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**FORMER WHITEHALL SHIPYARD,
SPITAL BRIDGE,
WHITBY
NORTH YORKSHIRE**

**REPORT ON AN
ARCHAEOLOGICAL
EVALUATION AND
BUILDING SURVEY**

**2001 FIELD REPORT
NUMBER 44**

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CONTENTS

1. INTRODUCTION
2. METHODOLOGY
3. HISTORICAL AND ARCHAEOLOGICAL BACKGROUND
4. RESULTS OF EXCAVATION
5. OBSERVATIONS OF STANDING REMAINS
6. RESULTS OF TEST PITS
7. ENVIRONMENTAL EVIDENCE
8. FINDS
9. CONSERVATION ASSESSMENT (small finds)
10. CONSERVATION ASSESSMENT (timber)
11. CONCLUSIONS AND RECOMMENDATIONS
12. SOURCES
13. THE OLD SAIL LOFT
14. LIST OF CONTRIBUTORS

Appendix 1 Site Archive Listing

Appendix 2 Archaeological Specification

LIST OF ILLUSTRATIONS

FIGURES

- Figure 1 Plan showing location of trenches, trial pits and previously excavated trial pits
- Figure 2 Wooler, 1740, Plan and Prospect of the Town and Harbour
- Figure 3 Wood, J., 1st 1828, Town Plan of Whitby
- Figure 4 Wood, J., 1828, Town Plan of Whitby, Whitehall
- Figure 5 Pickernell, F, 1841, Plan of the Town and Harbour of Whitby
- Figure 6 Ordnance Survey, 1st edition, 1852, Map of the Shipyard Area of Whitby
- Figure 7 Plan of Freehold Building Ground Close to Whitby, 1853
- Figure 8 Map of Church Street, Dry Docks, Shipyards, Whitehall, n.d, (c.1866)
- Figure 9 Ordnance Survey, 2nd edition, 1893
- Figure 10 Ordnance Survey, 3rd edition, 1913
- Figure 11 Stratigraphic Matrices
- Figure 12 19th century dockyard structures and (now demolished) buildings overlying modern map showing location of excavated structures.
- Figure 13. Trench 1, east facing section
- Figure 14. Trench 2, south-west facing section
- Figure 15 Excavated structures in Trench 2 in relation to features shown on historic maps
- Figure 16 Trench 3, south-east facing section
- Figure 17 Excavated structures in Trench 3 in relation to features shown on historic maps
- Figure 18 Excavated structures in Trench 4 in relation to features shown on historic maps
- Figure 19 Trench 4, north-east facing section
- Figure 20 Excavated structures in Trench 5 in relation to features shown on historic maps
- Figure 21 Trench 5, north-east facing section
- Figure 22 Plan showing location of observed remains
- Figure 23 Sections of test pits 1 to 12
- Figure 24 Schematic East West Section
- Figure 25 Charlton's 1778 map
- Figure 26. Old Sail Loft - sketch of north elevation
- Figure 27. Old Sail Loft - sketch phase plan

PLATES

- | | |
|----------|--|
| Plate 1. | Overall site view from south |
| Plate 2 | Whitehall Yard with Whitehall and the Mount, 1864 |
| Plate 3 | Photo, c.1890 taken from Spital Vale |
| Plate 4 | Photo, building a seine type fishing boat |
| Plate 5 | Photo, 1963, Whitehall Shipyard |
| Plate 6 | Trench 1, facing east |
| Plate 7 | Trench 2, facing south-east |
| Plate 8 | Trench 3, facing north-east |
| Plate 9 | Trench 4, facing south-east |
| Plate 10 | Trench 5, facing north |
| Plate 11 | Old Sail Loft – north elevation of west end of long range |
| Plate 12 | Old Sail Loft – south elevation of east end of long range |
| Plate 13 | Old Sail Loft – east end of long range from north-east |
| Plate 14 | Old Sail Loft – Sail Loft range from north-east |
| Plate 15 | Old Sail Loft – Sail Loft range, detail of herringbone masonry |
| Plate 16 | Old Sail Loft – Sail Loft range from east |
| Plate 17 | Old Sail Loft – Sail Loft range from west |
| Plate 18 | Old Sail Loft – long range and Sail Loft range from north-west |

1. INTRODUCTION

Between June 25th and July 12th 2001, York Archaeological Trust carried out an archaeological evaluation on land occupying the site of the former Whitehall Shipyard, together with a small parcel of land immediately to the north of this, at Whitby, North Yorkshire, (NGR NZ 8997 1025, Figure 1). This block of land encompasses an area of approximately 2.3 hectares and is located on the east bank of the River Esk within the Upper Harbour. Within the block there is little ground slope in a north - south direction, this being more pronounced in an east -west axis where a fall towards the west of around 3.50m is generally present across much of the site. The underlying geology comprises the Saltwick Formation where beds of Ailaby sandstone overlie shales and clay. Slippage along an ancient fault line of the river has caused a steep cliff along the eastern side of the River Esk. A sandstone cliff has formed on the eastern side of the river and the cliff face forms part of the eastern edge of the site. Land immediately east of the site boundaries is generally elevated by several metres above the former shipyard. At the southern end of the site this change in level is defined by a near vertical quarried rock face whilst at the northern end the change of level is marked more gradually by sloping ground.

Within the site a single building, "The Old Sail Loft" at the northern extremity of the plot, remains upstanding. Of some architectural and historical interest, a report on the building is included in this document. Spital Bridge lies immediately north-east of The Old Sail Loft. Said to be of 18th century date it is possible that the bridge, or parts of it, may contain older fabric. The single arch of this bridge spans the Spital Beck which flows into the River Esk at this point and forms the extreme northern limit of the site. Tidal mudflats extend along the western edge of the site. The river frontage is formed of a number of different components ranging in date from the 18th century at the extreme north of the site to the 20th century in many other areas.

The archaeological evaluation, together with a desk based assessment and observation of engineering test-pits, was carried out on behalf of Harrison Developments Ltd (Malton) and followed a Brief for Archaeological Evaluation issued by the Heritage Unit of North Yorkshire County Council (see Appendix 2).

2. METHODOLOGY

The methodology adopted in the recording of the Old Sail Loft is set out in the building report, section 12.

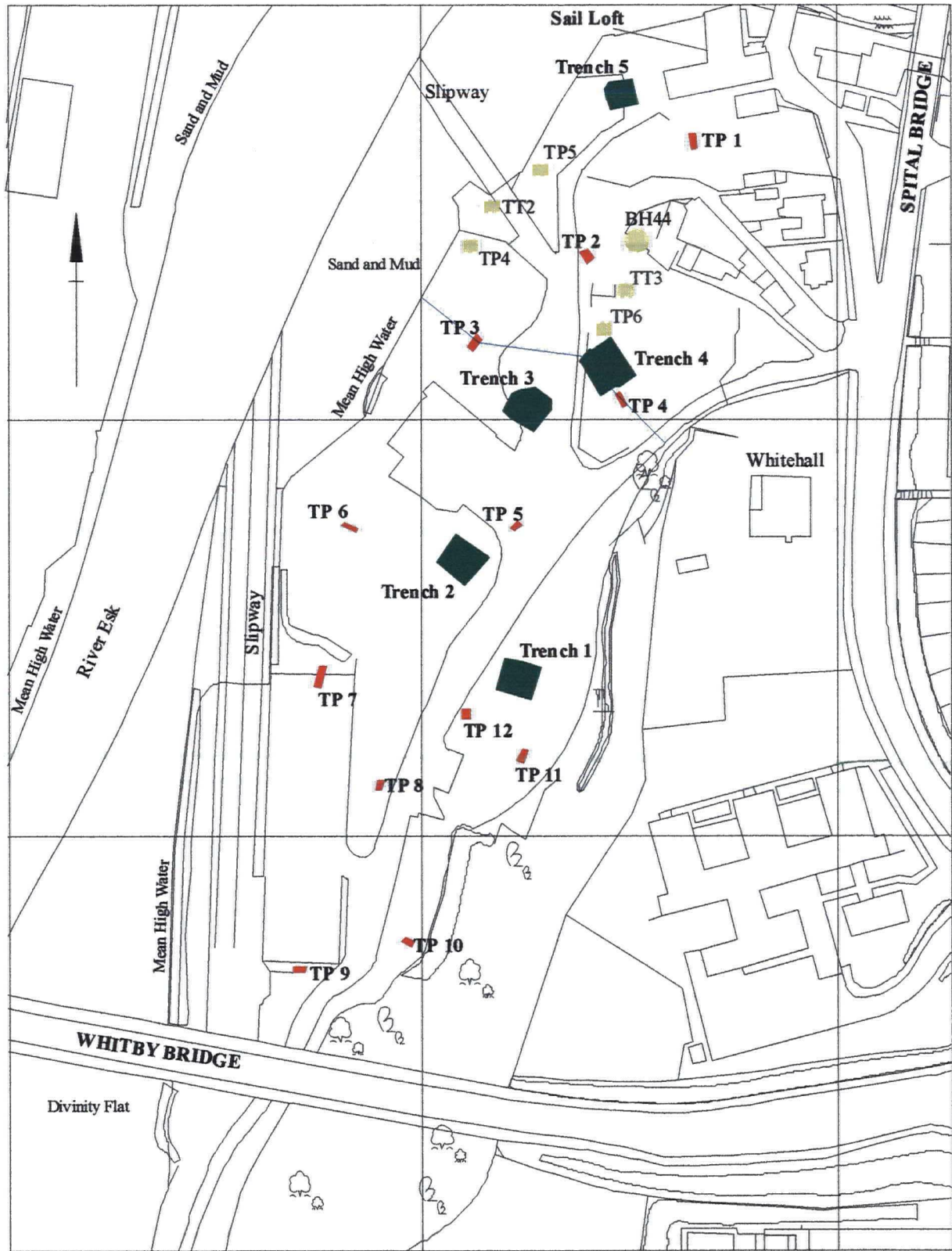
The historical and archaeological background to the area was studied via a variety of media. The sources consulted consisted of the Sites and Monuments Record (SMR) of North Yorkshire County Council, cartographic data (from 1740 to the 20th century), published and unpublished archaeological reports, works of historical and archaeological synthesis and photographic archives of the Whitby Literary and Philosophical Society.

Archaeological monitoring of twelve trial pits excavated mechanically by a JCB with a toothless bucket for a geotechnical assessment of the site was carried out whilst the archaeological evaluation took place. While these trenches provide information about deposit formation across the site no significant archaeological features were encountered within them. The results of these trial pits are presented in section 6.

Five trenches, numbered 1 - 5, were excavated as part of the evaluation. The distribution of these was designed to give wide coverage of the site and to collectively produce results representative of the site as a whole. Some of the trench locations were determined by the location of features which could be conjectured from historical maps of the site. It was initially intended that each of the five trenches would measure 10m x 10m at their upper limits and have sides battered at 45 degrees such that at a depth of 4.0m, for example, the base of the trench would measure 2m x 2m. Certain factors served to necessitate diversion from this plan. In Trench 1 "natural" was revealed at very shallow depth and so vertical sides could be maintained. Trench 5 measured just 7.30m x 6.0m, this being determined by the proximity of a standing building and the presence of gas and electricity services. Excavation revealed the presence of walls on two sides of this same trench and prevented the battering of all sides and as a consequence a smaller area was excavated in the central part of the trench away from the walls, the effect being "stepped". By contrast, parts of Trench 4 measured in excess of 11.50m from east to west owing to the presence of an early feature at the western side of the trench. Only by extending the trench was it possible to examine this feature.

All modern surfaces and overburden were removed by a 360 degree mechanical excavator operated under archaeological supervision. Certain deep, homogeneous land reclamation deposits were also carefully excavated by mechanical means. Most machining was carried out with a toothless bucket, a toothed bucket being employed on certain difficult modern materials. All subsequent deposits were thereafter manually excavated. Each context encountered was individually recorded on separate pro-forma record sheets and planned, either singly or multi-context, at a scale of 1:20. At least two sections from each trench were recorded, at scales of either 1:10 or 1:20. It should be noted that many of these section drawings depict deposits and features that occurred in oblique battered, and not vertical, sections. All extant above ground features, archaeological trenches and significant archaeological features therein were located by means of an EDM survey and tied into the Ordnance Survey digital map of the area. An extensive series of colour digital and print photographs were taken during the course of the works. These include overall site shots, working shots, final trench shots and feature detail shots.

All finds and site records have the Whitby museum accession number WHITM : 2001.12 and are presently stored by York Archaeological Trust.



0 100 metres

- Excavation Trenches
- Trial Pits
- Trial Pits, (not to scale), NAA, 1998
- Location of schematic section

Based on the Ordnance Survey Digital Map Data with Permission of the Controller of Her Majesty's Stationery Office, Crown Copyright. York Archaeological Trust Cromwell House, 13 Ogleforth, York, YO17FG. Licence Number AL 10001343

Figure 1. Location of excavation trenches, trial pits and previously excavated trial pits



Plate 1. Overall view of site looking north

3. HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

The first recorded settlement at Whitby was a monastery founded in 657 by St Hilda on the headland near to the present abbey. This was reputedly destroyed in 867 during the course of a Danish raid and seems to have been abandoned. There is, however, ample evidence in the place names found nearby that there was Scandinavian settlement of the area which was likely to have included the harbour of Whitby (called *Witebi* in Domesday Book). Originally, the name may have referred to a settlement on the west bank of the Esk with that on the east side being known as *Presteby* (*Prestebi*, or settlement of priests, in Domesday Book). It was not until the 14th century that the settlements on both sides of the river were called by the one name, Whitby.

The abbey was founded in c.1074 by William de Percy on land which he held as a sub-tenant of the Earl of Chester who had been granted the land by William the Conqueror. The abbey was first granted only two carucates of land but between 1084-1102, a more extensive grant was made of land which ranged from Sandsend in the north to Hackness in the south and from Grosmont in the west to the sea in the east. The abbey held the right to rents from the land but did not hold it freehold.

Settlement developed on flat ground around the lowest bridging point of the River Esk. Documentary references to this bridge date from 1327 and there was also an ancient ford at Boghall, upstream from the bridge. Green Lane, widened in modern times, was the route from the abbey and the earlier monastery to the fording point across the River Esk. The town of Whitby was always referred to separately in abbey charters and although the abbey held many rights over it, it did not own the town. It is not clear at this early period whether the land on Green Lane and that to the south fell into Whitby town or was a part of the abbey lands (which later formed the manors of "Whitby Lathes", Stainsacre and Hawkser).

The reported position of a medieval hospital is of specific relevance within the bounds of the development site. In 1109 a leper hospital was founded at a place granted by the abbot of Whitby upstream from the main town, on the east bank of the River Esk in the vicinity of Spital Bridge. The hospital was first dedicated to Michael the Archangel and was located at "Helredale". It served needy people who were not leprous in addition to lepers (Whitby Cartulary, Vol II, 514). In 1145-53 it was still known by this name, but later, the valley, watercourse and bridge took the name of the hospital and became known as Spital Vale, Spital Beck and Spital Bridge. A croft was granted to the hospital and by the late 12th century the dense wood and thorny ground had been cultivated. No further references to a hospital with this dedication survive.

A hospital at Whitby is next referred to in the Hundred Rolls of 1274/5 when a "hospital of the Blessed Thomas" is referred to in the Liberty of Whitby when it is said to be in the king's gift and that the burgesses held the land and holding belonging to it (YAJRS Vol. CLI, 116). A charter of 1307 mentions a land grant from Rievaulx Abbey to Whitby Abbey for the benefit of the hospital of paupers of Whitby but gives no dedication or indication of the location (Whitby Cartulary, Vol. II, 517). In 1320, 1397 and 1399 the custody of the hospital of St John the Baptist, Whitby was in the grant of the king and is recorded in the relevant Patent Rolls. This hospital may have been fairly extensive; in 1406 it was the subject of an enquiry into wastes, dilapidations and destructions in the church, chancel, lands, houses, buildings, woods, walls, enclosure, gardens, stews, stanks and mills within its site and belonging to it. Following this

enquiry there is no further documentary reference to a hospital. It is likely that it may have been abandoned at the time of the dissolution.

The number of different dedications have caused confusion; in the 18th century antiquarians and writers assumed that there had been several different hospitals, one for each of the different dedications. However, the 19th century historians of Whitby, Young and Atkinson, both supposed that the dedications had all referred to a single hospital. The NYSMR records two hospitals, Hospital of St Michael (SMR 7464.00044) and another hospital (SMR 7464.00042). While there may have been two hospitals it is perhaps more likely that rededication occurred as the foundation passed between church and crown patronage.

Earlier documentary evidence refers to "the hospital at the bridge"; later references are more generally to "Whitby". While there was no evidence of the location of the hospital after 1274 there was an oral tradition that the hospital of St John the Baptist was on the foreshore by Spital Bridge, locating it where the hospital to St Michael was sited. Atkinson reconstructs the town in c.1540 and locates the hospital on the basis of ruined walls on the quay owned by William Skinner (Young, Vol 2, 365; Woods 1828) and appears to follow the ground plan of the 18th century sail loft currently on the site and is thus unlikely to reflect independent evidence of the hospital. The 1st edition Ordnance Survey map (1852) marks the site in the same general area, but it should be stressed that the specific location of the hospital is not known. Medieval hospitals often have an associated burial ground, therefore there is a possibility that both the structural remains of the hospital, and its associated burial ground may survive on the site.

Whitby, lying at the mouth of the River Esk is a natural harbour and boat building has a long history here, possibly dating from the medieval period. Initially the boats constructed on the mud flats between the Dock End and Larpool were relatively small. In the 16th century a succession of piers was constructed to encourage the river to erode a deeper channel. More comprehensive improvements to the harbour were made from 1720 onwards as new revenues, collected as a tax for landing coals at Newcastle were used for (among other projects at east coast ports) the rebuilding of Whitby's piers enabling bigger ships to be built and shipyards to develop. Progressively the tidal mud flats on the banks of the River Esk were reclaimed for new shipyards and during the 18th and 19th century the town's expansion was based on an increasing prosperity derived from fishing and shipbuilding. Shipbuilding was also stimulated by the development of the alum industry which required the shipping of large quantities of coal from the north eastern coalfields. There was also much work in the repair and maintenance of vessels and it was for this purpose that dry docks were constructed.

During the period from c.1697 to c.1735 five principal shipyards were established at Whitby and there were also numerous smaller boat building sites. The earliest yard dated from c.1697. It was first owned by Jarvis Coates and was located on land adjoining Bagdale Beck. The southern part of Coates shipyard was taken over by Henry Barrick, who first appears as a ship builder in the Whitby registers in 1786. Boat building continued in the southern part of this yard where there was one slipway and a dry dock until 1865 (Weatherill 1908, 26). A second shipyard was started by the eldest son of Jarvis Coates whose name first appears in the rate book in 1717 although his yard may have been working before that time. Thomas Fishburn took over the yard in c.1748 and bought it in 1759. He built Esk House as a residence and a dry dock at Boghall in 1757.

In c.1730 the Dock Company was formed at Whitby. The Company's yard was located on the east side of the river, extending from the foot of Green Lane to the opening called Boyes' Staith,

commonly known as "Abraham's Bossom". In 1734 the company built a double dry dock and later a single one. There were also shipbuilding slips at each end of the premises (Weatherill 1908, 29).

The fourth principal yard to be established was that of William Coulson in c.1735. This later became known as the Whitehall Shipyard and was located within the area of proposed development. The history of this yard is examined in more detail below. The fifth principal yard in Whitby was that established in c.1760 by William Simpson who began building a yard on the west side of the river, on land apparently gained from the harbour and built a dry dock there. In 1774 the *Diligence* was built at this yard and this was later Captain Cook's vessel the *Discovery*. Simpson's father had built a dock on the east side of the river near the house of Mr. Chapman in Church Street in c.1755 but the ground being spongy and could not be kept dry, it was abandoned and filled in, the materials being taken to construct the dock on the west side of the river (Weatherill 1908, 29). Excavation within Church Street car park revealed a sequence of stone waterfronts ending in the 18th century and included the construction of this short lived stone built dry dock which was seen to have been constructed almost parallel with the river (CBA 1998, 37).

In 1830 shipping was much depressed, partly due to a declining alum industry. Shipbuilding was unprofitable and the shipyard owners began to give up their business and sell their land to the railway companies. In 1836 a Railway Company bought the site of the second yard to have been formed which had been closed since 1830. This became the site of the terminus of the Whitby and Pickering railway and the building which had been Fishburn and Broderick's shipyard offices became the railway company's offices. By 1845 the railway company had obliterated all sign of the ship yard here although the dry dock was not filled in until 1902 and was held on lease by Turnbull and Son ship builders (Weatherill 1908, 27). In 1845 the York and North Midland Railway Co., having bought the railway from Whitby to Pickering extended their system to Whitby. They built a station and its approaches on the land previously occupied by the shipyard adjoining Bagdale Beck (Weatherill 1908, 26) The remaining part of the site of this yard was bought by the North Eastern Railway Company in 1865. At this time the dock was filled in and all signs of the shipyard were entirely removed (Weatherill 1908, 27). Soon after 1862 the North Eastern Railway Company bought the site of the fifth yard to have been established and filled in the dock there (Weatherill 1908, 29). The site of the third yard to have been formed came in to council ownership by the beginning of the 19th century and became the site of the Electricity Power Station (Weatherill 1908, 29).



Plate 2 . Whitehall Yard with Whitehall and the Mount in the background, 1864 (Long, 1974, 37)



Plate 3. Photo c. 1890 taken from Spital Vale, showing the roof of the ropery at Spital Bridge (CM 313)

3.1 WHITEHALL SHIPYARD

Wooler's Plan and Prospect of the Town and Harbour of Whitby, 1740 (Figure 2) shows a building on the site of the sail loft at Spital Bridge but the area to the south to be free of buildings and represented as open agricultural ground leading down to mud flats. William Coulson from Scarborough began a shipyard located above Spital Bridge which was later known as the Whitehall Shipyard and became the longest surviving shipyard in Whitby. William Coulson's arrival in Whitby is dated to c.1735 (White 1993, 68) although the establishment of the shipyard may post date Wooler's map of 1740 since while this map does depict the dry dock constructed in 1734 upstream from Spital Bridge it shows no indication of Coulson's yard to the south of the bridge. Weatherill's record of the history of the shipyards which is based on Young's history reports that there are no surviving records of vessels built at this yard prior to 1790 (1908, 29). Jones also found no record of the output of the yard under Coulson and follows Weatherill's account of the subsequent history of the ownership of the yard (1982, 25). Although there appear to be no records of boats produced by Coulson's yard his will, dated 1750, includes lists of material used in wooden boat building (White 1993, 68) which suggests that boats were likely to have been constructed at the yard while it was under the ownership of Coulson. The first ship builder's name recorded at this yard was Ingram Eskdale, later Eskdale, Smales and Cato, after which the yard was taken over by W. S. Chapman and Company and later by Robert Campion (Weatherill 1908, 29). Woods map (1826) (Figure 4) shows the "White Hall Yard" as owned by Robert Campion and the Messrs Campion name appears on the Pickernell map of the area dated 1841. In February 1842, J and W. Campion became bankrupt. In 1851 Thomas Turnbull and Sons became the owners of this property (Weatherill 1908, 29).

Weatherill states that a dry dock was built in the yard in 1818 by Robert Campion, though it was filled in at some unknown date (1908, 29) probably soon after the yard closed in 1902 and certainly before 1908 at the time Weatherill was writing. Woods map of 1826 (Figures 3 and 4) does not appear to show a dry dock but marks three small squares each with a line leading to the river. It does show several buildings including those built against the quarry face towards the south of the site. Pickernell's map, 1841 (Figure 5) shows the Whitehall dry dock and what appears to be clearly defined riverside quay walls. The buildings on the site are similar to those shown on Woods map in 1828 although there had been some alteration and extension. The 1st edition Ordnance Survey, 1852 (Figure 6) surveyed the dry dock in some detail, showing dock gates at its entrance and pumps to each side. Walls, steps and a crane base to the north of the dock are indicated and may relate to the excavated features in Trench 4 (see Figure 18). A building with a chimney is also shown on the 1852 map. Comparison of Woods map and the 1st edition OS map indicates that land was reclaimed from the tidal river mud flats specifically to enable the construction of the dry dock. This was one stage in a series of progressive reclamations of land for the shipyard. The site is described as Turnbull's Ship Yard on a map dated 1853 drawn up for the purpose of sale of land on west side of the river (Figure 7).

Thomas Turnbull had begun boat building a little further up the river from Whitehall at Larpool at one of the lesser yards by Weatherill's estimation (1908, 30) The yard had been established in 1800 by Jonathan Lacy who soon after, in 1803, gave it up. John Spence afterwards occupied this yard and vessels were registered in his name from 1819 until 1827. Thomas Turnbull built six ships at the yard at Larpool between 1840-1844 before he removed to Whitehall (Weatherill 1908, 30). Between 1851-1870 19 wooden ships were built at Whitehall by the Turnbolls (Browne 1946, 179-188) an average of about one vessel per year. These were wooden sailing

ships which were built for the Baltic ports, Quebec and more occasionally for Swedish ports (Long 1974, 43).

Long states that in 1865 the graving dock at Whitehall was successfully enlarged to accommodate bigger vessels (Long 1974, 51). The 2nd edition Ordnance Survey map, 1893 (Figure 9) shows a detailed survey of the dry dock, extending almost to the eastern edge of the site. Further significant developments are made to the shipyard in the 2nd half of the 19th century. The Whitby Gazette reported that *"the formation of a Patent Slipway, which is to be 500 feet long will allow two vessels to be hauled up together, quite dry. Pile driving has commenced and is being prosecuted at low water. The contract for the engine and the whole of the ironwork has been taken by the firm of John Abbott and Co. of Gateshead. The site chosen for the Slip is immediately above their present dock and is in every respect a suitable place, the water being good and deep at the foot."* (Long 1974, 51). An attempt to use the Slip to haul out a vessel was reported to have failed but later in the same year, 1866, the brig, the Veronica was successfully hauled out (Long 1974, 51). An undated map (NYRO ZW (M) 1/106) (Figure 8) shows the "Patent Slip", located in the position of the surviving slipway rails, with an engine house at its southern end. Buildings additional to those on the 1852 map are also marked.

In 1867 Thomas Turnbull was in failing health and transferred all the shares he held in sailing vessels to the management of his sons and he died later the same year (Long 1974, 53). Thomas Turnbull of The Mount took over the Yard and in c.1868 changed production from wooden sailing ships to iron steamers (Long 1974, 54). The last sailing boat was finally completed in 1870, which was the 25th vessel that the Turnbulls had built since commencing in business as shipbuilders at Larpool in 1840 (Long 1974, 56). In 1871 the first steam screw ship the SS Whitehall was launched at Whitehall. Long mentions that the Whitehall dockyard had to be converted for building iron steamers (1974, 57) but does not illuminate the detail of these changes. Browne states that *"significant alterations had to be made to the yard to allow for slipways of the required length, new plant was built for constructional work in iron"* (Browne 1946, 179-188) although it should be noted that the dry dock had been extended and a new Slipway had already been constructed during 1865. The 2nd edition Ordnance Survey map 1893 (Figure 9) shows a tramway running across the site additional buildings to both the 1852 (Figure 6) and the later undated map (Figure 8).

Ship building output at Whitby reached its peak in around 1884 (Jones 1988, 156). The Whitehall yard, at its peak, had employed 700-800 men and other trades and suppliers had also benefited and it was an important part of the local economy (Browne 1946, 179-188). The 1852 map shows specialised trades clustering around the shipyards. A ropery, a sail cloth manufactory, three sail lofts, three timber yards and a timber pond were all located close to the Whitehall Shipyard.

The Turnbulls blamed the downturn of profitable trading on cheaper production at the Sunderland and South Shields shipbuilding yards, but there had been a steady decline in ship building after the end of the Napoleonic Wars (Jones 1988, 100). The Whitehall Yard was the only yard in Whitby to follow the pattern of other, much larger, shipbuilding ports in the north east and on the Clyde, that of undertaking the conversion from the construction of wooden boats to those of iron and later steel. This allowed the Whitehall Yard to continue shipbuilding until the end of the 19th century. It was the logistical limitation of the swing bridge which ended the economic viability of the yard. Ships of up to 57000 tons could be built, but no larger ships could pass under the swing bridge and this limitation spelt the death knell for the yard (Browne 1946,

179-188). The Whitby Gazette reported in 1902 that Tunrball's had no more orders in hand (Jones 1988, 161) and the Whitehall Yard closed that year after the launching of the SS Broomfield (Browne 1946, 179-188).

There were few alterations to the site at the beginning of the 20th century. The Whitehall Shipyard appears on the 3rd edition Ordnance Survey map (1913) (Figure 10) similar to its depiction on the 2nd edition (1893) (Figure 9) except that by 1913 the dry dock had been filled in. It is unclear exactly when the feature was filled in, although by the time Weatherill writes in 1908, the dock has been filled in, possibly soon after the closing of the yard in 1902. Shipbuilding at the Whitehall Yard was temporarily revived during the First World War after 1917 when a small number of ferro-concrete vessels were built but there was no further revival of the yard and it became derelict (Browne 1946, 179-188).

The buildings on the site have been demolished and a levelling and resurfacing of the site has removed most of the above ground evidence of the shipyard. Evidence of riverside quays, slipways and of buildings at the quarry face has survived above ground and these are discussed in section 5. There is no documentary evidence of significant truncation of deposits on the site. An archaeological evaluation (NAA, 1998) which included the Whitehall shipyard site has indicated that below ground shipyard features may remain largely intact. The evaluation uncovered a possible timber lined dry dock together with concrete foundations of unspecified shipyard structures. These features survived between 1-2 m below ground. In addition a timber-lined drain which may have predated the shipyard was encountered and the evaluation suggested that reclamation deposits towards the river may overlies remains which predated the shipyard (NAA 1998A, 13).

3.2 AREA TO THE NORTH OF DOG LANE

Wooler's plan dated 1740 (Figure 2) shows a building on the site of the sail loft on the foreshore immediately upstream from Spital Bridge. This building and its relationship to those standing on the site are discussed more fully below (see section 12 and section 4, trench 5). Charlton's Plan of Whitby (1778) (Figure 25) extended as far as Spital Bridge and the ropewalk but did not show the area of the shipyard to the south. The 19th century maps all show the sail loft together with a separate building or buildings standing immediately to the west of it.

The development site to the north of Dog Lane does not appear to have formed a part of the Whitehall Shipyard. Woods map of 1826 (Figure 4) shows the area to the north of Dog Lane as owned separately by William Skinner whereas Robert Campion owned the Whitehall yard to the south. Pickernell's map of 1841 (Figure 5) marks Mr. Chapman's Quay to the north of Dog Lane. W.S Chapman had owned the Whitehall Ship yard prior to Robert Campion (Weatherill, 1908, 29). Nevertheless the Whitehall Ship Yard also appears to be clearly marked on this map in the area to the south of Dog Lane. The 1st edition Ordnance Survey map (1852) (Figure 6) marks the open area to the north of Dog Lane as a Timber Yard with a crane and a mooring post. The site continues as a timber yard and is annotated as such on the undated map (NYRO ZW(M) 1/106) (Figure 8), but likely to be c.1865 since it shows the patent slipway constructed in that year. By 1893 the 2nd edition Ordnance Survey (Figure 9) no longer annotates the site as a "Timber Yard" but the crane base and mooring post are still marked.