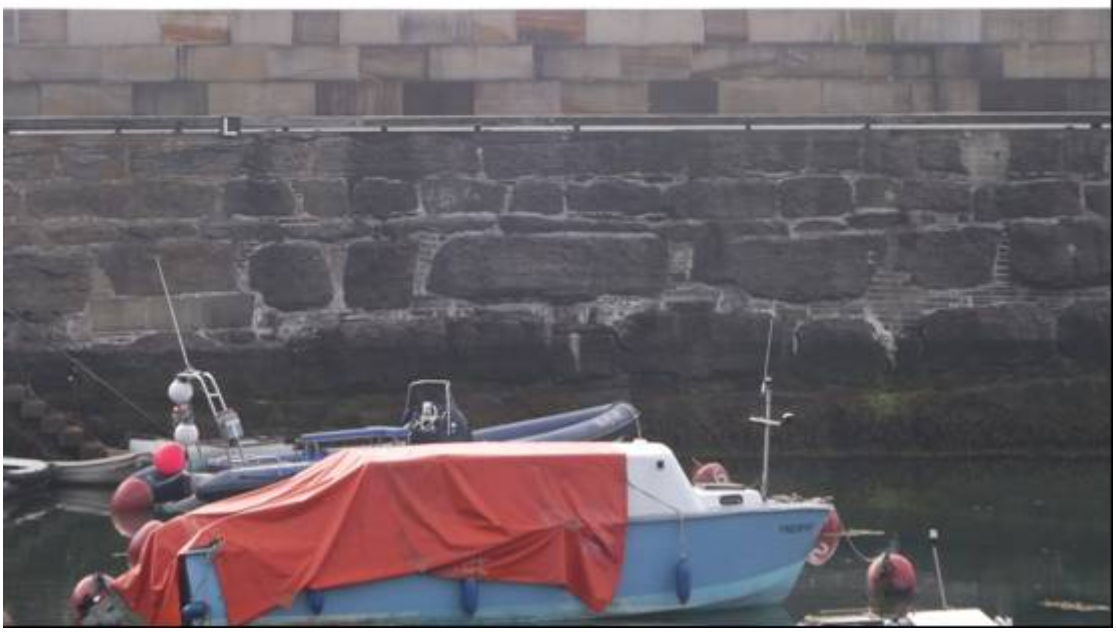

Plate 7 East Pier, detail of inner face, showing extensive patching between original blocks and new parapet, looking south-east

Plate 8 East Pier, detail of central landing stairs, looking south-east

Plate 9 East Pier, south end, showing southern landing stair and temporary footbridge, looking south-east across end of Vincent's Pier

Plate 10 Overall view of outer harbour, looking south-west

Plate 11 East Pier, general view over outer harbour, with modern landing stage (left) looking north towards the Castle

Plate 12 East Pier, original parapet at north end of pier with later cast iron railings, looking north-east

Plate 13 East Pier, north end, junction of old and new parapets, looking east

Plate 14 East Pier, junction of original southern section of parapet (foreground) with new central section beyond steps, looking north-east

Plate 15 East Pier, southern section, junction of new and old parapets, with rock armour against east face

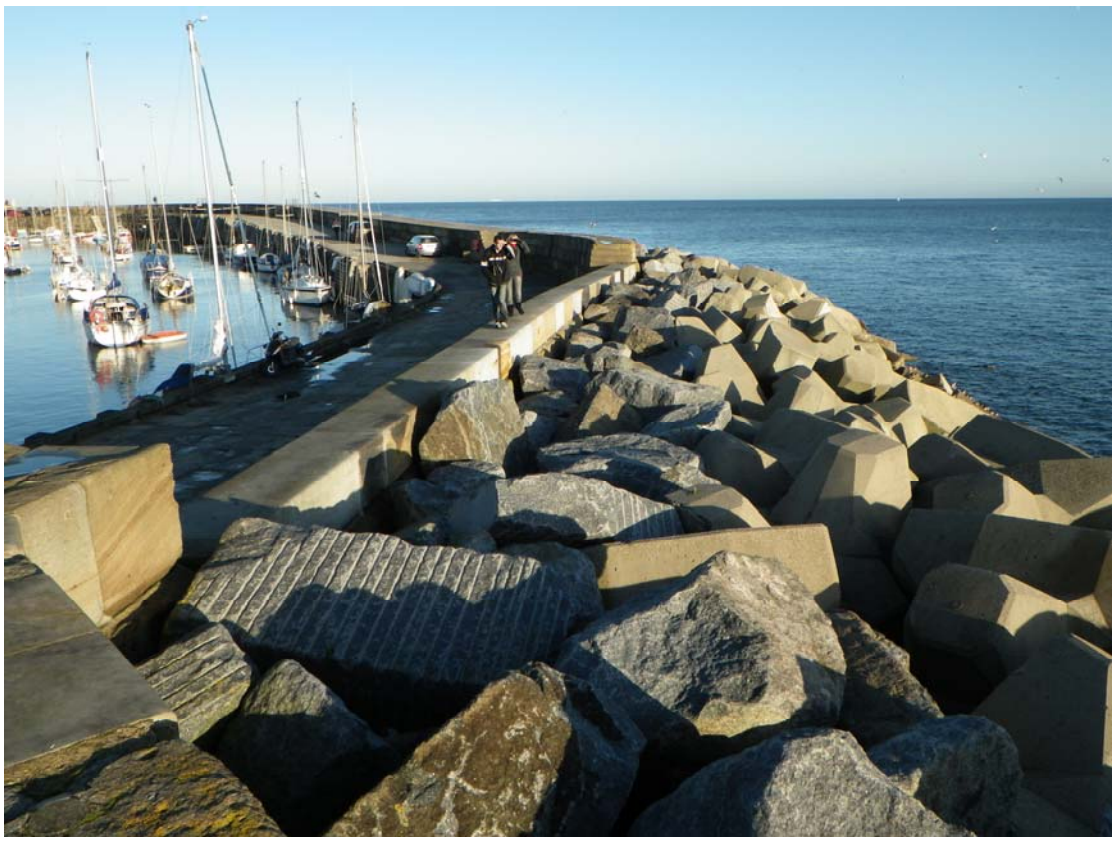

Plate 16 East Pier, southern section, modern rock armour laid against east face, showing short new section of parapet with older sections to north and south

Plate 17 East Pier, southern section, detail of top of original parapet, showing blocked circular sockets for removed cast iron railings

Plate 18 East Pier, southern section, detail of junction of concrete and stone surfacing, looking south-west

Plate 19 East Pier, stone blocks forming surface of southern section, showing lewis holes, with modern replacement

Plate 20 East Pier, repairs to stone surface, showing use of three-legged (rectangular) and split-pin (circular) forms of lewis on old and new sections

Plate 21 East Pier, showing stone block surface and new section of parapet at south end raised to accommodate rock armour

Plate 22 East Pier, southern section, with high parapet on outer edge, looking south-west

Plate 23 East Pier, original surface and parapet at south end, with temporary bridge stored ready for use, looking south-west

Plate 24 East Pier, detail of shaped end of original parapet (1m scale)

Plate 25 East Pier, Type C bollard near south end, looking north-east

Plate 26 East Pier, Type E wooden bollard next to rebuilt steps to original parapet (1m scale)

Plate 27 Scarborough Harbour 2012, Type E wooden bollard on East Pier (1m scale)

Plate 28 East Pier, Type F wooden bollard (1m scale)

Plate 29 Sandside, Luna Park funfair on pre-war platform between north end of East Pier (right) and Vincent's Pier (left), looking north

Plate 30 Sandside, slipway between east side of Vincent's Pier (left) and pre-war platform for Luna Park amusements (right), looking north

Plate 31 Sandside, public conveniences at north end of Vincent's Pier, showing construction of 'Old Pier' (left), looking north

Plate 32 Sandside, slipway east of Vincent's Pier, showing stone posts marking edge, looking south

Plate 33 Sandside, detail of stone post marking edge of eastern slipway (1m scale)

Plate 34 Vincent's Pier, general view of outer harbour and northern section of 'Old Pier' (right), with modern timber landing stage (left), looking south-west

Plate 35 Vincent's Pier, detail of east side of 'Old Pier' showing change in construction between Vincent's work (left) and an existing section, looking north-west

Plate 36 Vincent's Pier, general view of 'Old Pier' and outer harbour, looking north-east towards crane (centre) and modern timber landing stage (right background)

Plate 37 Vincent's Pier, 'Captain Sydney Smith Bridge' linking 'Old Pier' to island pier, looking south

Plate 38 Vincent's Pier, 'Captain Sydney Smith Bridge', looking north-east towards 'Old Pier', position of north end of earlier drawbridge visible directly beneath

Plate 39 Vincent's Pier, position of south end of earlier drawbridge visible on island pier below present bridge, looking south-west

Plate 40 Vincent's Pier, 19th-century water house at south end of 'Old Pier' section

Plate 41 Vincent's Pier, commemorative plaque for 'Captain Sydney Smith Bridge' on wall of water house

Plate 42 Vincent's Pier, general view along 'Old Pier', with Type B bollard (left) and Type C (right) in front of modern crane, looking north-east

Plate 43 Vincent's Pier, Type B bollard on 'Old Pier' (0.5m scale)

Plate 44 Vincent's Pier, Type C bollard on 'Old Pier' (1m scale)

Plate 45 Vincent's Pier, plain concrete-filled bollard on 'Old Pier' (0.5m scale)

Plate 46 Vincent's Pier, wooden Type D bollard on 'Old Pier' (0.5m scale)

Plate 47 Vincent's Pier, cast iron mooring ring on 'Old Pier' (0.5m scale)

Plate 48 Vincent's Pier, general view across outer harbour to Lighthouse Pier and footbridge, looking south-west

Plate 49 Vincent's Pier, general view of 1830s Lighthouse Pier with temporary footbridge in place, looking north-east

Plate 50 Vincent's Pier, south face of Lighthouse Pier, showing modern steel sheet and concrete refacing, looking north-west

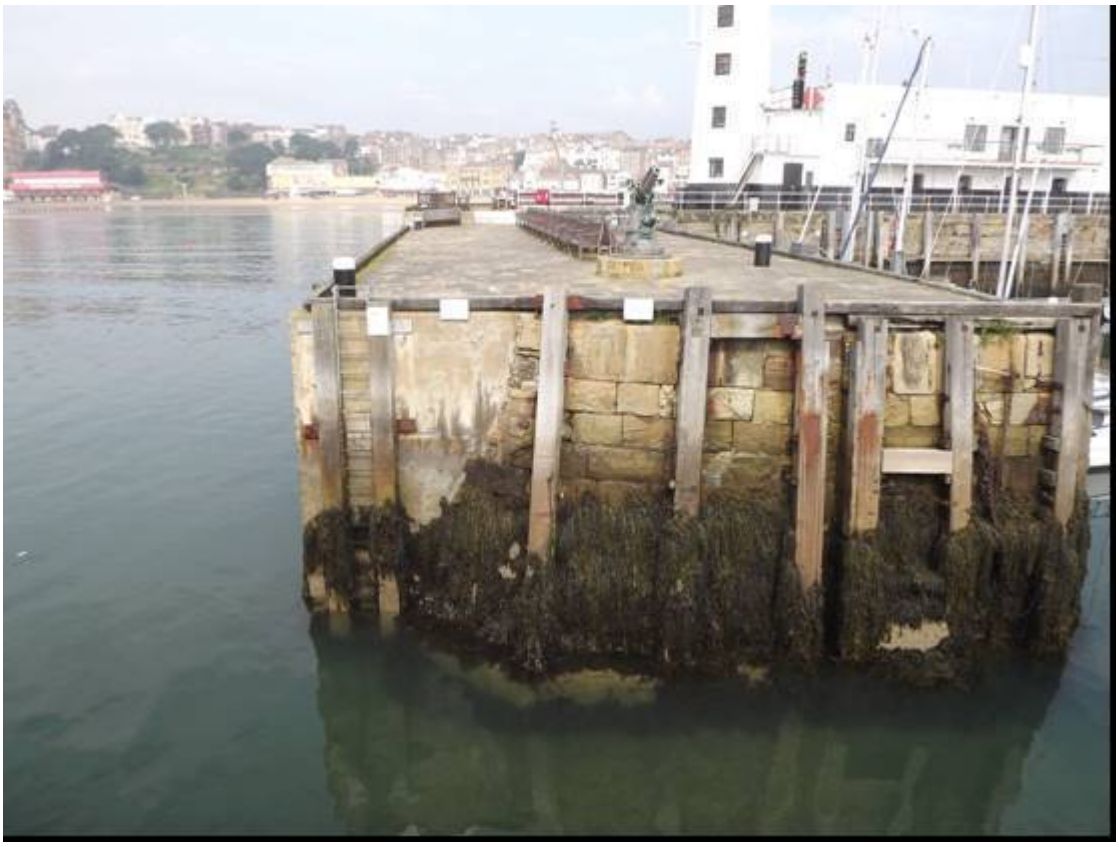

Plate 51 Vincent's Pier, end of Lighthouse Pier prior to construction of footbridge, showing batter of original masonry and vertical modern refacing (left)

Plate 52 Vincent's Pier, in January 2013 following construction of temporary footbridge and insertion of timber stop planks across inner harbour entrance

Plate 53 Vincent's Pier, detail of outer harbour entrance with stop planks and temporary footbridge

Plate 54 Vincent's Pier, inner face of southern section of Lighthouse Pier, looking east towards Grand Hotel and Spa Bridge over Valley Road (left background)

Plate 55 Vincent's Pier, inner face of main section of Lighthouse Pier and landing stair below lighthouse, looking east

Plate 56 Vincent's Pier, general view of south section of Lighthouse Pier showing stone surface, looking east

Plate 57 Vincent's Pier, modern concrete landing stair and facing on west side of Lighthouse Pier, looking south

Plate 58 Vincent's Pier, the Grade II lighthouse, looking north

Plate 59 Vincent's Pier, the Grade II lighthouse and original pier wall, looking south-west

Plate 60 Scarborough lighthouse, commemorative plaque

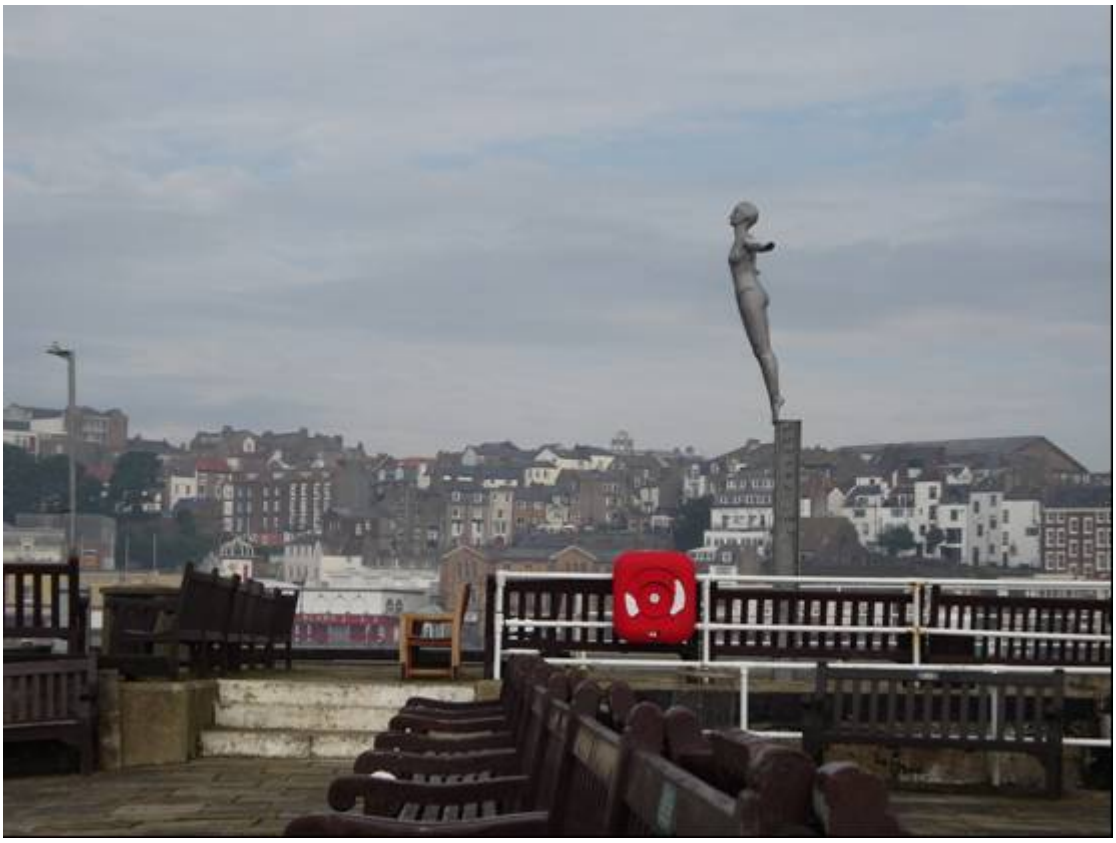

Plate 61 Vincent's Quay, Lighthouse Pier, 'The Diving Belle' modern sculpture on looking west

Plate 62 Vincent's Pier, end of Lighthouse Pier, 13-pounder quick-firing (QF) Mark V Vickers naval gun raised from the wreck of the SS Hornsund in 1982 (1m scale)

Plate 63 Vincent's Pier, detail of Vickers breech mechanism

Plate 64 Vincent's Pier, manufacturer's plaque on Vickers gun pedestal

Plate 65 Vincent's Pier, commemorative plaque detailing recovery of Vickers gun by Scarborough Sub Aqua club

Plate 66 Vincent's Pier, Lighthouse Pier, modified wooden bollard with decorative iron cap (1m scale)

Plate 67 Vincent's Pier, Lighthouse Pier, detail of decorative compass rose on cap of bollard (1m scale)

Plate 68 Vincent's Pier, Lighthouse Pier, small capstan south of lighthouse (0.5m scale)

Plate 69 Vincent's Pier, Lighthouse Pier, decorative top of small capstan (1m scale)

Plate 70 Vincent's Pier, Lighthouse Pier, reused cast iron ship's capstan south of lighthouse on modern concrete plinth (1m scale)

Plate 71 Vincent's Pier, Lighthouse Pier, detail of base of large capstan, showing pawls and pawl ring forming ratchet mechanism

Plate 72 Vincent's Pier, Lighthouse Pier, detail of large capstan head, showing upper row of sockets for capstan bars and corrosion on cap

Plate 73 North side of harbour and the Old Town, eastern section between central slipway (right) and 1928 North Wharf staging (left), looking north towards Castle

Plate 74 North side of harbour and the Old Town, western section between North Wharf (right) and western slipway (left), looking north towards St Mary's Church

Plate 75 North-east corner of inner harbour, c 1900 bridge between Vincent's Pier and North Wharf carrying rebuilt Sandside carriageway, looking north

Plate 76 North Wharf, general view of section east of central slipway with modern refacing, looking north

Plate 77 North Wharf, general view of seawall (right) immediately west of central slipway and east end of 1928 wharf staging (left), looking north

Plate 78 North Wharf, general view of eastern section of 1928 wharf staging, looking north

Plate 79 North Wharf, general view of central section of 1928 wharf staging, looking north

Plate 80 North Wharf, general view of western section of 1928 wharf staging, looking north

Plate 81 North Wharf, general view of west end of 1928 wharf staging and slipway next to West Pier (left), looking north

Plate 82 North Wharf, section of rebuilt wharf east of central slipway with Type B bollard and modern setts

Plate 83 North Wharf, detail of Type B bollard, partly sunk in modern setts (0.5m scale)

Plate 84 North Wharf, top of central slipway with Type B bollard and speedboat booths, looking south-east towards Vincent's Pier

Plate 85 North Wharf, Type B bollard at top of central slipway (0.5m scale)

Plate 86 North Wharf, general view along wharf showing range of large and small bollards, looking east

Plate 87 North Wharf, general view of lobster pots and modern restaurant fronting Sandside

Plate 88 North Wharf, general view towards Sandside and north end of West Pier, looking west

Plate 89 North Wharf, large modern bollard with square baseplate

Plate 90 North Wharf, smaller modern bollard with circular baseplate

Plate 91 Sandside, western slipway between North Wharf and West Pier, with wooden post (left) and unpainted Type B bollard (background)

Plate 92 Sandside, wooden post and post setting in western slipway (0.5m scale)

Plate 93 West Pier, south end of 1877–80 pier with c 1900 extension and surviving modern bait shed to left, looking north-west

Plate 94 West Pier, general view of south end and east side, looking north-west

Plate 95 West Pier, general view of east side of pier with fish market and office buildings, looking north-west

Plate 96 West Pier, general view showing east side of pier and 20th-century fish market buildings, looking west

Plate 97 West Pier, general view showing east side of pier, 1990 fish market (left) and inter-war fish sellers' offices (right), looking west

Plate 98 West Pier, north end, showing 1990 fish market (left) and inter-war and late 19th-century fish seller's offices, looking west

Plate 99 West Pier, east wall of pier at north end and rear elevation of late 19th-century former fish sellers' offices, with slipway (foreground), looking south

Plate 100 West Pier, rear and east end of late 19th-century former fish sellers' offices, looking west

Plate 101 West Pier, late 19th-century former fish sellers' offices showing two level 'almshouse' design, looking north

Plate 102 West Pier, front elevation of late 19th-century former fish sellers' offices, looking north-east

Plate 103 West Pier, front elevation of inter-war fish sellers' offices, showing general similarity to earlier building, looking north-east

Plate 104 West Pier, general view along east side of pier, with inter-war offices and 1980 fish market (right), looking south-east

Plate 105 West Pier, rear of inter-war fish-sellers' offices, looking north-west

Plate 106 West Pier, front elevation of 1990 fish market, looking south-east

Plate 107 West Pier, rear of 1990 fish market adjoined by north end of remodelled single-storey building (left), looking north-west

Plate 108 West Pier, foundation plaque on 1990 fish market

Plate 109 West Pier, south end of remodelled single-storey 20th-century fish market building, looking north

Plate 110 West Pier, fish processing building, south end of pier, looking south-east

Plate 111 West Pier, surviving 1973 'bait shed' awaiting demolition at south-west corner of pier, looking south-east

Plate 112 West Pier, surviving 1973 'bait shed' at south-west corner of pier with Type A bollard (foreground), looking north-west

Plate 113 West Pier, view along west side of pier towards lifeboat house, with Type A bollard (foreground), looking north-west

Plate 114 West Pier, view of car park area and offices at north end of pier, looking north

Plate 115 West Pier, Type A bollard on west side of pier (1m scale)

Plate 116 West Pier, modern hammerhead bollard on east side of pier (1m scale), looking north across western slipway to North Wharf

Plate 117 Marine Drive, the Gothic style South Toll House, now used by HM Coastguard, looking north

Plate 118 Junction of Sandside and the start of the Marine Drive, looking north towards the South Toll House, with Luna Park amusements to the right

Plate 119 Sandside, looking west towards the narrow east end of Quay Street (centre) and 53–55 Sandside (left), with Castle headland to right

Plate 120 Nos 51 & 53–55 Sandside, looking north across c 1900 carriageway

Plate 121 Nos 50 (the 'Ivy House') & 51 Sandside, looking north-east across pre-1900 line of the road

Plate 122 Nos 45 ('The Lancaster' public house) & 48 Sandside, looking north

Plate 123 Nos 40–41, 42 & 43 Sandside, looking north

Plate 124 General view of east end of Sandside from Nos 38–45, looking north-east, with the pre-1900 roadway behind the vehicles

Plate 125 Nos 34–35 Sandside (left), 36 (former Scarborough Marine Engineering), 38 & 39 (centre), & 40–41 (right), looking north

Plate 126 Early 18th-century Nos 34–35 Sandside, looking west

Plate 127 No 31 (Golden Ball public house), 32–35, & 36 Sandside, looking north-west; the pre-1900 roadway curved around this projecting block

Plate 128 Nos 31 (Golden Ball public house) & 32–33 Sandside, looking north-east

Plate 129 Nos 26, 27–28, 29 & 30 Sandside, looking north-east; the buildings fronted the pre-1900 roadway

Plate 130 Nos 24 (King Richard III House), 25–26, & 27–28 Sandside, looking north

Plate 131 Nos 21, 23, & 24 (King Richard III House) Sandside, looking north; the pre-1900 roadway curved around this projecting block

Plate 132 Nos 18, 19, 20 (former Bethel Mission Chapel), 22 (set back to right of chapel), & 21 Sandside, looking north

Plate 133 Nos 13 ('Newcastle Packet' public house), 15, 16, & 17–18 Sandside, looking north

Plate 134 Nos 11–12, & 13 ('Newcastle Packet' public house) Sandside, with entrance to East Sandgate (right), looking north

Plate 135 Nos 9, 10 & 11–12 Sandside, looking north; these buildings fronted the pre-1900 roadway

Plate 136 Gable detail of early 18th-century No 9 Sandside, looking north

Plate 137 Nos 5–8, 9, & 10 Sandside, looking north

Plate 138 No 38 Foreshore Road west of entrance to Eastborough (left), No 80 Eastborough, Nos 1–2, 3, & 4 Sandside, looking north-west

Plate 139 Sandside, Grade II listed 1920s Police Box

Plate 140 Sandside, WW2 sea mine used as collection box

Plate 141. Sandside, detail of dedication plate on WW2 sea mine

Plate 142 Sandside, late 19th-/early 20th-century Admiralty pattern anchor with Nos 34–35 in background; the pre-1900 roadway is located below the pavement

Plate 143 Scarborough town and harbour, c 1538 (British Library Cotton Augustus I. ii. 1)

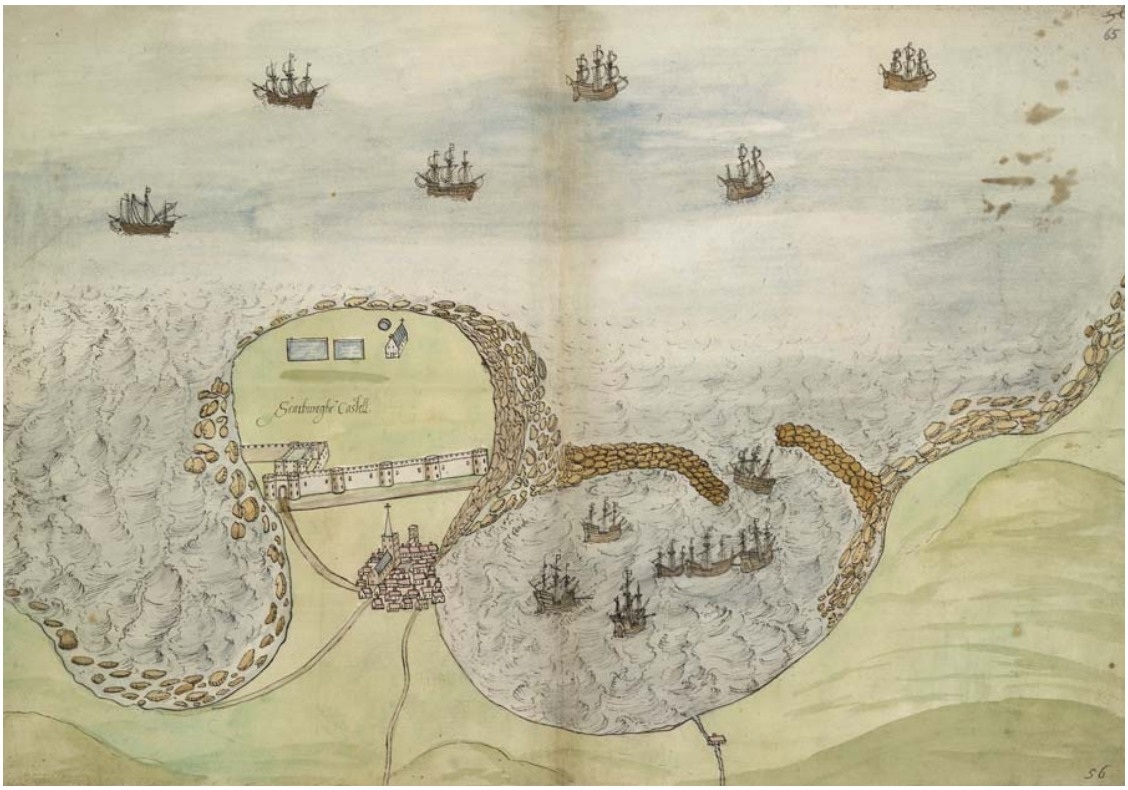

Plate 144 Plan of Scarborough Castle and harbour, c 1595 (British Library, Royal MS 18 D.III fols 64–5)

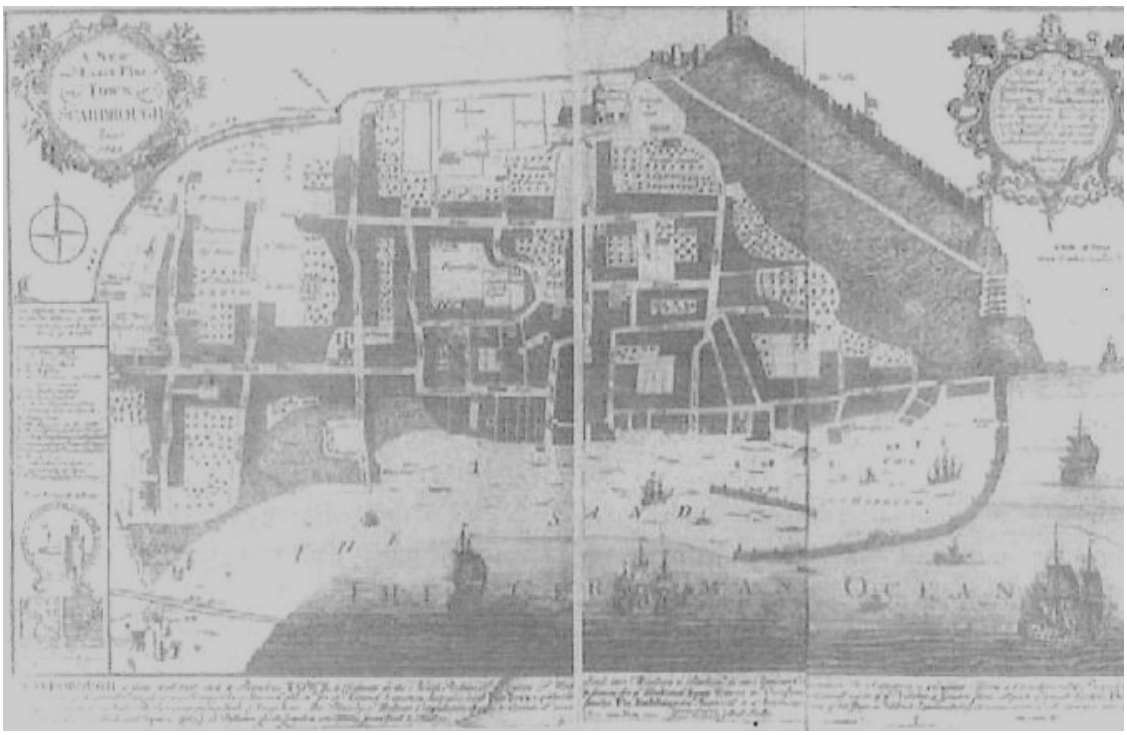

Plate 145 John Cossin's 'A New and Exact Plan of Scarborough', 1725

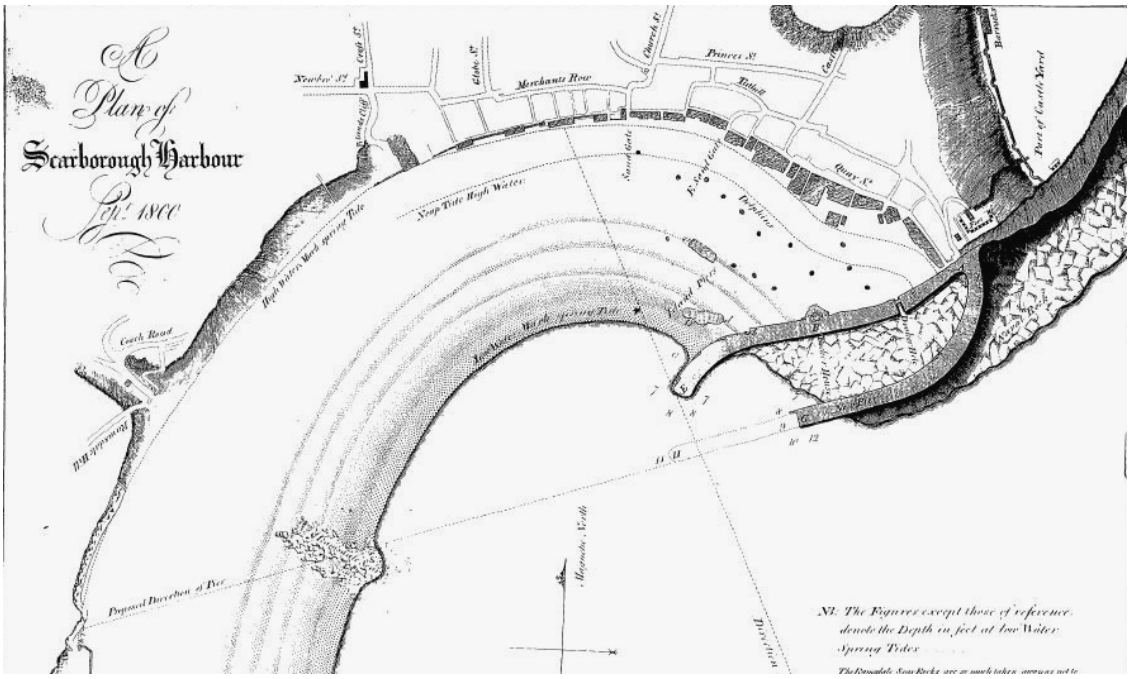

Plate 146 William Chapman's, 'A Plan of Scarborough Harbour Sept 1800'

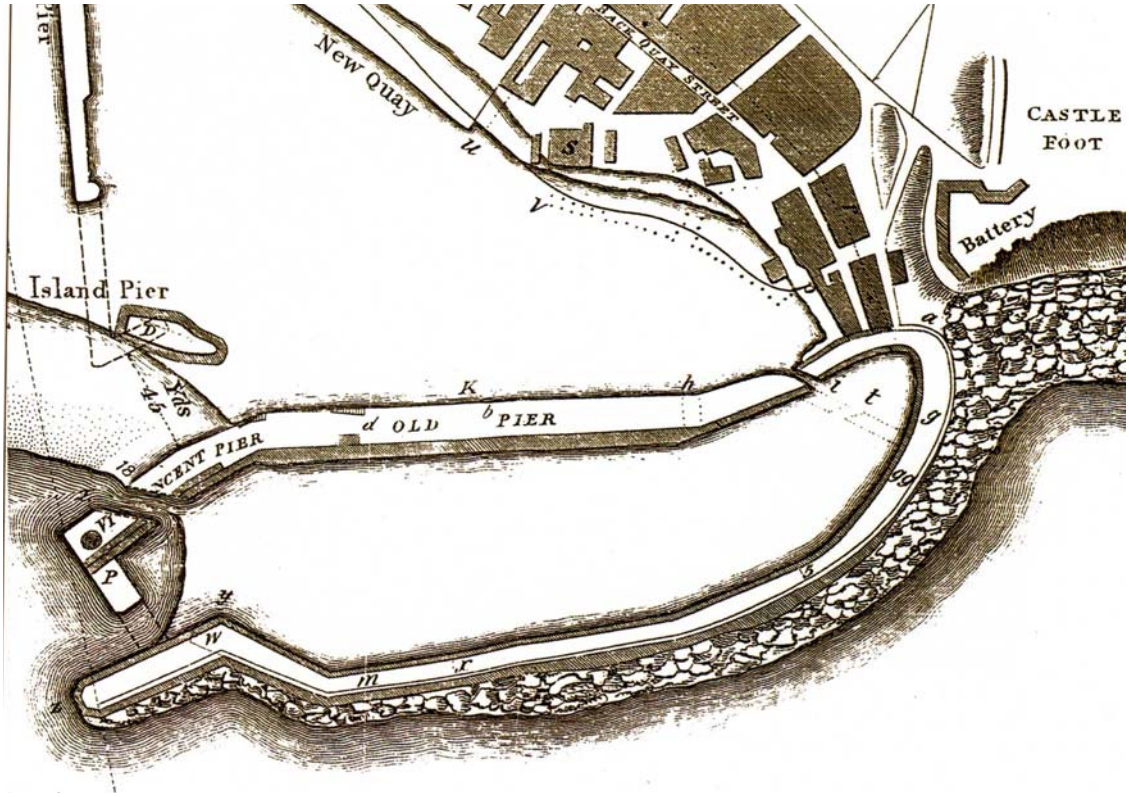

Plate 147 William Chapman's, plan of Scarborough harbour, 1831

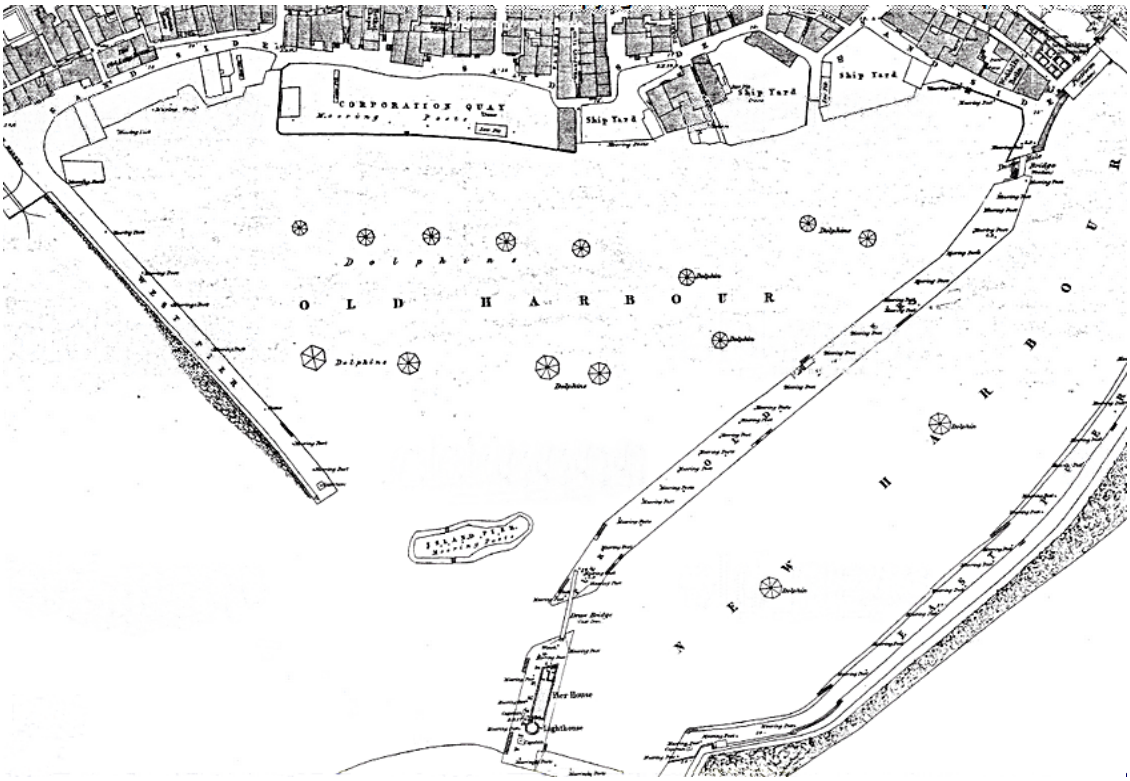

Plate 148 Scarborough harbour, 1:1056 Ordnance Survey, 1852

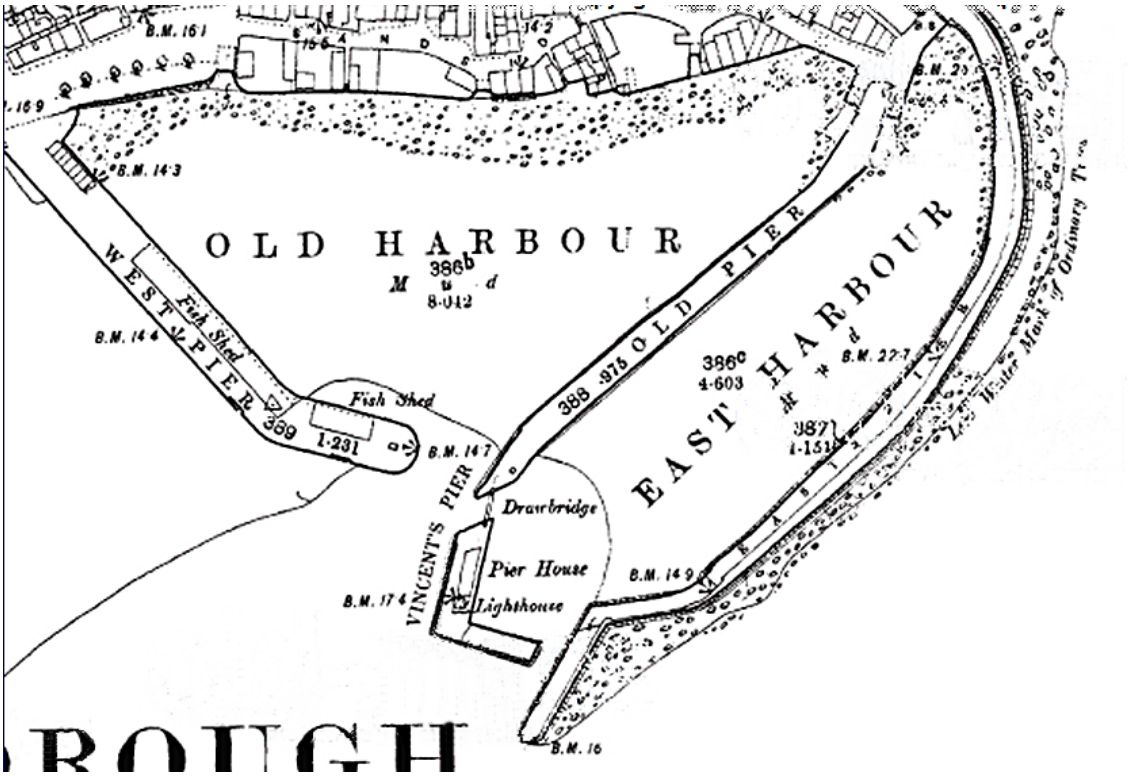

Plate 149 Scarborough harbour, 1:2500 Ordnance Survey, 1893

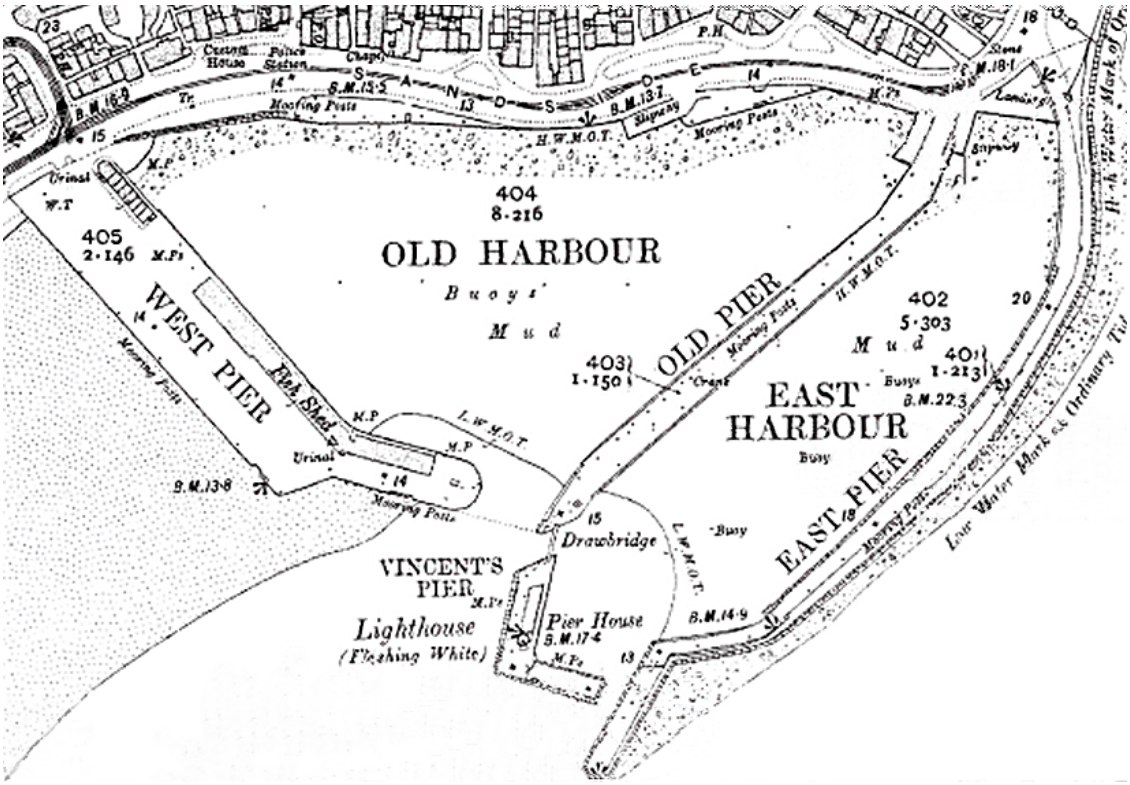

Plate 150 Scarborough harbour, 1:2500 Ordnance Survey, 1912

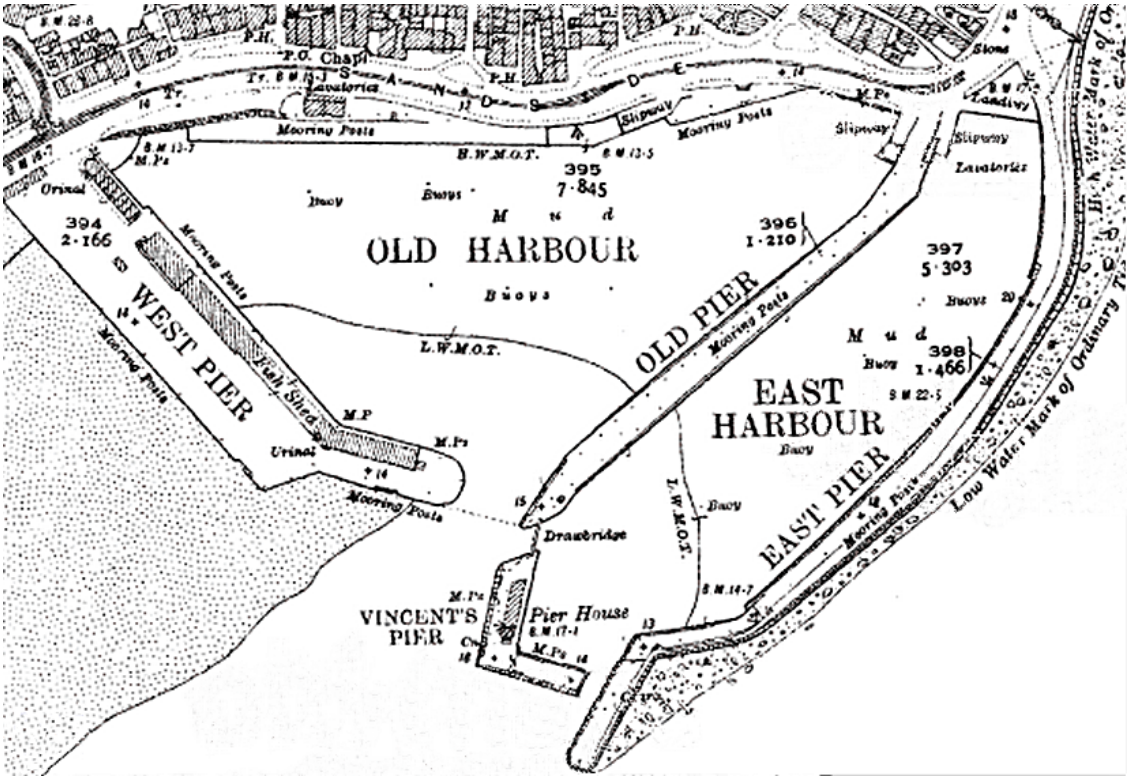

Plate 151 Scarborough harbour, 1:2500 Ordnance Survey, 1929

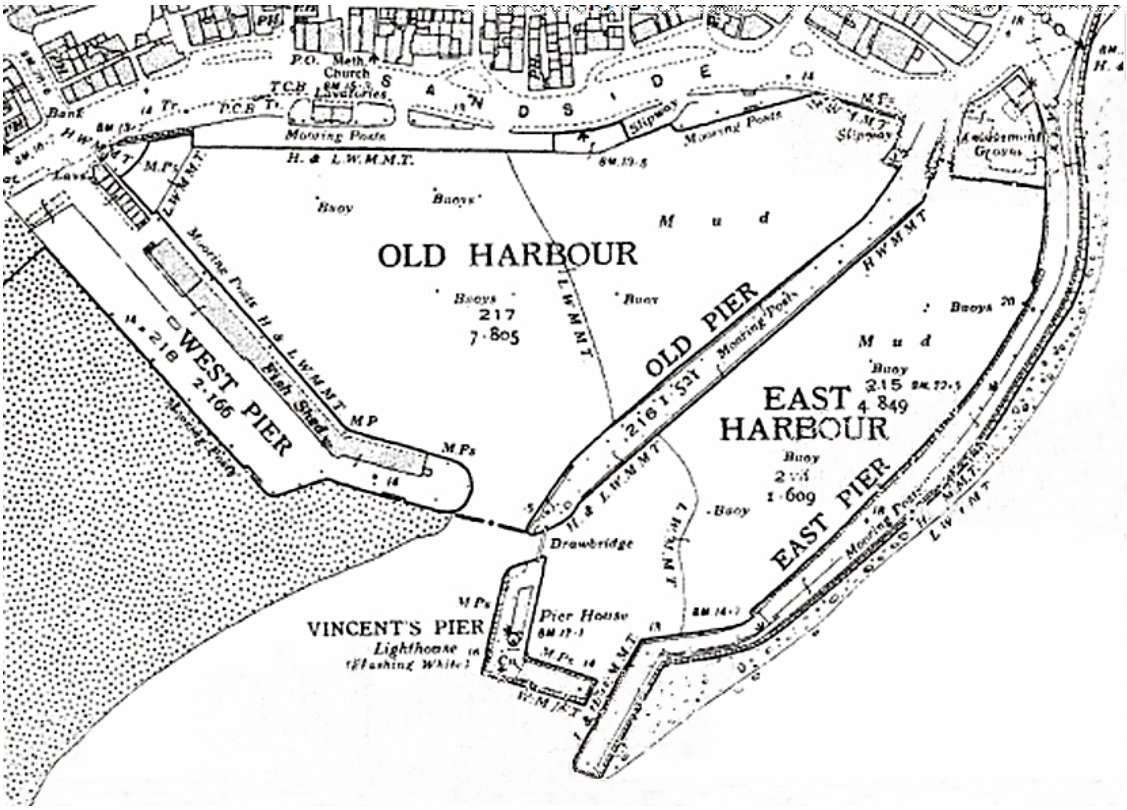

Plate 152 Scarborough harbour, 1:2500 Ordnance Survey, 1939

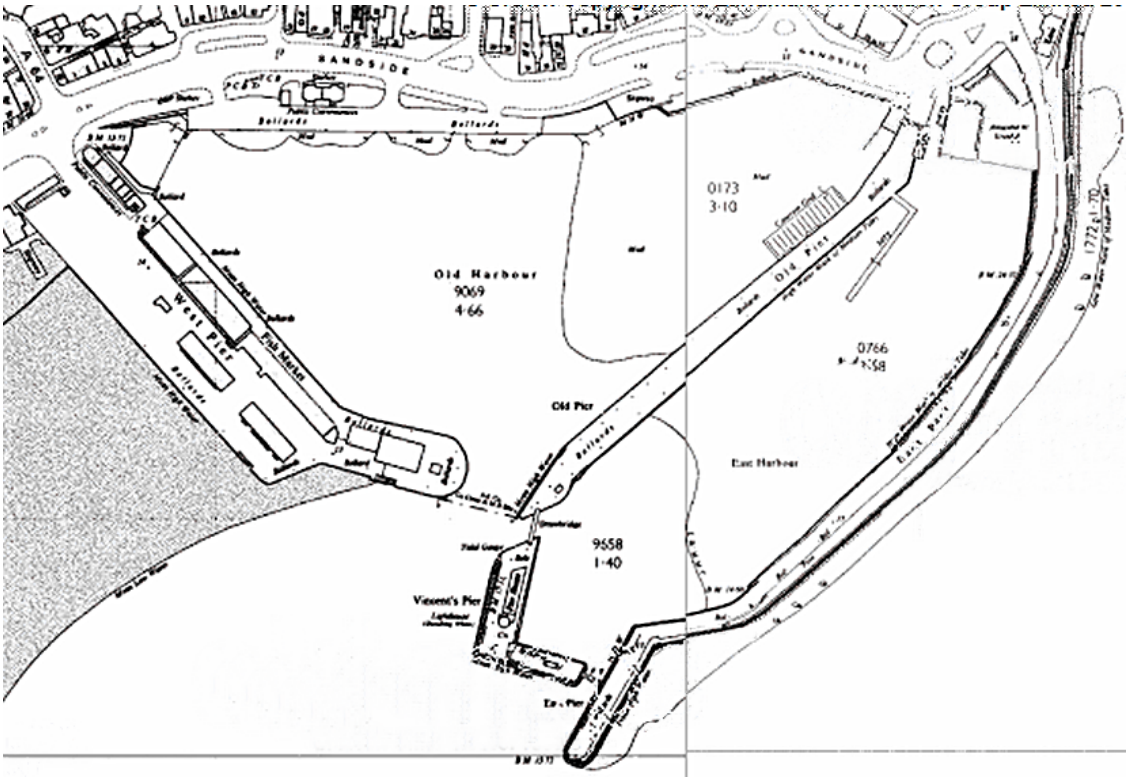

Plate 153 Scarborough harbour, 1:2500 Ordnance Survey, 1966

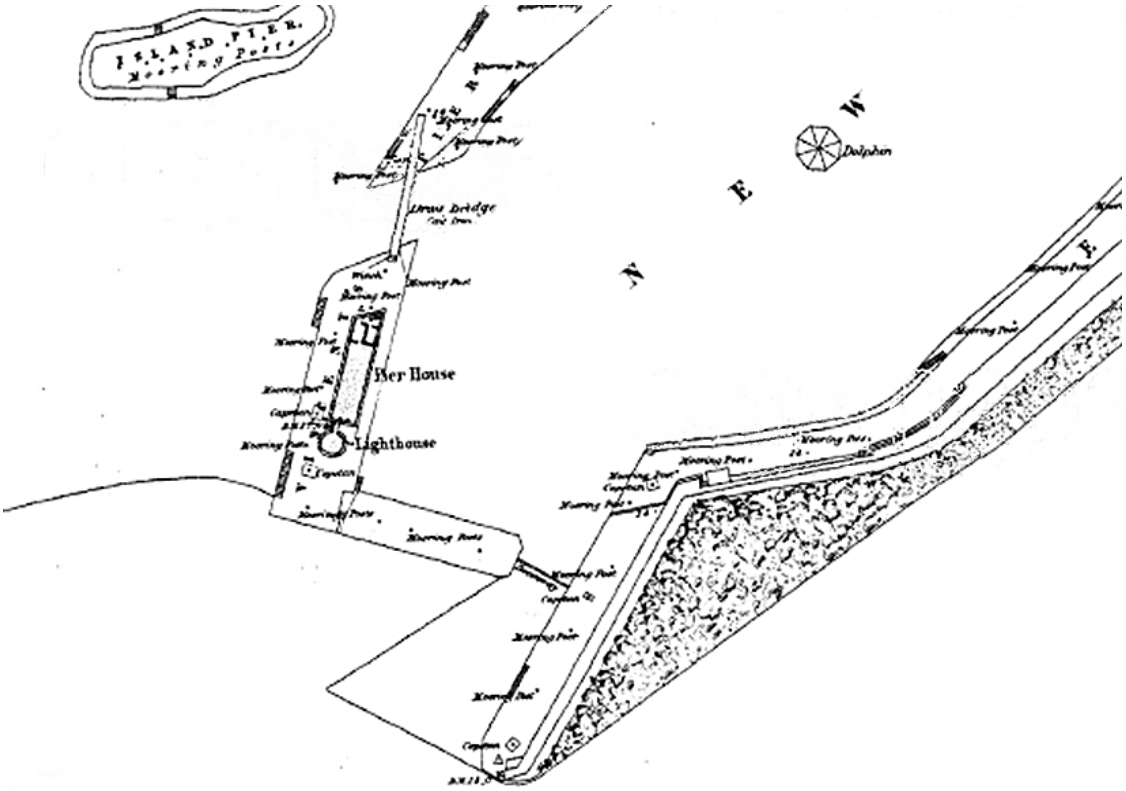

Plate 154 Entrance to outer harbour, 1:1056 Ordnance Survey,1852

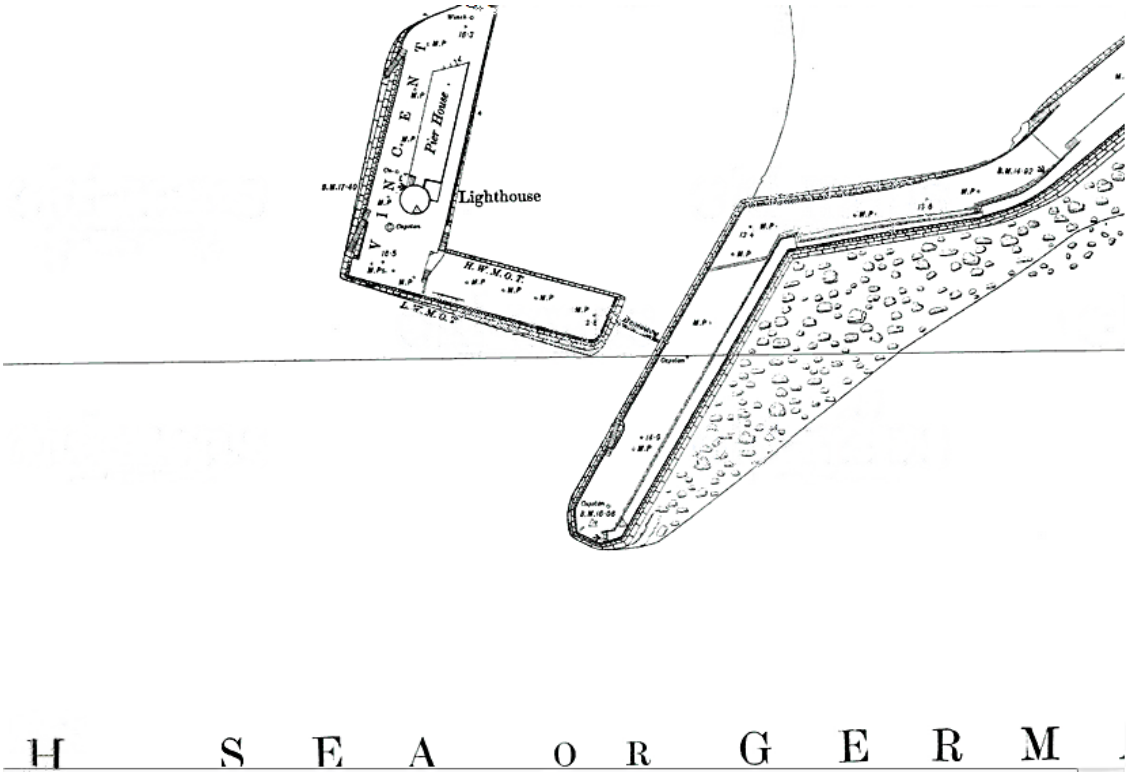

Plate 155 Entrance to outer harbour, 1:500 Ordnance Survey, 1892

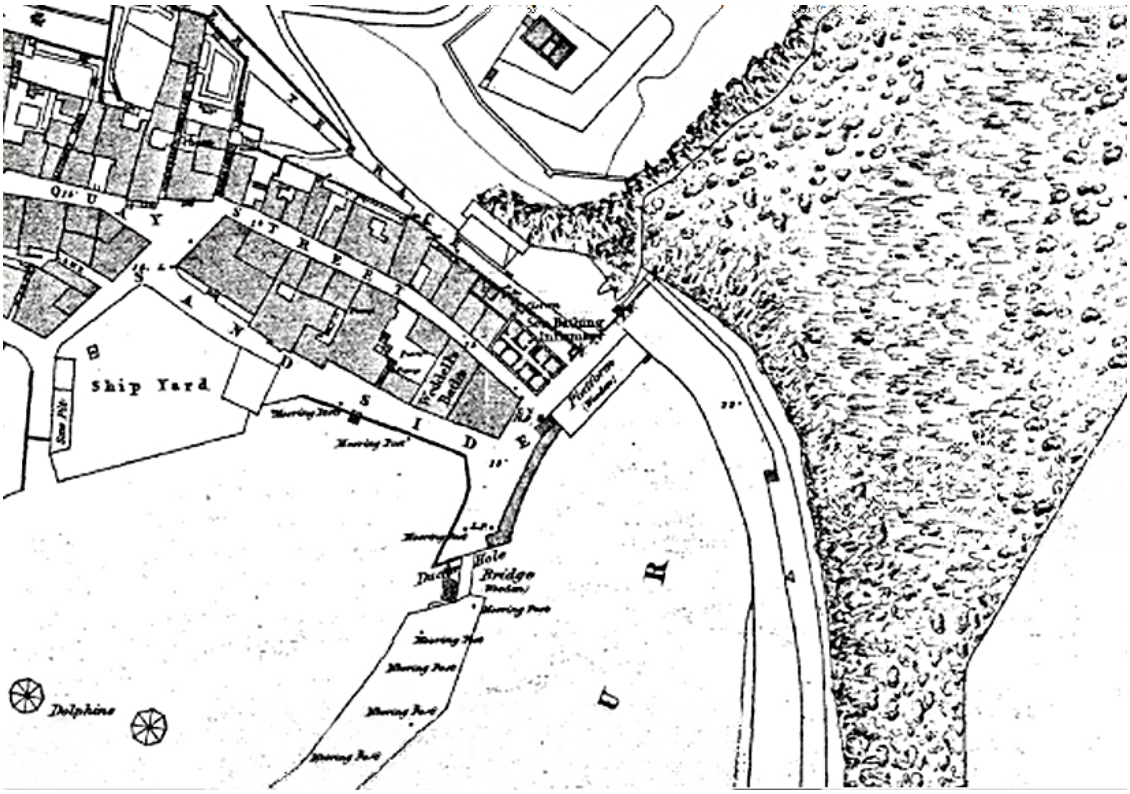

Plate 156 North-east corner of harbour, 1:1056 Ordnance Survey, 1852

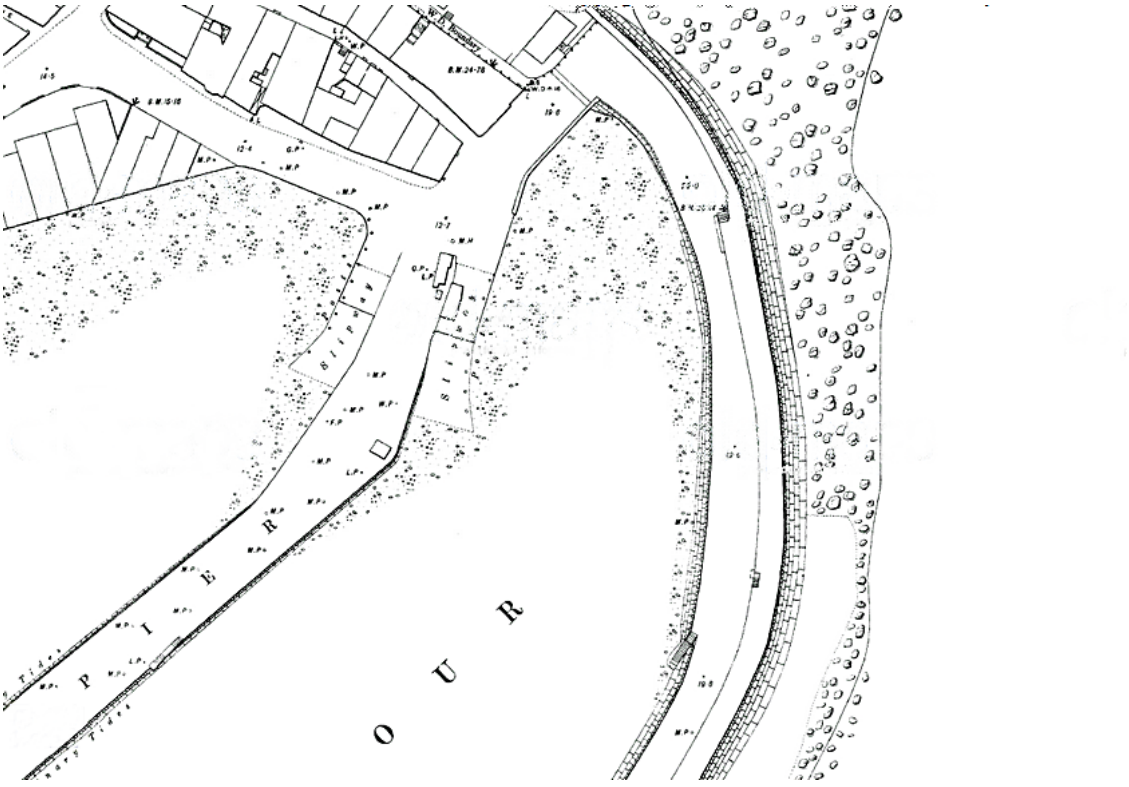

Plate 157 North-east corner of harbour, 1:500 Ordnance Survey, 1892

Plate 158 Northern area of harbour, 1:500 Ordnance Survey 1892

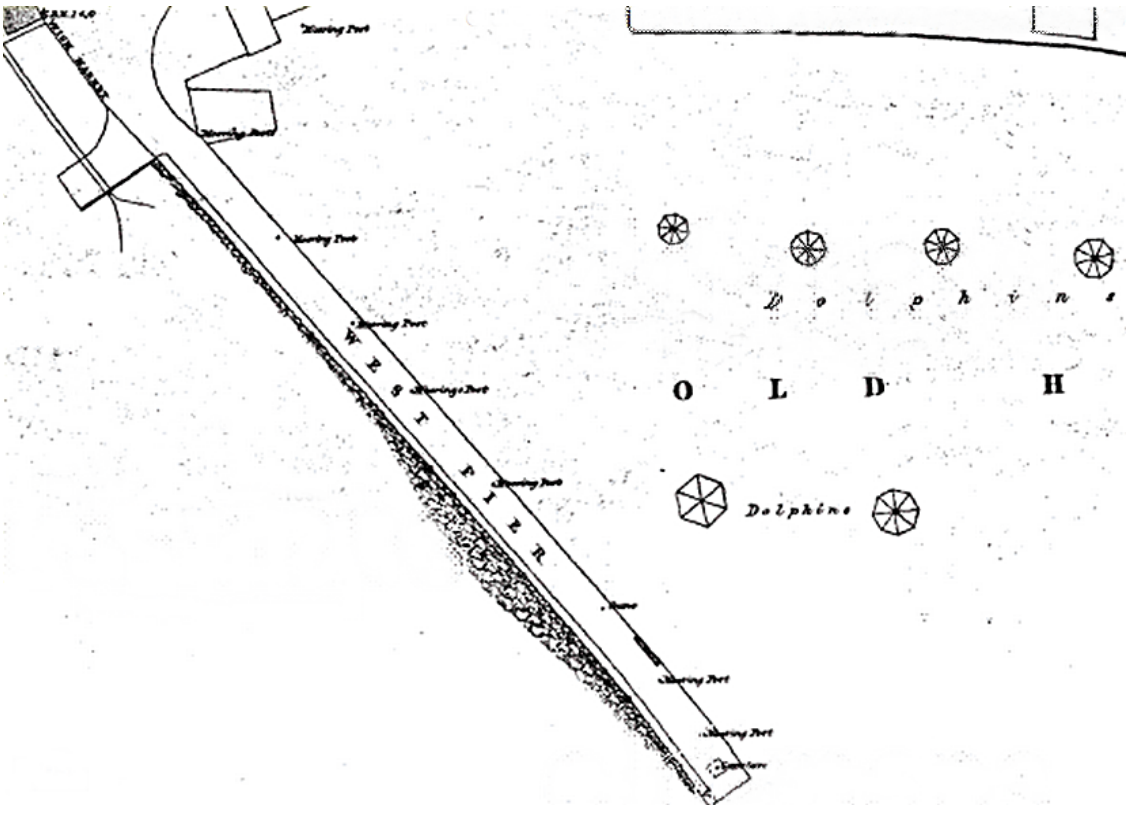

Plate 159 West Pier, 1:1056 Ordnance Survey, 1852

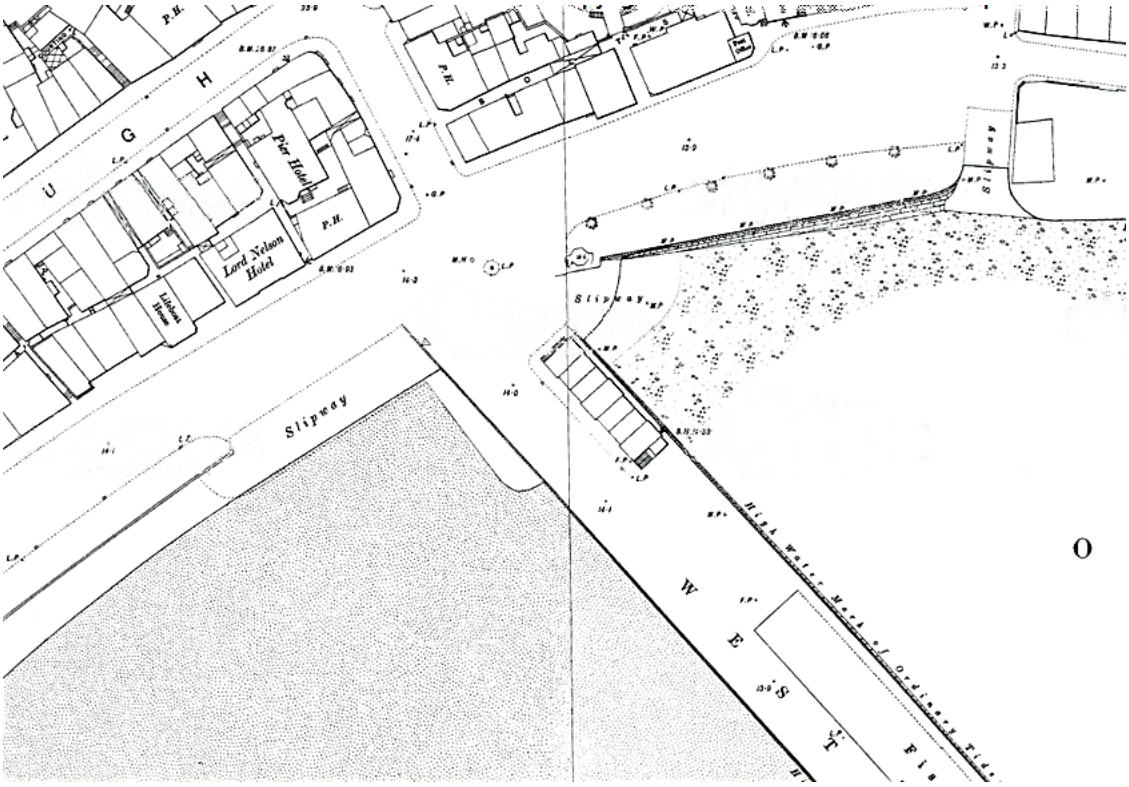

Plate 160 North end of West Pier, 1:500 Ordnance Survey, 1892

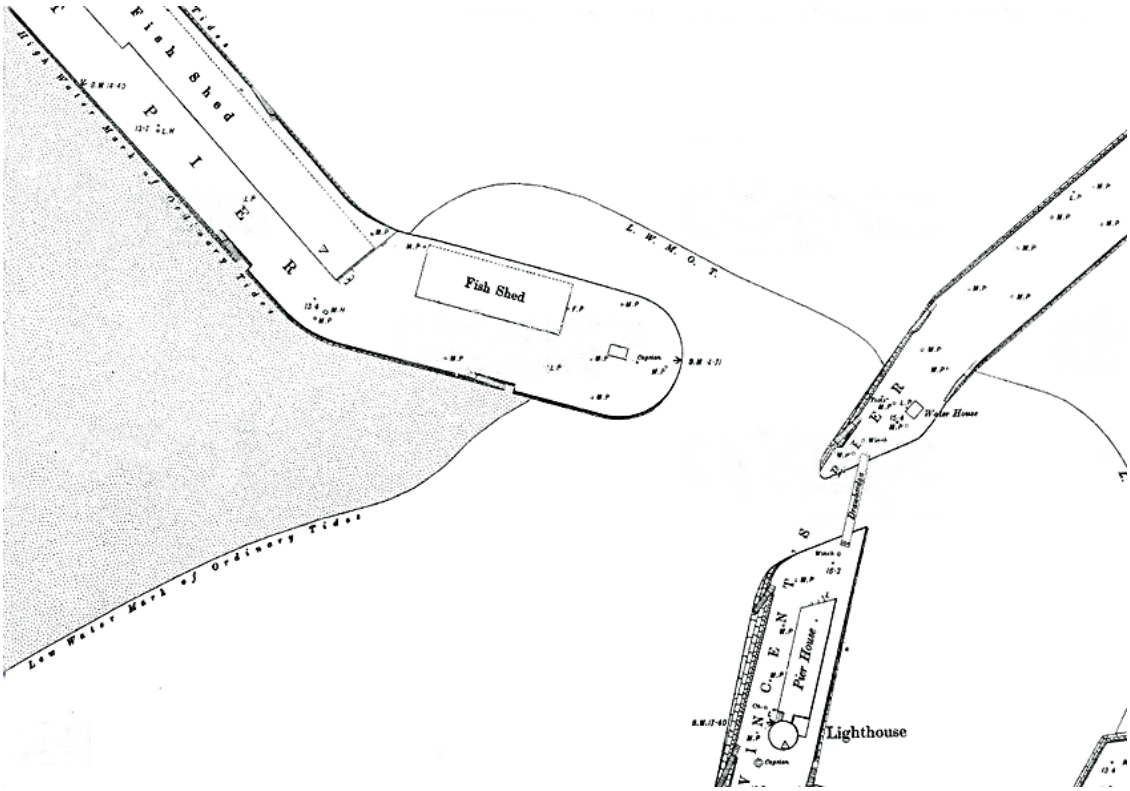

Plate 161 South end of West Pier, 1:500 Ordnance Survey, 1892