



**YORK ARCHAEOLOGICAL TRUST**



## **ARCHAEOLOGICAL INVESTIGATIONS AT LEISURE WORLD, BRIDLINGTON**

### ***ASSESSMENT REPORT***

Report Number 2014/34      October 2014



# YORK ARCHAEOLOGICAL TRUST

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## NON-TECHNICAL SUMMARY

Evaluation trenches dug in order to evaluate the site of Leisure World, Bridlington prior to rebuilding of the complex located the remains of Fort Hall, an 18<sup>th</sup> century house, in the south-east corner of the site. Consequently the entire footprint of the house was investigated and recorded, revealing evidence of the layout and construction history of the building. In addition the evaluation demonstrated that any archaeological deposits that might have occurred within the majority of the development site had been completely removed during the construction of the leisure centre in the 1930s.

## KEY PROJECT INFORMATION

Project Name	Leisure World, Bridlington
YAT Project No.	5782
Report status	Final
Type of Project	Evaluation and assessment
Client	BAM Construction Ltd, North-East
Planning Application No.	DC/13/02434/STPLF
NGR	TA 1872 6691
Museum Accession No.	ERYMS (BAG): 2014.30
OASIS Identifier	yorkarch1-193162
Author	K Hunter-Mann
Illustrations	B Antoni
Editor	D Aspden
Report Number and Date	2014/34 22 <sup>nd</sup> October 2014

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## 1 INTRODUCTION

An archaeological evaluation was carried out during demolition works at Leisure World, Bridlington on 27<sup>th</sup> and 30<sup>th</sup> May 2014, prior to the rebuilding of the leisure centre (NGR TA 18726691; Fig. 1). Following the evaluation, the archaeological works were completed by an excavation that took place during 6<sup>th</sup>-20<sup>th</sup> June 2014.

The fieldwork was carried out on behalf of BAM Construction Ltd, North-East for East Riding of Yorkshire Council. It was assigned YAT project number 5782 and the East Riding of Yorkshire Museum Service accession code ERYMS (BAG): 2014.30.

## 2 METHODOLOGY

The evaluation involved two trenches, Trenches 3-4 (Fig. 2). Initially, three evaluation trenches measuring 20m long by 2m wide (1-3) had been planned, but the excavation of Trench 3 and observation of the rest of the site under demolition showed that the original construction of the leisure centre in the 1930s had removed the natural deposits to a depth of about 1.5m across the site, and therefore any archaeological deposits that may have overlaid the natural deposits had also been entirely removed. It was therefore decided not to proceed with the other two initial evaluation trenches (1 and 2).

It became evident from documentary research that Fort Hall, a house recorded as being built in the late 18<sup>th</sup> century, once stood in the south-east corner of the site; and as the original leisure centre had not extended into this area, it was possible that remains of the house may have survived. An additional evaluation (Trench 4) was therefore dug in this part of the site to ascertain whether the house or any other archaeological features survived. This trench was 2m wide, and L-shaped and a little less than 20m long due to space constraints. Archaeological remains of a post-medieval brick building, consistent with Fort Hall, were identified in Trench 4. Consequently, during 6<sup>th</sup>-20<sup>th</sup> June, a topsoil strip was undertaken and the full extent of the building was investigated and recorded.

All trenches were excavated by machine down to the top of the archaeological deposits, at which point excavation was undertaken by hand. The archaeological features were planned at 1:20 or 1:50 and sections/elevations drawn at 1:10 or 1:20 as appropriate; measured sketches of some elevations were also made. A written record of all archaeological features was made either on individual context cards or in a discussion of each room. All archaeological features were photographed using colour reversal and black and white print film, and digital photography.

The changes in the evaluation strategy were agreed in advance with the Manager of Humber Archaeology Partnership. A written scheme of investigation was devised for the archaeological investigations, based on a specification prepared by the Humber Sites and Monuments Record Office. The written scheme of investigation was updated for the investigation and recording of Fort Hall.

### 3 LOCATION, GEOLOGY & TOPOGRAPHY

The site is located close to the centre of Bridlington, some 500m north-east of the harbour. It is bounded by Victoria Terrace overlooking the North Sea to the south-east, Fort Terrace to the south-west, Promenade to the north-west and York Road to the north-east.

The drift geology is Devensian Till (boulder clay), over Late Cretaceous chalk from the Flamborough Formation (British Geological Survey online viewer).

The area is generally low-lying and fairly level, at about 14.2m OD. South-east of the site the land falls steeply down to the sea shore.

### 4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

It is likely that the natural harbour attracted people to the area from the Roman period if not earlier, although the archaeological evidence for settlement is limited. Two Neolithic/Bronze Age bowl barrows known as Butt Hills lie 1km to the north-west of the site. The large ditch and bank known as Danes Dyke, on Flamborough Head, is thought to be Bronze Age in date. Roman and Greek coins have been found in the vicinity of the harbour and a Roman burial and coin hoard have been found in Bridlington (Brigham et al 2008, 35f).

The place-name is recorded as Bretlinton in Domesday Book and is probably derived from the Old English *Brehtelingtun*, meaning 'Berhtel's farmstead' (Smith 1970, 100-2). After the Norman Conquest, the manor was granted to Gilbert de Gant, and Walter de Gant founded an Augustinian priory in 1133. The priory was granted the right to have a port by King Stephen in about 1135, to hold a weekly market and an annual fair by King John, and to hold three annual fairs by Henry VI. The 'old town' developed around the priory, about 1.5km inland from the harbour, although it is likely there was some form of settlement at the harbour.

After the Dissolution of the monasteries, the land was held by the Crown until it was granted to Sir John Ramsey, Earl of Holderness in 1624. Sir George Ramsey sold the manor to the inhabitants of the town in 1633. In 1643 Queen Henrietta Maria landed at Bridlington with troops to support the Royalist cause during the English Civil War, before moving on to York.

A spring was discovered south of the harbour in 1738, and the spa attracted visitors to the town. The coastal area, known as Bridlington Quay, gradually became built up. The Old Town and the Quay have gradually merged into a single settlement over the last two hundred years.

There may have been a fort immediately south of the Leisure World site from medieval times, protecting the north side of the harbour, but certainly from 1656 there was a fort at that location, albeit abandoned and rebuilt on more than one occasion (Brigham et al 2008, 44). It is probably shown on a 1793 map of the Lordship of Bridlington, and is depicted on an early 19<sup>th</sup> century landscape painting by Lucy Foster (ERYMS:1993.442). It was damaged in a storm around 1813 and abandoned soon after.

Fort Hall was built in 1792 for John Walker, but it subsequently became the town house for the Greame family of Sewerby House. A plan of the Lordship of Bridlington, dated 1793, indicates that the Greames owned the plot of land on which the house was built, and that W

Savage (or Darage) was the tenant; evidently the map records the status of this property prior to the construction of the house. When Yarburgh Greame inherited the estate at Heslington Hall, York, Fort Hall was passed on to his brother, Henry G Yarburgh, who is recorded as resident at Fort Hall in 1823 (Baines 1823, 181). The family had assumed the Yarburgh name, which was the ancestral name of the owners of Heslington Hall. By 1840, Henry's sister Alicia Maria was resident, having married George Lloyd (White 1840, 373); whether this represents the handing over of Fort Hall or the entire Sewerby estate to a junior member of the family is not yet clear. Henry Boynton of Burton Agnes was also resident there at some point (Neave 2000, 143). The Lloyd-Greame family held the house until it was sold to Bridlington Corporation in 1934. However, they appear not to have been resident there for the latter part of this period, as Alfred Francis Bedwell (JP for the East Riding and Judge of the County Courts) is recorded in 1898 as having died there, as was Frank Bedwell in 1931, which suggests that the Bedwells were long-term tenants if not owners of the house from the later 19<sup>th</sup> century onwards. The hall was demolished when the Grand Pavilion was relocated to the site in 1937, although post-war OS maps erroneously show the hall as still standing.

The building appears on the early 19<sup>th</sup> century Foster painting and several photographs. It was built of brick, with a semi-basement and three floors above, with pairs of bayed windows on the first two floors on the north-west and south-east elevations; smaller bay windows are shown added to the third floor over the bays on the south-east side in a photograph of around 1930. A rounded entrance bay is indicated in the middle of the south-east elevation on the 1853 OS map; this appears to be the same as the single storey entrance shown on the c. 1910 photo. It was probably replaced by 1911 by a square entrance block (1911 OS map), which is shown on a photograph of around 1930 as being a three-storey block. Throughout most of the property was situated within gardens at the end of Esplanade and directly overlooked cliffs to the North Sea, as depicted in a c. 1840 lithograph and on the 1850s OS map. By the time of the 1891 OS map the south-west part of the garden had largely gone and the house fronted onto the newly established Fort Street; furthermore, the sea front had been developed and Esplanade now continued past the seaward side of the house.

## **5 RESULTS**

### **5.1 Evaluation Trenches 3-4.**

#### **5.1.1 Trench 3**

Trench 3 was situated towards the south of the development site and measured 20m long (south-east/north-west) by 2m wide. When the trench was excavated, the former leisure centre building had been removed by machine.

The earliest deposit encountered was compact mottled mid-dark grey and brown clay with moderate gravel-cobbles, in the south-eastern part of the trench. This clay deposit was interpreted as the natural boulder clay. The clay was overlain in the north-west part of the trench by orange to mod brown sands, gravelly sands, silty clays, clays and laminated clays which sloped down to the north. These deposits are regarded as late glacial outwash. Overall, these deposits formed the undisturbed natural (3001). The top of these deposits was at about 12.5m, although truncation during the leisure centre construction apparently removed the uppermost part.



Overlying the undisturbed natural deposits was mixed dark brown silty clay with moderate concrete and brick fragments (3000). It was some 1.7m thick and was the uppermost deposit in the trench. This deposit represents the leisure centre demolition.

### 5.1.2 Trench 4

Trench 4 was located in the south-east corner of the site. It measured 12m long (south-east/north-west) by 2m wide, and at the north-west end it returned for 7m to the north-east. Modern deposits some 0.3m thick had been removed in this part of the site prior to the excavation, so that the top of the trench was around 14.1m OD.

Occupying the lower part of the north-east return were interleaved soft orange sands with moderate manganese flecks, compact light brown clay, orange gravelly sand and light brown sand (4017). The top of these deposits was around 13.2m OD and they were at least 0.2m thick; they are interpreted as undisturbed natural deposits, probably of fluvio-glacial origin.

In the south-eastern part of the trench several brick walls were encountered, apparently representing the main north-west wall and several internal walls of a large building, interpreted as parts of the north-west external wall and internal walls of Fort Hall (4008-13). The tops of these walls were all around 13.3m OD. There was a discontinuity in the line of the external wall and a construction cut was identified alongside the south-west part, suggesting that this part of the wall (4009) had been added to the original wall (4010). Within this structure was a layer of crushed mortar with occasional brick fragments (4001) limited investigation showed that this deposit was at least 0.3m thick, and it is regarded as a demolition/backfill deposit.

Overlying the building and demolition deposit was compact dark brown clay silt with moderate yellow/orange silt flecks (4005) and a similar but mid brown deposit containing moderate brick and stone fragments. These layers seem to have formed a levelling deposit at least 0.8m thick, sealing the demolished building.

Overlying the natural deposits in the north-east return was a layer of chalk gravel over a terram base, which was about 0.5m thick (4022), which is thought to have been the base for a modern access road.

## 5.2 Main excavation Trench 5.

### 5.2.1 Introduction

Trench 5 extended Trench 4 in all directions in order to expose the footprint of the brick building. It was some 19m long (north-south) by 13m wide.

The earliest deposit encountered, beneath the base of the building, was compact dark brown clay at about 12.8m OD. Limited machine investigation indicated that this deposit was at least 1m thick. It is regarded as undisturbed natural boulder clay. Around the east side of the building was compact light brown sandy clay silt. It is likely that this is largely a soil overlying natural deposits, although the building construction and associated services has probably greatly disturbed the upper part of this deposit.

Three brick-lined wells were found beneath the building (Fig. 4). Two are thought to be associated with the building and are discussed below (see Rooms 6 and 10). The third (5025), towards the north-east corner, was a circular well at least 6.9m deep (down to at least 5.25m

OD). It was situated close to the fireplace in Room 5 and so almost certainly could not have been contemporary with the building. The lowest observable part of the well comprised headers on edge and with an internal diameter of about 0.7m. About 2m from the top it widened out in 4 stretcher courses, so that the well above was 1.3m in diameter internally. Although the brickwork was generally un-mortared, the uppermost 0.45m of the structure was formed by 6 courses of mortared brick corbelling and a sandstone slab cap; this is thought to be an alteration in order to support the floor of the later building.

It should be noted that a discontinuity in the build of the west wall between the two bays was identified in Trench 4, with the central part possibly being early and incorporating post-medieval brick (4010) and the wall to its west (4009) being built against it, but offset by one brick thickness to the south. Unusually this section of wall was four bricks thick. If these elements were all part of Fort Hall, the discontinuity can be explained either as a construction error or as a repair to the building. Another possibility is that 4010 was part of an earlier structure, perhaps a square housing over well 5026; a possible continuation of the north wall of Room 6 was observed beneath Room 2, so could represent the truncation of the wall to incorporate the well housing within Fort Hall.

A large, roughly rectangular cut was then dug, to accommodate the semi-basement level of a large brick built house. The cut measured 13.5m long (north-south) by 11.5m wide, and had vertical sides at least 1m deep, with the base of the cut around 12.2m OD. This feature was cut through the soil and into the boulder clay, and truncated well 5025. It was lined with mortared brick walls, three bricks wide (4009-10, 5014, 5028) that formed the exterior walls of the building. There were pairs of bays visible in the west and east walls. Internal brick walls formed several subdivisions (Fig 3, Rooms 1-11). This feature is thought to have been the semi-basement level of a large house, with bayed ranges to north and south of a central range.

The original floor of the building was probably flat-laid brick, with an underlying course of half-bricks and brick fragments. Most of the rooms had traces of sandstone slab flooring that had largely been removed, presumably during demolition of the building; the slab flooring had a sandy bedding and had probably been added to the brick floor perhaps to minimise damp. Rooms 1 and 5 and part of Room 6 had been re-floored in concrete on a gravelly sand bed, after the brick (and perhaps stone) floor had been removed. A small brick-lined drain with slate capping was observed running the length of Room 2, apparently commencing at the centre of Room 10 (presumably with a grate in the floor above). Short lengths of similar drains were noted in Rooms 1, 3, 4 and 10, including one apparently acting as an overflow from well 5002; these drains seem to have been intended to conduct waste water away to the north, presumably out of the building into a brick culvert that was observed adjacent to the building running down to the sea. Parts of the drain were built of glazed ceramic pipe, perhaps representing repairs of the original brick lining. The original brick-lined drain opening in the centre of Room 10 was apparently replaced with a salt glazed ceramic pan immediately to the west (not in situ).

Two brick-lined wells are thought to have been extant whilst the basement was in use. The well in Room 10 was circular, 1.3m in diameter and at least 1.7m deep (5002). Extending from the well to the north was a shallow brick-lined drain with slate capping, which is interpreted as an overflow outlet that connected with the drain in Room 2. The well in Room 6 was roughly

square (1.45 by 1.3m internally) and was built with single brick thick walls; the drain running through Room 2 apparently respected it. This well was situated in the centre of Room 6 (probably a stair well) and lies partly within Room 2 (a corridor) and seems to have been covered with sandstone slabs, which implies that there was some form of internal structure that supported the slabs, as indicated by a single brick thick wall observed about 0.3m from the north-east side of the well. A facet in one of the slabs suggests there was a fixture attached to the floor, perhaps a pump. The covering over the western quadrant of the well was reinforced at some point with a layer of concrete.

An opening in the north wall at the end of Room 2 is thought to have been an original external entrance into the basement, probably down a single flight of steps leading directly down from the west to a sandstone slab base (Room 12); a grate in the base presumably took rainwater into the drain running north from Room 2. Set a little away from the north-east side of the house were two brick-lined chambers, both with walls two bricks thick. One was 1.55m square internally (Room 14); to its south-east was a rectangular chamber measuring 2.1m long (south-west/north-east) by 1.2m internally with a 0.35m-wide recess at the north-east end. (Room 15). The latter structure was bonded with extremely hard pink mortar. Rooms 14 and 15 are interpreted as cess pits.

Subsequently, the entrance way was extended to the north in the form of a parallel room (Room 13) - probably another flight of steps, as an external threshold was built at the north-west end of the extension. This construction butted against Room 15 but encroached on the footprint of Room 14 by some 0.2m, requiring the complete removal of the original south-west wall. The slab surface in Room 12 immediately outside the doorway, at the foot of the steps, was resurfaced with a concrete skim.

Several alterations to the original basement room layout were noted. A single brick wall subdivided the north-east part of Room 2, creating Room 1 in the process. Room 8 was subdivided with a single brick thick wall and its south-west and north-east walls were knocked through at their south-east ends, thus forming a corridor (Room 9) connecting Rooms 5 and 11. At least two alterations of the partition wall separating Rooms 10 and 11 took place.

Outside the building along the middle of the south-east side and so set into the external ground surface, between the two bays of the main structure, were two brick features that extended from the wall of the building and returned towards each other, almost forming a central bay but terminating 1.2m apart. Overall this feature measured 3.7m wide and projected a maximum of 0.8m from the building. It is interpreted as the base of an entrance bay.

A number of minor external features were noted, largely associated with drainage. A small concrete surface with grate outside the west bay of the south range appears to have taken surface water away from the building. A small brick lined feature adjacent to the east bay of that range is thought to have taken waste water from the scullery (see Room 11 below). Two small brick and concrete bases alongside the north wall of the building, adjacent to Rooms 3 and 5; and one against the east wall of Room 15 may have been the bases for downpipes from the roof. Several glazed ceramic pipes adjacent to the building would also have been involved in the management of foul and surface water.

### 5.2.2 *Room-by-room description*

#### **Room 1**

North range, west side, maximum dimensions 4.4x2.5m. It was connected to Room 2 by a central doorway in the east wall. Previously it formed part of a large space with Room 2 prior to the insertion of brick partition 5003. There was a bay window on the west side, with a wooden sill in the centre of the bay indicating the width of the window. There was a fireplace in the south wall, of brick with stone facing to the sides, probably inserted into the wall (5008); it was replaced by a larger fireplace with firebrick surround and stone projecting jambs (5006), probably in the later 19<sup>th</sup> century. The walls had a mortar coating with plaster skim, overlaid by several coats of limewash and finally a green-blue coat of paint; the external wall and the wall between the fireplace and external wall had an overlying concrete skim. The concrete skim floor presumably overlaid earlier brick and stone slab floors (unobserved).

Fixings in the partition wall are thought to represent a sink adjacent to the doorway, with a waste pipe falling to the north, where a hole in the north wall would have allowed the waste water to flow along a channel into a drain in Room 12 (see below). Nail holes and scars paintwork indicate a shelf in the northern half of the bay and along the north wall.

#### **Room 2**

North range, east of Room 1. 8m long (north-south) by 1.1m wide, extending from the external north door to Room 10. Part of the same space as Room 6, and of Room 1 prior to the latter's partition. The sandstone slab floor overlaid a layer of flat-laid brick. There was a plaster skim over mortar, painted yellow. A shallow brick-lined drain with slate capping ran down the middle of the room (5005); in places, the drain lining had been rebuilt using hard pink mortar or had been replaced with a salt-glazed ceramic pipe, suggesting at least two repairs.

#### **Room 3**

North range, east of Room 2. This was a small room, 2.2x2.3m maximum, with a doorway in the centre of the west wall, and a wooden window sill in the centre of the north (external) wall. It had a sandstone slab floor; part of a brick lined drain with slate capping was observed running west to connect with the drain in Room 2. The limewashed mortar walls had a patchy concrete skim. Scars in the floor and on the north wall indicate the position of brick wall supports for a work surface below the window. This feature continued eastwards clockwise round the room as far as the south side of the doorway, presumably as a shelf of more than one build, in the form of scars in the paintwork and a recess in the mortar, with at least two voids for timber supports.

#### **Room 4**

South of Room 3. Another small room, 2.2x1.75m, with doorways in the west and east walls. The sandstone slab floor was over bricks, with a probable brick-lined drain that presumably connected with the drain in Room 2 to the west. There was a mortar coat overlaid with limewash on the walls, with traces of green paint over. A brick base (5009) and a parallel mortar scar in the floor indicate a low shelf on the north side of the room. A timber strip in the thickness of the wall on the north side of the west door relates to a door frame). A door frame

in the east doorway is indicated by voids in the concrete floor that extended into the doorway from Room 5. The south part of the east wall appears to have been removed subsequently, so that the room was almost completely open to Room 5; this wall is not on the same alignment as the wall to its south, nor is it bonded to it, but the reason for this is unclear.

### **Room 5**

North range, east side. A large room with a bay window, 4.55x3.55m maximum. There were doorways in the west and south walls. There was no evidence for windows as the walls survived to a height of only about 0.8m. There was a concrete floor, presumably a skim over sandstone slabs. There was a mortar coat overlaid with limewash, with a concrete skim on the walls, painted red. There was no concrete skirting. The fireplace, 1.3m wide in middle of the west wall, (5015) is probably original, with an alcove on the north side and alcove/doorway on the south side (see Room 4). Voids in the concrete floor to either side of the fireplace indicate a stone decorative surround. The flue was off centre and extended west through the thickness of the wall separating Rooms 3 and 4, indicating that it connected with a main flue above. That wall was five bricks thick (0.62m wide) and almost certainly supported a chimney stack. A 0.13m-square void in the thickness of the external wall towards the centre of the bay is of uncertain function. There was a lead pipe with a diameter of 35mm in the external wall, 0.88m from south end of bay, above several fittings, indicating a sink. Various iron nails at either side of the alcove north of the fireplace may represent at least three shelves, or individual fittings.

### **Room 6**

Central range, west side, measuring 2.55x1.7m. It was not separated from Room 2 and probably formed part of the same working area, as the square well with brick lining two bricks thick (5026) lay in the centre of that area. This also suggests that the well formed part of the original layout of the building. Drain 5005 apparently respected the well, although this could mean the well was earlier than the house but was retained when the house was built. At least one east-west brick wall within the well seems to have supported the slab floor over the well. A cutaway in one slab suggests a fixture, perhaps a pump. The walls had a plaster skim on a mortar surface. The southern part of the room was sealed with a concrete skim and the floor was about 0.15m lower than the northern part. Green paint overlaid the plaster in the south half of the room and in the upper east part of the north wall. There were two horizontal recesses in the north wall and various voids in the north wall and the north half of the west wall. There was clearly some form of division between the north and south parts of the room, perhaps indicating the position of stairs for servants to access the upper floors, with a cupboard or shelving below.

### **Room 7**

In the middle of the central range, 2.8x2.1m. There were doorways in the middle of the west wall and at south end of the east wall. There was also a 0.45m-wide opening in the north wall 0.55m above floor level. The stone slab floor with sand and mortar bedding was over flat laid bricks (245x115mm, 95/8x4 1/2" maximum) laid in east-west rows, no bedding. The east and north walls were three bricks thick, and the east and south (5013) walls two thick, stretcher laid; the bricks measured 240x120x60mm. There was a white plaster skim on the mortared walls. There was pale green paint on the plaster in the north-west corner.

The bricks forming the base of the opening in the north wall were headers laid on edge and were coated in sooty coal dust. This staining was also visible on the brick floor in the north part of the room and behind the plaster face of the east wall. A mortar scar some 175mm wide which ran from the west doorway diagonally to the middle of the north wall; north-west of this scar the staining is absent, indicating some form of subdivision in the north-west corner. Midway along the mortar scar was an offshoot that ran west to the west wall; two slots about 150x50mm in the wall at this point, 0.1m and 1.0m above the floor, appear to have been part of this feature.

There were two nails 0.55m from east end of the south wall and 0.68m above floor level; below the nails the east end of the wall was not plastered, suggesting a low-level cupboard in the south-east corner of the room. A nail in the east wall, 0.5m from south end and 0.8m above floor level, is of unknown function.

### **Room 8**

Central range, east of Room 7, 2.7x1.65m in its final form. The stone slab floor with sand/mortar bed was over flat laid bricks laid in east-west rows. The surviving slabs were painted red. The south wall was three bricks thick, the west and north wall two bricks thick, and the bricks measure about 230x110x70mm. There was a mortar render with plaster skim. Vertical gaps in the render in middle of west doorway and south end of south doorway were evidently for timber door frames; wood in recesses to either side about 0.3m above floor level would have attached the doorframe to the walls.

This room was probably not a work space originally, as it seems to have primarily connected Rooms 5, 7 and 11 through four doorways. Subsequently a single brick thick north-south partition wall with light grey cement mortar divided the space into two (5012; see Room 9 below). At some point the west wall was thickened with a single brick thick wall (5011), which probably returned east at the north end to block up the western of the two northern doorways in this space. This blocking appears to have been removed and then re-instated (5010).

Iron nail/fittings in the north, east and south walls and a scar in the south wall 0.63m above the floor indicate a shelf running the length of the east wall. Various iron fittings towards the base of the south wall.

### **Room 9**

Central range, east side, 3.45x1.15m maximum. This room was created by subdividing Room 8 with a partition wall (see 5011 above). The north doorway was original, but the south doorway into Room 11 was created by knocking through the south wall. The stone slab floor rested on a coarse sand and gravel bed. The concrete floor in Room 5 to the north extended about 0.5m into this space. The east wall had mortar facing with plaster skim, painted pale green. A vertical gap in the render indicated the position of a doorframe towards the north side of the north doorway. The plastered mortar walls had a skirting on the west wall; the skirting was painted pale green, the wall was painted off white/yellow.

## Room 10

South range, west room, 6.5x4.65m maximum. There was a bay on the west side, a doorway in the middle of the north wall originally, and later doorways had been inserted in the east wall north of the chimney and perhaps south of the chimney. The stone slab floor had a mortar and ash bedding; the slabs in the bay were painted red. Beneath the bedding was a layer of flat laid bricks measuring 240x115x55mm and laid in east-west rows (5007) on a mortar bed, and beneath that was another layer of bricks laid in north-south rows and including many half bricks, set in a very coarse lime mortar about 35mm thick. A square void in the brick bed towards the centre of the room is thought to have accommodated a grate and was connected with a shallow brick-lined drain running north into Room 2. This appears to have been superseded by a pink mortar setting, presumably for another grate, immediately to the west. An unglazed convex ceramic drain towards the middle of the bay sloped down to the north-east, presumably to connect with the drain in Room 2.

In the western part of the room a circular brick lined well was found (5002); it was at least 1.7m deep, built of headers with occasional tile fillers and unbonded. Diameter 0.4m at the top, widening to at least 1m. It was probably capped with a stone slab (disturbed when found). A shallow brick-lined drain with slate capping ran for at least 1m north from the well, forming another element of the under-floor drainage. There were traces of a drain running to the well from the south-west corner of the room.

Forming the east limit of the room was a single brick thick wall (5017). The wall north of the chimney had been knocked through to form a doorway into Room 11. A vertical offset in the north wall of the room 0.65m from wall 5017 indicates a structure north of the chimney, probably a cupboard; two nails, one in the north wall and one in the east wall, 0.91m above floor level, indicate a shelf within this cupboard. Standing along the west side of the wall was a large brick fireplace with two flues (5018). This fireplace appears to have been constructed within two existing side walls, both two bricks wide (5019). The bricks in the southern side wall were darker than the red brick in wall 5017, and appeared to have been a fireplace rebuild that had been keyed into the south part of 5017.

The walls had a plastered mortar facing, with the south wall painted light blue and the north wall olive green. However a 2.1m long part of the south wall had not been painted blue, suggesting that structure was fixed to the wall at this point. The north and south walls also had a plaster skirting 160mm high, although the bay did not. The skirting overlaid the stone slab floor. The skirting also terminated at its east end on the south wall flush with the front of the fireplace, suggesting that there had been a cupboard on the south side of the fireplace; however the blue paint continued east beyond this point, suggesting that the cupboard post-dated the painting but preceded the plaster skirting.

## Room 11

South range, east room, 4.0x4.7m maximum, with a bay window in the east wall. There were doorways in the west wall into Room 10 and in the north wall into Rooms 8 and 9. The stone slab floor was over a layer of bricks, flat laid in east-west rows (5020), except a single north-south row against the party wall north of the chimney. There were plastered mortar walls, including the fireplace surround, with a pale green paint over, and a patchy cement skim over

that. There was a cement skirting on all walls and up to the brick supports for the sink in the bay (see below).

A fireplace (5016) with single flue was built against the party wall with Room 10 (5017), although the central flue cut through the wall to gain access to the Room 10 chimney central flue. The bricks measured 230x110x70mm, and some were frogged; they were bonded with hard light grey cement mortar, indicating a later 19<sup>th</sup> century or early 20<sup>th</sup> century date. It is likely that there was not a fireplace here originally. In front of the fireplace was a concrete hearth with small glazed tiles measuring 153x78x8mm.

Part of a stone work surface lay in the centre of the bay 0.84m above floor level, presumably below a window; there were shallow oval recesses measuring around 150x100mm to either side, perhaps for soap and a lead pipe ran from the wall and west across the work surface. Another lead pipe to the south of the work surface ran south-east through the external wall about 0.5m above floor level, apparently leading to an external drain alongside the bay wall; the lead pipe had been laid in a channel hacked through the wall. Brick walls extending west 0.8m from the bay wall and 1.1m apart (partly visible as mortar impressions on the floor), the north wall two bricks thick, south one brick thick, appear to have supported a structure in front of the work surface – probably a sink, with the lead pipes providing water supply and waste outlet.

## **Room 12**

External, at the west end of the north side, 2.8m long (east-west) by 1.2m maximum. The doorway on the south side was the entrance to the basement. It is likely that originally steps led straight down from the west to the basement entrance; the position of the bottom three steps – presumably stone (removed) - are shown as bare brick in the south wall, whereas the exposed wall above has a cement skim; the face of the south wall (the north wall of the house) and the upper part of the west wall appear to have been rebuilt with early/mid 19<sup>th</sup> century bricks, perhaps during the remodelling of the entranceway (see below). The north (5021), west (5022) and east walls were two bricks thick. The bricks in wall 5021 measured 240x60mm and were slop moulded, indicating a late 18<sup>th</sup> century date; the base of the wall stepped up twice at the surviving west end, suggesting that the steps leading down to the basement entrance had been set into the full thickness of the wall; and the north side of the wall was not pointed, indicating that it was built against the side of the entrance cut originally. The walls at the north-east corner were one brick thick, apparently to accommodate the existing Room 15.

East of the bottom step, the floor was stone slabs with a cement skim; a ceramic seating for a grate towards the north-east corner would have taken rainwater away, probably to a brick sewer observed running east down to the sea about 1m north of the house. A shallow channel in the concrete, running from the south-west corner to the grate, appears to have taken waste water from the postulated sink outlet in Room 1 (see above), the hole through the wall from Room 1 opening on to the top of the first step.

Subsequently the steps were remodelled by moving the top of the steps to the north (see Room 13). The west end of the north wall was removed to accommodate a flight of steps that led down from the north before turning east to the basement entrance; the fair face to the



reduced end of the north wall and the refaced north side of the wall used slop-moulded bricks measuring 240x120x75mm, suggestive of an early/mid 19<sup>th</sup> century date.

### **Room 13**

An external space on the north side of Room 12, 2.8m long (east-west) by 1m. The south wall was the north wall of Room 12, Room 15 formed the east limit and the remodelled south wall of Room 14 (5023) formed the north side (see Room 14). A shallow, double brick thick wall filled the gap between Rooms 14 and 15. The west wall extended to only about 0.8m below ground level. To its west, at ground level, was the stone threshold to the flight of steps, set in a brick surround.

It is thought that the flight of steps down to the basement entrance were made less steep by moving the threshold north, so that the steps turned south and then east before resuming the original layout in the bottom three steps (see Room 12). This alteration may also have formed a covered route from the basement to the outside cess pit/toilet Room 14.

### **Room 14**

An external structure on the north side of Room 13, 1.55m (east-west) by 1.6m maximum. The base lay at 12.43m OD. Originally it was a roughly square structure, with brick walls two bricks thick, the bricks laid as stretchers and measuring about 230x110x60mm; and presumably it had a brick base. At some point after its construction, the south wall was removed and a new one built immediately to its north (5023), reducing the width of the structure by 0.25m. Subsequently the wall and base were covered with a cement skim.

This structure is interpreted as a cess pit, originally of bare brick but later lined with cement. A glazed ceramic pipe immediately to the west indicates that it was ultimately infilled and converted into a flushing toilet.

### **Room 15**

Another external structure, adjacent to and east of Room 13 and, internally 2.1m long (north-south) by 1.2m, with a recess in the west side of the north wall 0.4m long by 0.35m wide. Walls are two bricks thick (5024), stretcher bond with a brick base; bonded with a very hard pale pink mortar with frequent crushed brick inclusions.

This structure is also interpreted as a cess pit, specifically a privy ash pit; the recess almost certainly enabled ashes to be dumped into the pit.

## **6 GENERAL CONCLUSIONS**

The excavation of Trench 3 and the general monitoring of the groundworks confirmed that any archaeological deposits that may have lain within the footprint of the former leisure centre would have been removed by the construction cut for the building, which generally extended down some 1.5m into the natural boulder clay.

However, Trenches 4 and 5 demonstrated that the below-ground structure of the 18<sup>th</sup>-century Fort Hall remained largely intact in the south-east corner of the site. This would have been a semi-basement level, as shown on photographs of the building. Originally this would have been the service range for the house, including the kitchen, scullery, and probably a larder and

coal store. The bases of two adjacent cess pits were also identified. The arrangement of service level basement, with two floors of rooms above it and the servants quarters above that, developed during the 18<sup>th</sup> century. A very similar arrangement can be seen in the extant Judges Lodgings, York (RCHME, 1980, 153).

An initial examination of the pictorial and photographic evidence shows the house with a single pile east-west roof over the south range, and a double-pile north-south roof over the central and north ranges. A brick stack is shown in the south range, indicating the probable kitchen fireplaces in the south range were at the base of a main chimney stack. Another chimney stack is shown in the northern part of the building, and although it seems there were no fireplaces in that stack in the basement it is likely that the fireplace in Room 5 was connected to the stack. The thickest wall in the basement, east-west between Rooms 3 and 4, would be a good candidate for the core of the northern stack, although the pictorial evidence suggests that stack was aligned north-south. The flue arrangement for the fireplace in Room 1 is not clear.

There was evidence for many alterations to the structure during its use. The brick floors could have formed the original surface, with the stone floor added later; or the brick floor could have been a bedding for the stone floor. Certainly the cement flooring was a later addition. The evidence that the plastering in Room 11 post-dated the added fireplace could mean that the basement walls were all bare brick to begin with. There then seems to have been an episode of painting the walls and parts of some floors, along with some walls being given a cement skim. Brick partitions were added and doorways infilled in some places, but walls were removed in others, indicating many changes to the layout and to the means of moving around the basement. The cement skims on the floors and walls of Rooms 1 and 5, evidently to reduce dampness in these rooms, is thought to show that these rooms were used as living quarters by this stage; both rooms also had fireplaces, one being an addition to the buildings. Furthermore, Room 1 was created by partitioning off part of a larger space, apparently to form a small bedroom. However, it is not yet clear whether these changes can be assigned to the use of the building as the town house for the Greame family, or whether they represent modifications to the house when it was subdivided into apartments.

It is assumed that the two cess pits north of the house were in use at the same time, perhaps with Room 14 used by the servants and Room 15 for the owners. Ceramic pipes indicate that Room 14 at least was converted to flushing toilets by the turn of the 20<sup>th</sup> century.

Well 5025 is thought to pre-date Fort Hall. Dating of the bricks suggests it was constructed during the 16<sup>th</sup>-18<sup>th</sup> centuries. It could have served a documented building (possibly a chapel) at the Promenade end of this piece of land, prior to the creation of the Fort Hall property.

### **Recommendations**

Fort Hall is a good example of the mansions that were built in Bridlington during its heyday as a spa and as a retreat for the wealthy and local gentry. The archaeological evidence shows that it was a major building, housing wealthy residents with servants, with a basement service floor.

Numerous plans, paintings and photographs of Fort Hall are known to exist, and there is also considerable potential for documentary evidence to elucidate the status of the building, the lives of its inhabitants, the layout of the building and the changes made to it.

The archaeological, visual and documentary evidence brought together would form a good article in a local archaeological journal.

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## FIGURES

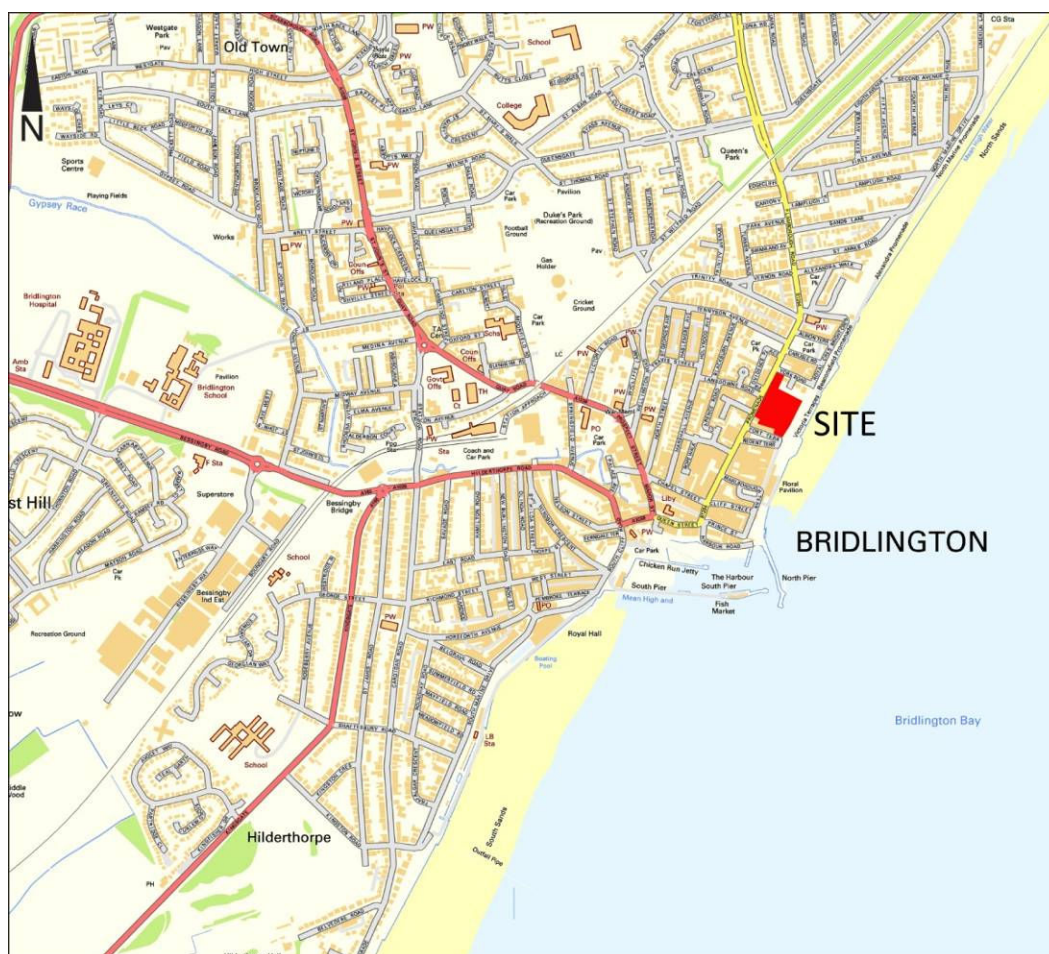


Figure 1 Site location

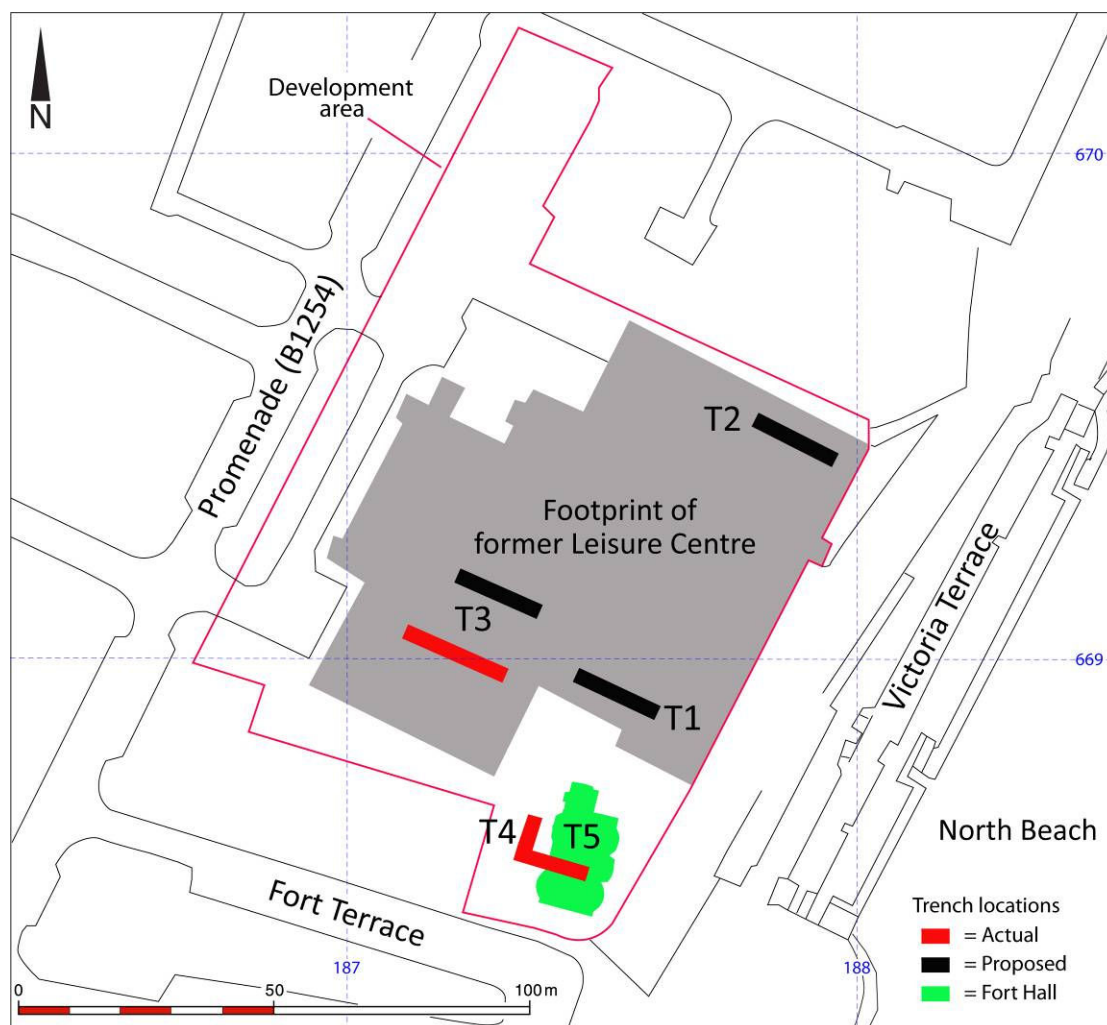


Figure 2 Trench location

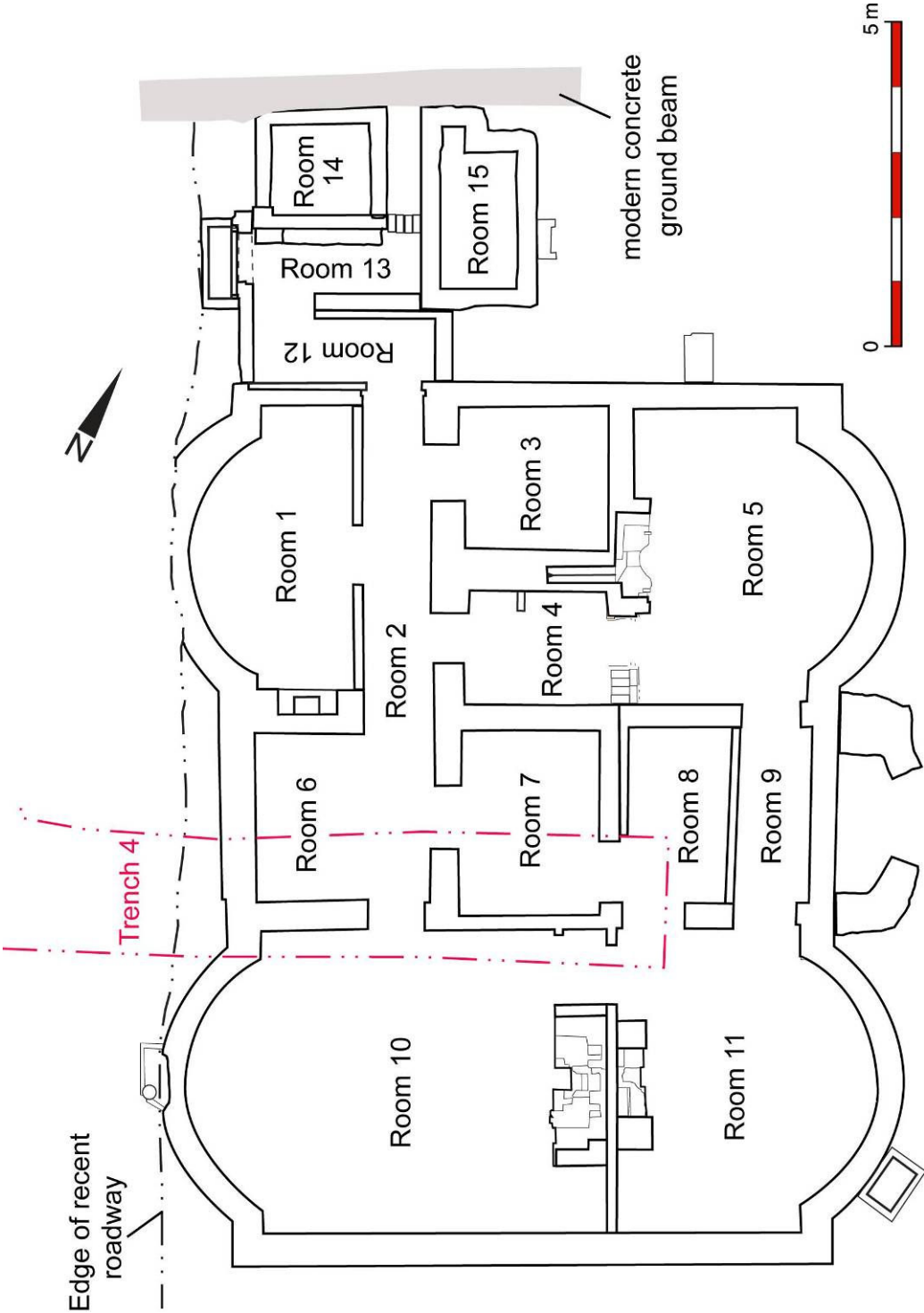


Figure 3 Fort Hall basement room layout

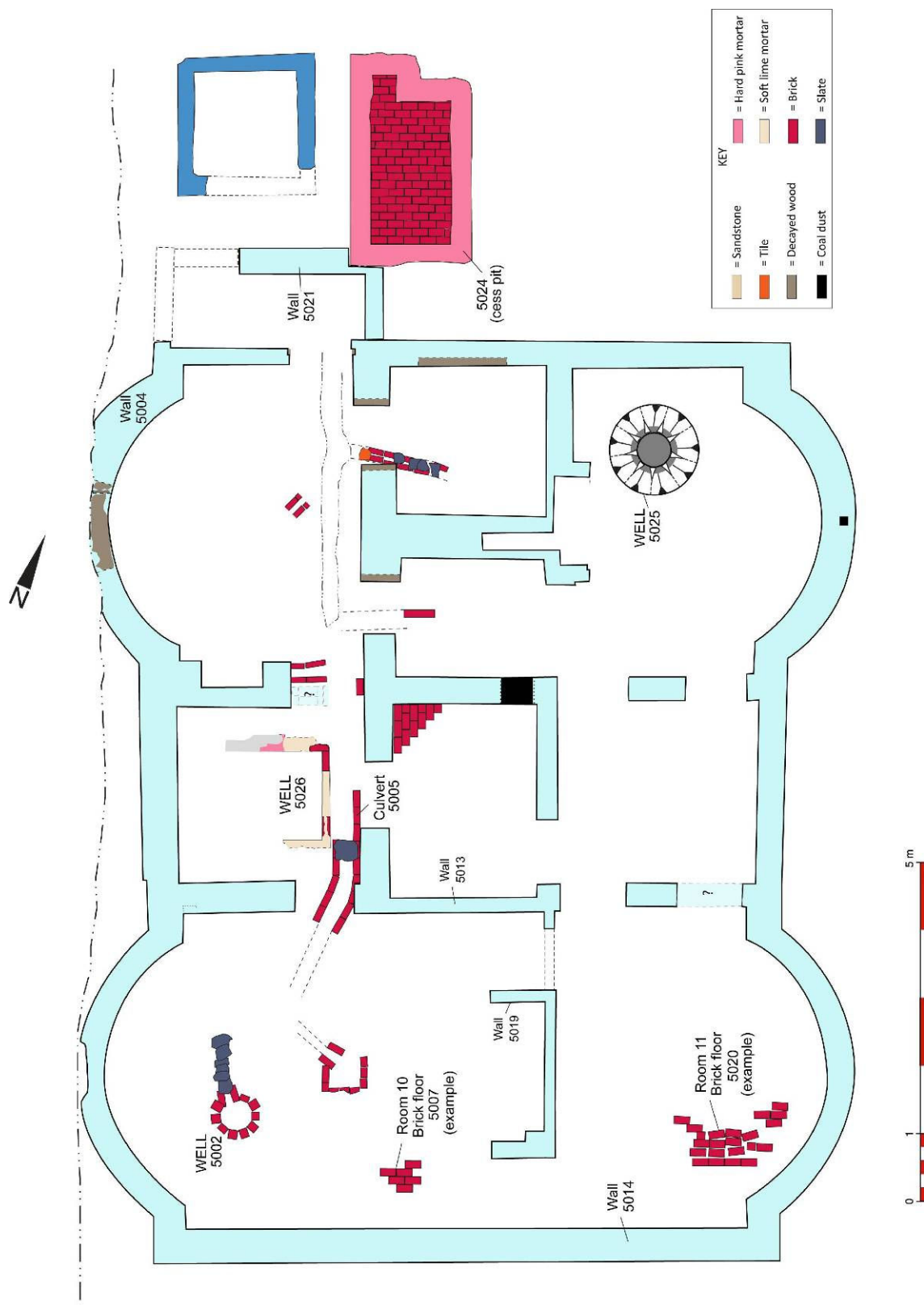


Figure 4 Fort Hall: early features



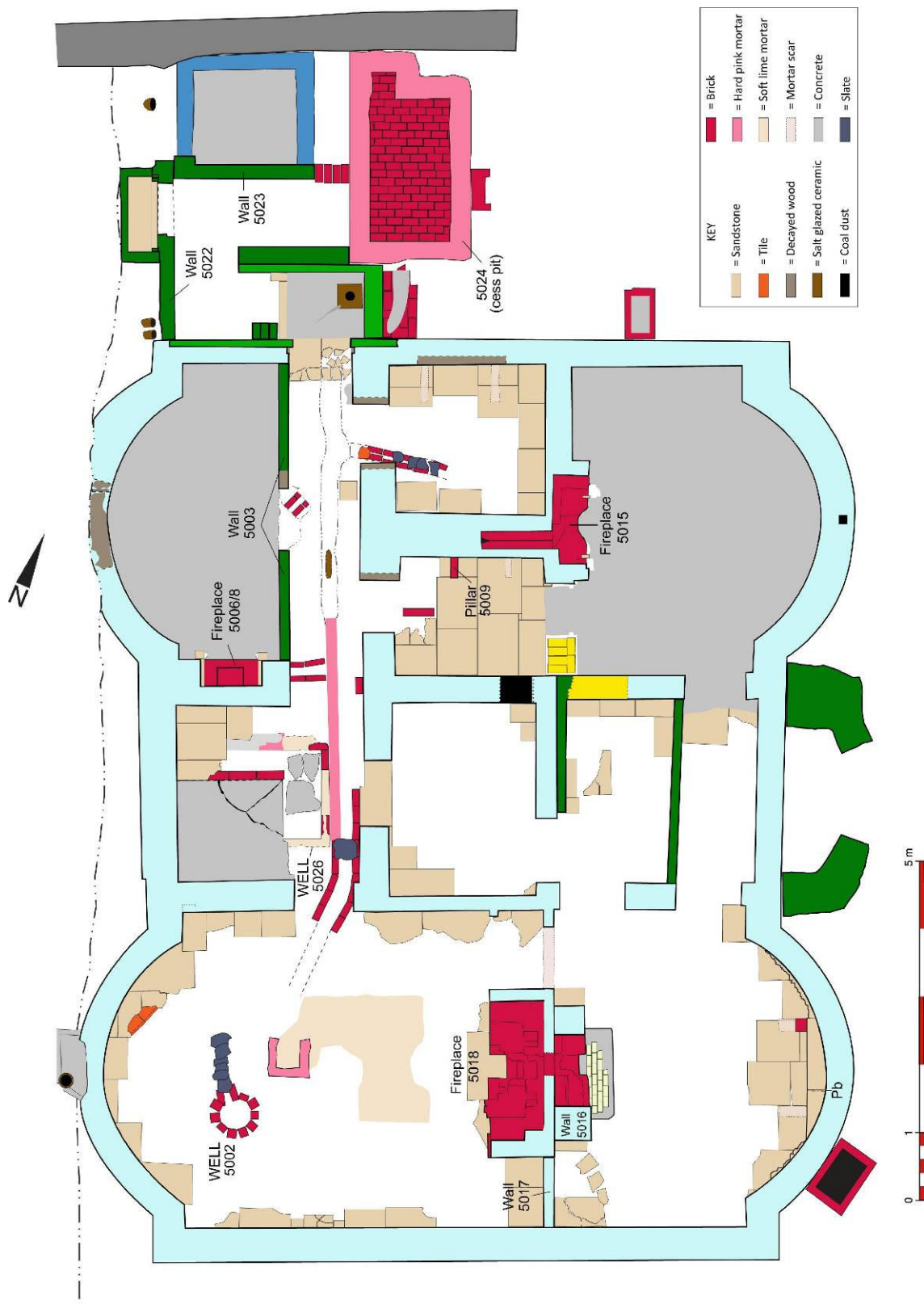


Figure 5 Fort Hall: later features



## PLATES



Plate 1 Well 5025, looks north-west



Plate 2 General view of basement, looks north-east





Plate 3 Room 1 fireplace





Plate 4 Room2 looking north





Plate 5 Room 3 looks south-west



Plate 6 Room 4, north wall





Plate 7 Room 5 looks south-west



Plate 8 Room 8 looks north





Plate 9 Room 10 looks east, with external drain in foreground



Plate 10 Room 10 fireplace 5016/5018 looks east





Plate 11 Room 11 looks south-west



Plate 12 Room 11 fireplace 5016 looks west





Plate 13 Room 11 work surface in bay window, looks east





Plate 14 Room 12 looks east





Plate 15 Room 14 cess pit (bottom left), Rooms 12-13 entrance to basement (centre), Room 1 (top right), looks south-east



Plate 16 Room 15 looks north





Plate 17 entrance bay foundations, looks west

**APPENDIX 1 – INDEX TO ARCHIVE**

Item	Number of items
Context sheets	65
Levels register	6
Photographic register	5
Levels register	
Drawing register	0
Original drawings	8
B/W photographs (films/contact sheets)	2
Colour slides (films)	2
Digital photographs	100
Written Scheme of Investigation	1
Report	1

**Table 1 Index to archive**

**APPENDIX 2 – CONTEXT LIST**

Trench	Context no.	Description
3	3000	Concrete structure
3	3001	Undisturbed natural
4	4000	unstratified
4	4001	demolition
4	4002	levelling
4	4003	levelling
4	4004	levelling
4	4005	levelling
4	4006	Levelling
4	4007	Levelling
4	4008	Brick wall
4	4009	Brick wall
4	4010	Brick wall
4	4011	Brick wall
4	4012	Brick wall
4	4013	Construction cut backfill
4	4014	Construction cut
4	4015	Backfill
4	4016	Unknown cut
4	4017	Undisturbed natural
4	4018	Drain backfill
4	4019	Drain cut
4	4020	Backfill
4	4021	Wheel rut
4	4022	Road
5	5000	Unstratified
5	5001	Demolition/backfill

5	5002	Brick well
5	5003	Brick wall
5	5004	Brick wall
5	5005	Culvert
5	5006	Fireplace
5	5007	Floor
5	5008	Fireplace
5	5009	Brick wall
5	5010	Brick wall
5	5011	Brick wall
5	5012	Brick wall
5	5013	Brick wall
5	5014	Brick wall
5	5015	Fireplace
5	5016	Fireplace
5	5017	Brick wall
5	5018	Fireplace
5	5019	Brick wall
5	5020	Brick floor
5	5021	Brick wall
5	5022	Brick wall
5	5023	Brick wall
5	5024	Brick wall
5	5025	Well
5	5026	Well
5	5027	Well 5026 backfill
5	5028	Brick wall
5	5029	Rooms 1-2
5	5030	Room 3
5	5031	Room 4
5	5032	Room 5

5	5033	Room 6
5	5034	Room 7
5	5035	Room 9
5	5036	Room 10
5	5037	Room 11
5	5038	Room 12
5	5039	Room 13
5	5040	Room 8

**Table 2 Context list**

## APPENDIX 3: POTTERY ASSESSMENT

### (A JENNER)

#### Introduction

Thirty-six sherds, from one Context [5001] , consist of mainly 19<sup>th</sup>/20<sup>th</sup> century domestic ware retrieved from excavations at the above site (see Table 1). The assemblage includes a large amount of sanitary ware toilet parts, one of which bears a legend in a scroll. The legend begins with the letters 'TR'. Chamber pots and/or wash basins, some with urine stains, jars and bowls and a jar lid were also present. One ointment jar was probably for gout, rheumatism and various sore body parts (see discussion and image below).

Much of this material may have come from the clearance of an outside or inside toilet, though the jars may have been used within the home.

#### Discussion

The small ointment jar has part of the legend [HOLLOWAYS OINTMENT] 'FOR THE [ CURE OF INVETERATE ULCERS] Bad legs [sore breasts and sore heads] GOUT A[ND RHEUMATISM] In Pots 1s 1/2d 2' [2/9 4/6 11/ 22 & 35] BY THE PROPRIET[OR 244]...'STRAND...LO'[NDON]. It was produced in order to contain the said ointment, which was made and sold by Holloway's; a Company that was set up in 1837. An example from the Victoria and Albert Museum was excavated at the Commonwealth Block site in London between 1988 and 2003 (see below).

The pots were probably made in the Staffordshire potteries and sent to Holloways but the ointment was made by Holloways. The pot found at Bridlington was probably manufactured before 1867, when Holloway's moved from The Strand to Oxford Street, London.

The cost of the pot is written on its side and was 1s 1/2d. This may have been relatively expensive and therefore a treasured item. It may have been kept for a number of years for its perceived value. It could therefore be residual amongst the later 20<sup>th</sup> century material

This particular item may have found its way from London via a sea ship which may have docked near Bridlington. We cannot say for sure.

Doctors were expensive and consequently people had to obtain their own medicines like Holloway's Ointment, even though it was not necessarily proven to be effective. Also, the number of ailments that it professed to cure confirms this suspicion. The legend on its side states that it is the cure for invertebrate ulcers, bad legs, sore breasts and sore heads, gout and rheumatism! Today we might find that hard to believe and of course it would also be illegal, as it contained opiates, which at any rate would make the patient feel better even if it didn't actually cure their ailments as such.

One of the toilet parts had a legend in a scroll with the letters 'TR....' within it, perhaps once spelling the word 'Trade mark' though it is not clear which manufactory this might have belonged to.





Image of a similar vessel from the Victoria and Albert Museum ([museumvictoria.com.au/collections/items/1614764/jar-holloway-s-ointment-ceramic-holloway-s-london-circa-1860-damaged](http://museumvictoria.com.au/collections/items/1614764/jar-holloway-s-ointment-ceramic-holloway-s-london-circa-1860-damaged)).

#### **Further recommendations**

There are no further recommendations for research.

There is no reason to keep any of this material, though the ointment jar warrants photography and perhaps would be useful as an example of ointment pots in a teaching collection or for a short popular article.

Context	Quantity	Dating	Details
5001	36	20TH CENTURY	1 transfer printed ointment jar with black border and legend [HOLLOWAYS OINTMENT] 'FOR THE [ CURE OF INVERTEBRATE ULCERS] Bad legs [sore breasts and sore heads] GOUT A[ND RHEUMATISM] In Pots 1s 1/2d 2' [2/9 4/6 11/ 22 & 35] BY THE PROPRIET[OR 244]...'STRAND...LO[NDON] 1 white earthen ware jar lid 11 white sanitary ware toilet parts including one sherd with black transfer printed makers mark with legend 'TR' 1 cream tile 1white tile with impressed '...NNO...' 13 white earthen ware chamber pot including one with acanthus moulding inside the rim and one plain rim with urine stains 1 salt glazed jar rim 1 fine white earthen ware jar with degraded blue band at the rim and grey concretion inside and out 4 white earthen ware jar with dark and light blue painted surfaces 2 white earthen ware large bowl with blue bands

Table 3. Pottery quantification

## APPENDIX 4: SMALL FINDS ASSESSMENT (N ROGERS)

### Introduction

A small group of material which was recovered from a single context (Context 5001) was assessed via a rapid survey. The vessel glass was assessed by Karen Weston, and Dr. Jayne Rimmer commented upon the decorative moulded plaster remains. Other finds were looked at by Nicola Rogers.

### The vessel glass (K Weston)

A total of three complete late 19<sup>th</sup>/early 20<sup>th</sup> century ?utility bottles were recovered from the excavation, in addition to rims and bases from further bottle, a pickles jar, a bowl/vase and one or possibly two rose coloured wine glasses. A complete bottle stopper, seven sherds of post medieval window glass, and one sherd of medieval window glass were also recovered. The assemblage appears to be domestic in nature, containing utility vessels, a food container, wine glasses and more decorative glassware. Compared to late 19<sup>th</sup>/early 20<sup>th</sup> century glass assemblages from Hungate, York, this assemblage has a larger proportion of what may be considered more expensive glass items (such as the wine glasses and sherds from a bowl/vase). Such decorative items were very rarely recovered from the lower status assemblages at Hungate and therefore it may imply that this assemblage came from a wealthier household(s).

### The plaster (Dr J Rimmer)

Dr J Rimmer notes: these are clearly the fragments of a ceiling rose with a hole in the centre that would have taken a lead for a ?gas or ?electricity lead for a light. These are part of a dense plasterwork block which indicates a late 18<sup>th</sup> or early 19<sup>th</sup> century date - the later examples (i.e. from the later Victorian/Edwardian periods) were hollow which made them lighter in weight and required less material in construction.

This information suggests that the plasterwork dates to the original late 18<sup>th</sup> century building, but was modified to sometime after 1850.

### Other finds

Nine finds are made of metal: apart from a stamped disc which is unfortunately illegible, the metal finds mainly comprise structural fittings including an iron door hinge and an iron bolt, as well as gas piping and a related fitting, a decorative wall hook and other fittings of uncertain function made of unspecified metal sheet. These fittings include 19<sup>th</sup> century or later items eg the gas piping, and it seems likely that the other fittings date to the same period or later.

The other finds comprise a bone toothbrush with copper alloy wire staining from the attachment of the bristles, which also bears a currently illegible stamp, a large green ceramic sphere of uncertain function, and a fired clay tobacco pipe stem. The tooth brush and sphere

seem likely to be 19<sup>th</sup> century in date; the tobacco pipe stem is clearly post late 17<sup>th</sup> century but is not more confidently dated.

### **Conclusions and recommendations**

The material appears to relate primarily to the structure identified on site as Fort Hall, but probably to the 19<sup>th</sup> century rather than earlier. No further work on the assemblage is recommended.

## **APPENDIX 5: CERAMIC BUILDING MATERIAL ASSESSMENT (J MCCOMISH)**

### **Introduction**

A total of 183.995kg of ceramic building material (CBM) and stone floor tile was assessed from the site, most of which dated to the late 18th-early 19<sup>th</sup> centuries, though some post-medieval and modern material was also present. The material is summarised in terms of context, form and date on Table 4 below, while Table 5 summarises the sherd count and volume of each form present.

The material was recorded to a standard YAT methodology, and in keeping with this methodology only a representative selection of the CBM and stone tile has been retained. In the case of this excavation one sherd of each fabric type has been retained, together with the stone floor tile and one complete tile of unusual form (classed as 'Other' in the methodology used). Although detailed fabric descriptions were not prepared at this stage, the sherds were all examined with a x10 hand lense so as to devise a fabric series for the site has, with a total of 12 fabrics being identified.

### **Results**

#### **CBM of uncertain date**

Eight sherds of tile, all in Fabric 2, were present in Context 5001. One of these was a complete rectangular tile, which measured 290x191mm in area, and 16mm thick. Though this tile might at first glance resemble a medieval roofing tile, it lacked any visible means of being attached to a roof, i.e. it lacked either a nib or peg-hole. The precise function of this tile is unclear and it has been classed as 'Other' in the recording methodology used.

The remaining seven sherds were less well preserved, but ranged in thickness from 15-17mm, while the only complete surviving breadth was 191mm. They have been classed as 'Plain' in the recording methodology used. The similarity in breadth measurements and fabric suggests that all

eight of these sherds are related, and therefore the precise function of all of these tiles is unclear. It is possible that they could represent roof tile of 14-16<sup>th</sup> century date, though this is by no means certain.

### **Post-medieval CBM**

Five sherds of 17<sup>th</sup> century or later pan tile were present in Context 5001. All of these were in a single fabric (Fabric 1), and they ranged in thickness from 12-16mm, with no other dimensions surviving.

Fifteen post-medieval bricks were present ranging in date from the 16-18<sup>th</sup> centuries. These were in four differing fabrics (Fabrics 5-8), and ranged in size from 230-248mm in length, 110-120mm in breadth and 43-61mm in thickness. They were all manufactured using the slop-moulding technique, as would be the norm for that period. Three bricks had other marks relating to manufacture: one of the bricks had rain marks on the upper surface, showing that it had been laid on the ground to dry (rather than being in a drying-shed) prior to firing; one of the bricks had a turning mark on the back; one brick was cracked through over-firing. Three of the bricks, from Contexts 5106, 5018 and 5019, had heavy sooting, which related to their use. In the case of the example Context 5018 the soot was present on both the stretcher of the brick and on broken surfaces, showing that the brick had been re-used.

A single sherd of stone floor tile was present in Context 5001. This was a tile of white marble 125mm wide and 32mm thick (the length dimension did not survive). It had clearly been reused or dumped as fragments of iron nail were adhering randomly to broken surfaces. Marble is rare in the British Isles, and where it was used, it was invariably imported from overseas, usually from Italy. Marble has always been expensive luxury item and was rare prior to the Georgian period when it became fashionable for statues, church memorials and for architectural detailing such as fireplace surrounds or flooring (Clifton Taylor and Ireson 1983, 46). This suggests that the fragment from the site is of 18<sup>th</sup> century date at the earliest.

### **Late 18<sup>th</sup> century or later CBM**

The overwhelming bulk of the CBM examined comprised bricks (30 examples) which dated from the late 18<sup>th</sup> century to the early 19<sup>th</sup> century. The imposition of brick tax from 1784-1850 prompted an increase in the thickness of bricks, which in turn led to regulations designed to limit brick size (Cox 1979, 16; Campbell and Saint 2002, 181). It is not, however, possible to use thickness of bricks to indicate precise dates, since, as Campbell and Saint (*ibid.*, 181) have pointed out, there can be enormous variation in the bricks of a single wall, resultant from differential drying-out prior to firing. The bricks of late 18<sup>th</sup>-early 19<sup>th</sup> century date examined for this assessment were all slop moulded and ranged in length from 230-251mm, in breadth from 105-

120mm and in thickness from 62-82mm. They were in five differing fabrics (Fabrics 5-9). Four had turning marks on the base and six were either cracked or blown through over-firing. Two of the bricks (both in Context 5009) had traces of green paint on one stretcher, which indicates that the wall in question was decorated green at some stage. Two of the bricks in Context 5015 and 5018 had heavy sooting resultant from their use.

Two sherds of Welsh slate were present in Context 5001, and though they could be as early as 18<sup>th</sup> century in date, they are probably of mid-19<sup>th</sup> to early 20<sup>th</sup> century date. One of these was cut to form a disc shape of uncertain function. Welsh slate was used alongside tile in Georgian architecture, and it became the dominant roofing type in the 19<sup>th</sup> century (Johnson 2010, 38), and from the 1850s onwards it was also sometimes used to provide a damp-proofing course within buildings (Muthesius 1982, 64). Eight sherds of machine made brick dating from 1850 or later were present, though it should be noted that in two cases the examples seen comprise one brick with part of a second brick adhering. One of these bricks had a rectangular frog on one surface, while a further three were firebricks. One of the firebricks had a two line makers stamp on one bed, the upper line reading RAMSAY, and the lower line NEWCASTLE in letters 15mm high. This brick was manufactured by the Ramsay and Co Fire Brick Works, which was founded in the 1830s by G. Heppel; it was initially located at Derwenthaugh, before moving to Swalwell, where the company owned an adjacent colliery from which the fireclay for brick manufacture was obtained (<http://www.penmorfa.com>; <http://www.swalwelluk.co.uk>). Ramsays were taken over by another company, called Adamsez, in 1923, and finally closed in 1975 (<http://apps.nationalarchives.gov.uk>). There were no manufacturer's stamps present on the remaining two firebricks, so the point of manufacture cannot be closely established, though in the case of the firebricks but lowland Scotland, Tyne and Wear or the north Midlands are the most likely sources. Two sherds of machine made wall tile dating from 1850 or later were present in context 5001, which both had a white fabric and clear glaze. A partial makers stamp was present on one of the wall tile sherds, but this was insufficiently preserved to match to a specific manufacturer.

### **Summary and recommendations for further work**

The material seen was comprised a limited range of both forms and fabrics. Beyond clarifying the date of the contexts in question, they contribute little to the overall understanding of CBM in general and as such have limited future research potential. The only exception is the sherd termed 'Other' which could be further researched so as to determine its original function. Detailed fabric descriptions have not been prepared for this assessment, but could be prepared if required, as this may contribute to the development of a fabric series for the town.

It is recommended that the accessioning museum is contacted regarding long term storage as they may not wish to accession sherds of relatively modern brick. If the museum does not require the bricks, then fabric descriptions must be prepared before they are discarded.

Context	Dating	Forms
5000	late 18th-early 19th	Brick
5001	17 <sup>th</sup> +	Other, Pan, Plain, Slate, Stone floor, Wall tile
5002	late 18th-early 19th	Brick, Post-medieval brick
5003	late 18th-early 19th	Brick
5004	1850+	Brick
5005	late 18th-early 19th	Brick
5006	1850+	Brick
5007	1850+	Brick
5008	1850+	Brick
5009	late 18th-early 19th	Brick
5010	late 18th-early 19th	Brick
5011	16-18th	Post-medieval brick
5012	late 18th-early 19th	Brick
5013	18-19th	Brick, Post-medieval brick
5014	late 18th-early 19th	Brick
5015	late 18th-early 19th	Brick
5016	1850+	Brick, Post-medieval brick
5017	18-19th	Brick, Post-medieval brick
5018	late 18th-early 19th	Brick, Post-medieval brick
5019	late 18th-early 19th	Brick, Post-medieval brick
5020	late 18th-early 19th	Brick
5021	late 18th-early 19th	Brick, Post-medieval brick
5022	16-18th	Post-medieval brick
5023	late 18th-early 19th	Brick, Post-medieval brick
5024	late 18th-early 19th	Brick
5025	16-18th	Brick, Post-medieval brick
5026	late 18th-early 19th	Brick, Post-medieval brick

**Table 4 Summary of CBM data by context.**

Form	No. of sherds	Weight in grams	Weight as % of total
Brick	37	124225	69.09
Other	1	1575	0.86
Pan	5	1800	0.98
Post-medieval brick	15	47025	25.56
Plain	7	4775	2.60
Slate	2	675	0.37
Stone floor	1	1000	0.54
Wall tile	2	20	0.01

**Table 5 Summary of material by form.**

**Web sources (searched on 28/14/2014)**

<http://www.penmorfa.com/bricks/england19.html>

<http://www.swalwelluk.co.uk/industry.html>

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## **APPENDIX 6: ARCHITECTURAL FRAGMENT ASSESSMENT (J MCCOMISH)**

A single architectural fragment was recovered from the site (AF1) which comprised three adjoining small fragments of moulding made from white marble. These have a flat panel at the top, with an ovolo moulding below, and were polished on all surfaces, with the exception of the back, which was covered with mortar. It is possible that AF1 may have related to a fireplace surround, or other decorative border. Marble was used for architectural detailing from the Georgian period onwards (Clifton Taylor and Ireson 1983, 46) making AF1 consistent with the date of Fort Hall House.

It should be noted that the three pieces of moulding were badly damaged and only the largest of the three has been retained as a representative example. No further research is recommended for AF1.

## **APPENDIX 7: WRITTEN SCHEME OF INVESTIGATION**



## WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL MONITORING OF TOPSOIL STRIP AND RECORDING AT SITE OF LEISURE WORLD, BRIDLINGTON

<b>Site Location:</b>	Leisure World, Promenade, Bridlington, East Riding of Yorkshire
<b>NGR:</b>	TA 1872,6691 (centred)
<b>Proposal:</b>	Erection of a Leisure Centre with associated access, parking and hard and soft landscaping
<b>Planning ref:</b>	DC/13/02434/STPLF
<b>Prepared for:</b>	BAM Construction Ltd, North East
<b>Status of WSI:</b>	Final

### 1 SUMMARY

1.1 East Riding of Yorkshire Council has received planning consent for the redevelopment of Leisure World, Promenade, Bridlington, East Yorkshire. The scheme will include the erection of a Leisure Centre with associated access, parking and hard and soft landscaping, following demolition of existing leisure centre and former 3Bs theatre bar.

1.2 The following archaeological condition has been imposed: “No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the Planning Authority (Circular 11/95, Model Clause 55). The scheme shall include an assessment of significance and research questions; and:

- i) The programme and methodology of site investigation and recording; this would provide for the proper identification and evaluation of the extent, character and significance of archaeological remains within the application area.
- ii) An assessment of the impact of the proposed development on the archaeological remains.

- iii) Proposals for the preservation in situ, or for the investigation, recording and recovery of archaeological remains and the publishing of the findings, it being understood that there shall be a presumption in favour of their preservation in situ wherever feasible.
  - iv) The programme for post investigation assessment of the results of the on-site evaluation.
  - v) Provision to be made for analysis of the site investigation and recording, following the post-excavation assessment, where the results justify this (as required under Policy 141 of the National Planning Policy Framework (NPPF).
  - vi) Provision to be made for publication and dissemination of the analysis and records of the site investigation, where the results justify this (as required under Policy 141 of the NPPF).
  - vii) Full provision to be made for archive deposition of the analysis and records of the site investigation (as required under Policy 141 of the NPPF).
  - viii) Nomination of a competent person or persons / organisation to undertake the works set out within the Written Scheme of Investigation (WSI). Sufficient notification and allowance of time to archaeological contractors nominated by the developer to ensure that archaeological fieldwork as proposed in pursuance of (i) and (iii) above is completed prior to the commencement of permitted development in the area of archaeological interest; and
  - ix) Notification in writing to the Curatorial Officer of the Humber Archaeology Partnership of the commencement of archaeological works and the opportunity to monitor such works.
- B) No demolition/development shall take place other than in accordance with the conditions set out in the approved WSI. In particular, no grubbing out of the foundations shall take place without a nominated archaeologist being present during these works; should archaeological deposits be exposed during the course of these works, they should be properly recorded.
- C) The development shall not be occupied until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the approved WSI, and the provision made for analysis, publication and dissemination of results and archive deposition, has been secured.

#### *Reason*

Bridlington Leisure World is located over the former site of the mid 17th century North Fort at Bridlington, which was erected during the civil war and subsequently played an important role in the defence of the port during the Anglo-Dutch naval wars, the American War of Independence and the French Revolutionary and Napoleonic Wars. Part of its footings may survive beneath the leisure centre. The request for this condition is in line with Policies 128-9, 131, 135, 139 and 141 of the NPPF.

Subsequent research indicates that North Fort lies to the south of the proposal site, but that the late 18th century Fort Hall lies at the south end of the site. This building lay south of the footprint of the leisure centre, so its below-ground remains at least may survive relatively intact.

1.3 This Written Scheme of Investigation (WSI) has been prepared in response to a Specification supplied by Humber Archaeology Partnership. The work will be carried out in accordance with the Brief and this WSI, and according to the principles of the Institute for Archaeology (IfA) Code of Conduct and all relevant standards and guidance.

## 2 SITE LOCATION & DESCRIPTION

2.1 The proposal site is located in the northern part of Bridlington, some 500m north-east of the Harbour (NGR TA 1872 6691, Figure 1), to the north-west of Victoria Terraces on the north sands beach in Bridlington Bay. The site is bounded by The Promenade (B1254) to the north-west, Fort Terrace to the south-west and dwellings fronting York Road in the north-east. Access to the site is via existing gates on the Promenade. The nearest Post code for the area is YO15 2QQ.

2.2 The last building to occupy the site, Leisure World, has been demolished and cleared away and the site now stands vacant.

## 3 DESIGNATIONS & CONSTRAINTS

3.1 Consultation of MagicMap and The National Heritage List for England shows no heritage designations or constraints on the development area.

## 4 ARCHAEOLOGICAL INTEREST

4.1 Bridlington Leisure World is sited over the location of Fort Hall. The hall was built in 1792 for John Walker and became the town house of the Greame family of Sewerby House. It is shown on an early 19th century painting as a three-storey brick building with a garden in front. It was demolished in 1937.

4.2 Although the construction of the leisure centre appears to have removed all archaeological deposits within its footprint, it is possible that the part of the site south of the leisure centre has not been disturbed by Modern development. In addition to Fort Hall, earlier archaeological remains could survive in this part of the proposal site.

4.3 York Archaeological Trust completed two evaluation trenches (Figure 2, T2 and T4) within the development site from Tuesday 27<sup>th</sup> May to Friday 30<sup>th</sup> May. The evaluation trenches established that the majority of the site has been previously truncated to around 3m below ground level by the construction of the existing leisure centre (As such trenches T1 and T3 were not excavated). A trench (Figure 2, T4) located with the grassed area at the southern extent of the development site demonstrated that archaeological remains probably relating to Fort Hall are present in that area. The evaluation indicates that the building revealed comprises at least two phases and may date to the 16<sup>th</sup> or 17<sup>th</sup> century.

## 5. GROUNDWORKS TO BE MONITORED

5.1 This work will comprise **continuous/comprehensive** archaeological monitoring, on removal of all topsoil and recent overburden prior to construction in the area occupied by the remains of Fort Hall (hatched green on Figure 2).

5.2 Following topsoil strip time will be allowed for the surface to be thoroughly cleaned, in order to assist the identification of any features therein. A site meeting will then be held between the client, the archaeological contractor, and the Humber Sites and Monuments

Record Office (as archaeological advisor to the Local Authority) to agree the scope of the next stage of works

## 6 DELAYS TO THE DEVELOPMENT SCHEDULE

6.1 All earth-moving machinery must be operated at an appropriate speed to allow the archaeologist to recognise any archaeological deposits and material.

6.2 Plant or excavators shall not be operated in the immediate vicinity of archaeological remains until the remains have been recorded and the archaeologist on site has given explicit permission for operations to recommence at that location.

6.3 Time should be allowed in the development schedule for archaeological remains to be recorded as detailed in section 7 below.

## 7 RECORDING METHODOLOGY

7.1 A detailed plan should be made of all features which are showing, to an appropriate scale (e.g. 1:50, or 1:20).

7.2 A sufficient sample of any archaeological features and deposits revealed will be excavated in an archaeologically controlled and stratigraphic manner, in order to establish the aims of the project (see 5.2 above). The complete excavation of features is not regarded as necessary; a sufficient sample will be investigated to understand the full stratigraphic sequence down to naturally occurring deposits. The sampling policy will be as follows:

- A 100% sample will be excavated of all stake-holes.
- A 50% sample should be excavated of all post-holes, and pits with a diameter of up to 1.5m.
- A minimum 25% sample will be excavated of pits with a diameter of over 1.5m; this will include a complete section across the pit to recover its full profile.
- A minimum 20% sample will be excavated of all linear features, up to 5m in length; for features greater than this, a 10% sample will be excavated suffice.

7.3 Unique context numbers will only be assigned if artefacts are retrieved, or stratigraphic relationships between archaeological deposits are discernable. In archaeologically 'sterile' areas, soil layers will be described, but no context numbers will be assigned. Where assigned, each context will be described in full on a pro forma context record sheet in accordance with the accepted context record conventions.

7.4 Archaeological deposits will be planned at a basic scale of 1:50, with individual features requiring greater detail being planned at a scale of 1:20. Larger scales will be utilised as appropriate. Cross-sections of features will be drawn to a basic scale of 1:10 or 1:20 depending on the size of the feature. All drawings will be related to Ordnance Datum. Where it aids interpretation, structural remains will also be recorded in elevation. All drawings will be drawn on inert materials. All drawings will adhere to accepted drawing conventions

7.5 Photographs of archaeological deposits and features will be taken. This will include general views of entire features and of details such as sections as considered necessary. The photographic register will comprise 35mm format black and white prints. Digital photography and/or 35mm colour slides may be used in addition, but will not form the primary site archive.

Digital cameras exceeding a minimum resolution of 10 megapixels will be used. All site photography will adhere to accepted photographic record guidelines.

7.6 Areas which are inaccessible (e.g. for health and safety reasons) will be recorded as thoroughly as possible within the site constraints. In these instances, recording may be entirely photographic, with sketch drawings only.

7.7 All finds will be collected and handled following the guidance set out in the IfA guidance for archaeological materials. Unstratified material will not be kept unless it is of exceptional intrinsic interest. Material discarded as a consequence of this policy will be described and quantified in the field. Finds of particular interest or fragility will be retrieved as Small Finds, and located on plans. Other finds, finds within the topsoil, and dense/discrete deposits of finds will be collected as Bulk Finds, from discrete contexts, bagged by material type. Any dense/discrete deposits will have their limits defined on the appropriate plan.

7.8 All artefacts and ecofacts will be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication *First Aid for Finds*, and recording systems must be compatible with the recipient museum. All finds that fall within the purview of the Treasure Act (1996) will be reported to HM Coroner according to the procedures outlined in the Act, after discussion with the client and the local authority.

7.9 A soil sampling programme will be undertaken for the recovery and identification of charred and waterlogged remains where suitable deposits are identified. The collection and processing of environmental samples will be undertaken in accordance with English Heritage guidelines (English Heritage 2011). Environmental and soil specialists will be consulted during the course of the evaluation with regard to the implementation of this sampling programme. Soil samples of approximately 40 litres for flotation (or 100% of the features if less than this volume) will be removed from selected contexts, using a combination of the judgement and systematic methodologies.

- **Judgement sampling** will involve the removal of samples from secure contexts which appear to present either good conditions for preservation (e.g. burning or waterlogging) or which are significant in terms of archaeological interpretation or stratigraphy.

7.10 If industrial activity of any scale is detected, industrial samples and process residues will also be collected. Separate samples (c. 10ml) will be collected for micro-slugs (hammer-scale and spherical droplets) (English Heritage 2001).

7.11 Other samples will be taken, as appropriate, in consultation with ArchHeritage specialists and the English Heritage Regional Science Advisor, as appropriate (e.g. dendrochronology, soil micromorphology, monolith samples, C14, etc.). Samples will be taken for scientific dating where necessary for the development of subsequent mitigation strategies. Material removed from site will be stored in appropriate controlled environments.

7.12 In the event of human remains being discovered during the evaluation these will be left *in-situ*, covered and protected, in the first instance. The removal of human remains will only take place in compliance with environmental health regulations and following discussions with, and with the approval of, the Ministry of Justice. If human remains are identified, the



Ministry of Justice and curator will be informed immediately. An osteoarchaeologist will be available to give advice on site.

- If **disarticulated** remains are encountered, these will be identified and quantified on site. If trenches are being immediately backfilled, the remains will be left in the ground. If the excavations will remain open for any length of time, disarticulated remains will be removed and boxed, for immediate reburial by the Church.
- If **articulated** remains are encountered, these will be excavated in accordance with recognised guidelines (see 6.12) and retained for assessment.
- Any grave goods or coffin furniture will be retained for further assessment.

7.13 Where a licence is issued, all human skeletal remains must be properly removed in accordance with the terms of that licence. Where a licence is not issued, the treatment of human remains will be in accordance with the requirements of Civil Law, IfA Technical Paper 13 (1993) and English Heritage guidance (2005).

## 8 REPORT & ARCHIVE PREPARATION

8.1 Upon completion of the groundworks, a report will be prepared to include the following:

- a) A non-technical summary of the results of the work.
- b) An introduction which will include the planning reference number, grid reference and dates when the fieldwork took place.
- c) An account of the methodology and results of the operation, describing structural data, associated finds and environmental data.
- d) A selection of photographs and drawings, including an overall plan of the site accurately identifying the areas monitored.
- e) Specialist artefact and environmental reports will be in the form of individual assessments compiled to meet the requirements of Appendix 4 of MAP2.
- f) Details of archive location and destination (with accession number, where known), together with a catalogue of what is contained in that archive.
- g) A copy of the key OASIS form details
- h) Copies of the Brief and WSI
- i) Additional photographic images may be supplied on a CDROM appended to the report

8.2 Copies of the report will be submitted to the commissioning body, the Local Planning Authority and the HER/SMR (also in PDF format).

8.3 The requirements for archive preparation and deposition will be addressed and undertaken in a manner agreed with the recipient museum. In this instance the Treasure House Beverley is recommended and an agreed allowance should be made for the curation and storage of this material.

8.4 Provision for the publication of results will be made. **If significant archaeological remains are recorded a second phase of analysis and publication may be required by the Humber Sites and Monuments Record Office (as archaeological advisor to the Local Authority). This analysis and publication will form a separate piece of work to be commissioned.**

8.5 The owner of the Intellectual Property Rights (IPR) in the information and documentation arising from the work, would grant a licence to the County Council and the museum accepting the archive to use such documentation for their statutory functions and provide copies to third parties as an incidental to such functions. Under the Environmental Information Regulations (EIR), such documentation is required to be made available to enquirers if it meets the test of public interest. Any information disclosure issues would be resolved between the client and the archaeological contractor before completion of the work. EIR requirements do not affect IPR.

## 9 HEALTH AND SAFETY

9.1 Health and safety issues will take priority over archaeological matters and all archaeologists will comply with relevant Health and Safety Legislation.

9.2 A Risk Assessment will be prepared prior to the start of site works.

## 10 TIMETABLE & STAFFING

10.1 Topsoil strip in the area of Fort Hall is scheduled for week beginning 2<sup>nd</sup> June 2014.

10.2 Specialist staff available for this work are as follows:

- Head of Artefact Research - Dr Ailsa Mainman
- Human Remains – Ruth Whyte (Dickinson Laboratory for Bio-Archaeology)
- Palaeoenviromental remains – Dr Jennifer Miller (Dickinson Laboratory for Bio-Archaeology)
- Head of Curatorial Services - Christine McDonnell
- Finds Researcher - Nicky Rogers
- Medieval Pottery Researcher - Anne Jenner
- Finds Officers - Geoffrey Krause & Rachel Cubitt
- Archaeometallurgy & Industrial Residues – Rachel Cubbit, Dr Rod Mackenzie & Dr Roger Doonan
- Conservation – Dr Ian Panter

## 11 MONITORING OF ARCHAEOLOGICAL FIELDWORK

11.1 As a minimum requirement, Humber Archaeology Partnership will be given a minimum of one week's notice of work commencing on site, and will be afforded the opportunity to visit the site during and prior to completion of the on-site works so that the general stratigraphy of the site can be assessed. York Archaeological Trust will notify Humber Archaeology Partnership of any discoveries of archaeological significance so that site visits can be made, as necessary. Any changes to this agreed WSI will only be made in consultation with Humber Archaeology Partnership.

## 12 COPYRIGHT

12.1 York Archaeological Trust retain the copyright on this document. It has been prepared expressly for the named client, and may not be passed to third parties for use or for the purpose of gathering quotations.

## 13 KEY REFERENCES

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See also the **HELM** website for a full list of English Heritage Guidance documents.

<http://www.helm.org.uk/server/show/nav.19701>



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