

River Foss Flood Storage Area

Heritage Statement

November 2019



Quality Management

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Project	River Foss Flood Storage Area		
Location	Site north-east of Strensall centred at approximately SE64976323 (464976, 463232)		
Title	River Foss Flood Storage Area - Heritage Statement		
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1. Site Location, Description and Proposals

The Foss Flood Storage Area straddles Ryedale District Council and City of York Council administrative areas centred on NGR SE 65122 62565. It lies northeast of Strensall approximately 12 km northeast of York, part within Lillings Ambo civil parish and part within Strensall civil parish.

The site largely comprises a mix of pasture and some arable cropping, with the Black Dike forming the southern boundary and the River Foss bisecting the site. Within the pasture area towards the southern boundary, there is evidence of marshy areas and also a pit excavated by the current landowner in recent years.

The proposed storage area has been designed to store up to 1,000,000 m³ of excess flood water and occupy a total area of approximately 130 ha. Water will be retained by a 1.65 km long embankment incorporating a 1900 mm diameter orifice control structure as it crosses the River Foss. The embankment will incorporate a clay core along its entire length and run from the west bank of the River Foss, over the river and parallel to (but mainly set back from) the west bank of Black Dike before changing direction towards the north-east, and ending just before, Lilling Low Lane.

The crest level of the embankment will be 19.85 m Above Ordnance Datum (AOD), allowing for 1050 mm freeboard above the spillway, and tie in to high ground adjacent to Lilling Low Lane and in to high ground on the right bank of the River Foss. In order to prevent overtopping or failure of the control structure during extreme events, a spillway set at 18.80 m AOD has been included in the design of the embankment, allowing excess water to flow into the Black Dike.

A total of four borrow pits, two permanent and two temporary, will be excavated in order to source the 112,000 m³ of clay required to construct the embankment and create wetland habitat to provide environmental mitigation:

- Borrow pits T1 and T2 will be temporary in nature, with the voids subsequently being backfilled with material that does not meet dam safety standards. The land will then be reinstated to its existing level and land use;
- Borrow Pit P1 will be excavated and the fill used within the embankment core. The borrow pit will be retained permanently and landscaped to provide wetlands and associated water dependent habitat;
- Borrow Pit P2 will be excavated, with some of this material used for fill material within the shoulders of the embankment and some material will be used as donor material to backfill Borrow Pits T1 and T2, to reinstate them. This pit will thereafter be retained permanently and landscaped to provide wetlands and associated habitats.

Road raising is proposed at Ings Lane to maintain dry access and egress to/from Lilling Green during the operation of the flood storage area. The road will be raised to 19.1 m AOD over a length of 200 m, matching the level of the existing bridge crossing the River Foss.

Further elements of the design include:

- The diversion of a 119 m reach of the Black Dike towards the east, as it currently lies within the proposed footprint of the embankment. This will consist of a 2-staged channel.
- Bank reprofiling along 225 m of the River Foss, between the proposed borrow pits and the control structure;
- The embankment will be afforded additional buried scour protection along short sections on both its dry side and its wet side. On the dry side, the scour protection will extend for 50 m to protect the embankment against the Black Dike whereas 75 m of scour protection will be installed on the wet side of the embankment to protect it from scour caused by the River Foss;
- Edge reinforcement will be provided along Lilling Low Lane, north of the embankment, to minimise the impact of flood water on the integrity of the lane. The design of the edge protection has been provided by North Yorkshire County Council and will consist of 300 mm wide trenches either side of the road;
- An asphalt access track will run along the crest of the western segment of embankment, connecting to the existing farm track to the west of the control structure, providing access for maintenance of the structure;
- A ramp capable of accommodating a combine harvester will be integrated into the design of the embankment, allowing for the farmer to access and farm land on both sides of the embankment;
- Lilling Lane Dike, a drainage ditch currently feeding into the Black Dike will be diverted into the River Foss, via borrow pit P2, with the remainder of the drainage ditch to be filled on the wet side of the embankment and retained on the dry side, continuing to provide land drainage. An 11 m section of the drainage ditch will be culverted in order to provide access across the ditch for the farmer;
- Borrow pit P1 will be reconnected to the River Foss by lowering the righthand bank of the River Foss. Borrow pit P2 will be reconnected to the River Foss via a culvert covered with a flapped outfall;
- A new permanent access route to the control structure will be created to the west of the embankment. In order to achieve this, an existing access track running north to south will be improved with a new type 1 surface (Crushed aggregate from 40 mm to dust). Improvements will also be made to the existing track running northwards from the western edge of the embankment, on the righthand bank of the River Foss. A new 560 m type 1 track running east to west will also be constructed, connecting the two aforementioned tracks.

2. Geology and Topography

Ground investigations (see Ground Investigation Report included in the planning application pack for full details) confirmed the solid geology at the site as Mercia Mudstone with superficial deposits of Aine Glaciolacustrine (comprising clay and silt) to the east and Alluvium (comprising silts, clays, sand and gravels) to the west.

Cartographic evidence shows the development of area evolving from a mid-19th Century pattern of small fields, through amalgamation, to the larger field patterns seen today. It also suggests that in the 19th and 20th centuries, the southern part of the site adjacent to the Black Dike was largely prone to flooding.

The site is generally level with land rising towards the north/northeast. It comprises a mix of pasture with marshy pockets and arable land. A pit has been excavated in recent years by a current landowner to aid drainage. In the general area, other pits are present; possibly resulting from clay deposits being extracted for brick-making.

3. Heritage and Archaeological Interventions to Date

To date the site has been subject to:

- 1) Desk Based Assessment (report attached as Appendix A)
- 2) Watching Brief on Ground Investigation Works (report attached as Appendix B)
- 3) Geophysical Survey (report and interpretative note attached as Appendix C)
- 4) Landscape and Visual Effects Scoping Statement

3.1 Desk Based Assessment

A desk-based assessment was carried out to identify the known heritage and archaeological assets present on or near the site, consider their significance and any potential impact the proposed development may have on their setting. This included examining the presence of both designated and non-designated assets. Non-designated assets were identified by examining the Historic Environment Records of the City of York Council and North Yorkshire County Council and other relevant heritage resources. This exercise returned few results, however, it was recognised that the site has not been subject to any previous archaeological research or fieldwork.

The assessment was used to inform the project team, at an early stage in the design process, of any heritage constraints which may be associated with the proposed flood storage option. This included a review of the relevant national and local planning policy and guidance that would impact on the scheme and whether any mitigation might be necessary for any of the identified assets to reduce the impact of the scheme. Finally, it also considered whether any additional investigations may be necessary to fully appreciate the heritage and archaeology.

Archaeology

The results of the assessment established that there were no designated or non-designated archaeological assets within the site. The nearest designated asset is the site of the deserted village of East Lilling (Scheduled Ancient Monument) which is over 1km to the north east of the proposed eastern extent of the embankment.

The nearest non-designated asset was a possible Romano-British settlement with associated field systems located 350m to the west of the site which was identified from aerial photography. The list of the identified assets is reproduced and described in more detail within section 5 of the report in Appendix A.

On the basis of what was known of the scheme design at the time no immediate concerns were raised regarding the setting of any of these assets. However, the report concluded that "*No archaeological remains are recorded on the site and therefore the potential lies with those remains not yet identified. In order to identify such remains, it is advisable to undertake non-intrusive survey in the form of a geophysical survey to identify risk.*" (Section 8.1, Page 20)

Built Heritage

The study identified that the nearest designated built heritage assets were three listed buildings 700 m to the north-east of the site, none of which could be viewed from the site. There are no Conservation Areas, Registered Battlefields or Registered Parks and Gardens within the study area.

Wallbutts to the southwest and East Lilling House Farm adjacent to the site are not listed buildings but appear on 19th century maps. Wallbutts cannot be seen from the site, but East Lilling House Farm can. In terms of potential impact on the setting of East Lilling House Farm, whilst the property's setting could be compromised, it is already surrounded by modern farm buildings.

3.2 Ground Investigations Archaeological Watching Brief

Monitoring of 21 geo-archaeological trial pits was undertaken throughout the application site by the York Archaeological Trust during late August/early September 2018 in accordance with an agreed Written Scheme of Investigation (WSI).

The results of the exercise are fully discussed in the associated report in Appendix B, however, it found that the River Foss extended beyond its current banks during earlier periods, through substantial periods of flooding or a widening/changing of its course. It also concluded that: "*No evidence of human activity was seen in any of the trial pits, suggesting that the area around Lilling Green and the River Foss was undeveloped land, which was predominantly agricultural from at least the mid-19th century.*" (Section 6, Page 3)

3.3 Geophysical Survey

In accordance with the recommendations of the desk-based assessment a geophysical survey of the site was commissioned under the supervision of the York Archaeological Trust. It took place in March 2019 and covered an area of 74ha, including all the borrow pit and embankment locations. A full report on the findings along with an associated interpretative note are reproduced as Appendix C.

The survey identified a large number of drainage features, reflecting the intensive agricultural management of the area. Additionally, the survey identified a palaeochannel of the Foss,

supporting the earlier interpretation of the trial pit watching brief. Notably, the generally weak magnetic background of the site allowed for more ephemeral features such as this to be identified. In the southern area, where the trial pits identified a wider spread of alluvium, the channel appears to diverge, possibly reflecting braiding or different phases of the river's course over time.

No clear evidence of settlement or agriculture pre-dating c.1800 was identified although it was recognised that there remains the possibility that such remains are present sealed beneath alluvial deposits and therefore masked from the geophysical survey. If this is so then it may lie too deeply buried to be adversely affected by the proposed scheme across most of the site.

3.4 Landscape and Visual Effects Scoping Statement

Whilst not produced to specifically assess the impact on heritage assets, this report contains a general commentary on the potential visual impact of the scheme and also selects a number of sensitive receptors against which to judge that impact, of which some are heritage assets. A copy of the full report is reproduced as Appendix A2 within the accompanying Environment Statement.

The report concludes that generally there will be short-term negative visual impacts during the construction period. However, the visibility of the site from the designated heritage assets identified as sensitive receptors (Sheriff Hutton Castle, Sheriff Hutton Hall, Sheriff Hutton Park & Gardens and Site of deserted East Lilling Village) was either nil or small. The assessment suggested that, once operational, none of the assets would experience any negative impact above 'slight' and the site would not be an obvious feature from any of the locations.

3.5 Conclusions

Built Heritage

None of the closest built heritage assets can be viewed from the development site and whilst visual impacts may be experienced close to the scheme, it is considered that it will not in any way affect the setting of the listed buildings closest to it or any other designated built heritage assets. Therefore, no further assessments are considered necessary.

Archaeology

Given the findings from the reports described in this section and particularly the geophysical survey it is considered that further archaeological intervention would be appropriate, particularly in the borrow pit areas and the proposed embankment, especially where these intersect with potential river deposits. Proposals for additional work are discussed in the next section.

4. Proposed Future Archaeological Interventions

In order to define the nature and extent of the proposed further interventions, archaeologists from both North Yorkshire County Council and City of York Council were consulted in July 2019. In addition to their advice a meeting was held in September with Historic England's Regional Science Advisor to agree the scope of the archaeological evaluation.

The broad scope and the aims and objectives of the evaluation were agreed and the basic methodology of a geo-archaeological coring survey with sample recovery and selective trial trenching was also discussed. The details of the evaluation and proposed methodology have been set out in a WSI which is reproduced as Appendix D. The fieldwork is proposed to be undertaken prior to the determination of the planning applications.

The justification for the additional work is that the River Foss palaeochannels could preserve within them evidence from the early Holocene up to the 1780's when the River Foss was canalised and it is important to determine whether archaeological deposits will be affected by the proposed work. Whilst the magnetometry survey has identified anomalies within the ground 1 metre or so below present ground level, it is unlikely to have identified any deeply buried remains and so further evaluation is required.

The trial trenching will be used to determine whether groundworks associated with the proposed development, including the excavation of the borrow pits and the construction of the embankment, will affect buried archaeological remains. They will also seek to identify, characterise and record features identified by the geophysics as well as within 'blank' surveyed areas.

The aim of the geo-archaeological coring will be to identify, characterise and record the former courses of the Foss and to ascertain if any dateable material is present in the deeply buried deposits which could be affected by the proposed work. Data gathered from the assessment will also aid in the understanding of former landscapes and how humans interacted with them. The fieldwork will aim to establish whether the river channel banks, and any bars and islands within the channel, attracted human modification and whether any wetland basins attracted early human activity.

Appendix A – Heritage Desk-Based Assessment




Water and Environment Management Framework
Lot 3 – Engineering and Related Services

York Flood Alleviation Scheme
Foss Upstream Storage
Heritage Desk-Based
Assessment

October 2018



Quality Management

Job No	CS/079290		
Project	York Flood Alleviation Scheme		
Location	City of York unitary authority, site north-east of Strensall centred at approximately SE64976323 (464976, 463232)		
Title	Foss Upstream Storage Heritage Desk-Based Assessment		
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Acronyms

BGS	British Geological Survey
CifA	Chartered Institute for Archaeologists
CYC	City of York Council
ESAP	Environmental Site Appraisal Plan
FRMP	Flood Risk Management Plan
HER	Historic Environment Record
IAs	Initial Assessments
NEAS	National Environmental Assessment Service
NYCC	North Yorkshire County Council
OAR	Options Appraisal Report
PEAR	Preliminary Ecological Appraisal Report
RDC	Ryedale District Council

1. Introduction

1.1. Purpose of the desk-based assessment

Capita-AECOM was commissioned by the Environment Agency in July 2017 to identify potential flood risk management measures across a number of flood cells in the City of York. As part of this process, an initial heritage appraisal for potential flood storage north-east of Strensall was carried out. This identified the potential for the project to affect both designated and undesignated heritage assets. The heritage appraisal made recommendations for a detailed desk-based assessment (DBA) to be carried out in order to fully assess the heritage assets and archaeological potential within the flood cell and the effects that the project may have on them. This report presents the results of the desk-based research, the assessment of impacts from the project on heritage assets and the resultant effect on them.

This cultural heritage DBA describes the nature, extent and significance of the known and potential heritage resource within the site. It provides a baseline of known heritage assets and an assessment of heritage/archaeological potential. It makes recommendations for additional heritage investigation and assessment needed to enable construction of the project, and for the potential mitigation of the potential impacts proportionate to the significance of the heritage assets and the effects of the project.

This DBA will inform the project team of any historic-environmental constraints at an early stage which may be associated with the proposed flood storage option north-east of Strensall. The final design of the proposed option is not yet known; however, it is expected that it will comprise an embankment with excavations (possibly as borrow pits) using the material extracted to build the embankment. Topsoil stripping of the footprint is also likely to be proposed.

The site lies in an area which is under-researched and under-surveyed; for this reason, little information was returned from the relevant heritage resources. With the lack of evidence and construction details, this aim was not fulfilled.

1.2. Scheme background

The York Flood Alleviation Scheme (FAS) was initiated by the Environment Agency and CYC, following the December 2015 floods during which 627 properties flooded internally across the City of York. Some of the worst-affected areas were located along the banks of the River Foss, to the north-east of the City Centre. In order to remediate this and offer improved protection to properties in the Foss catchment, a number of options were proposed and appraised. Following the appraisal process, the option of implementing upstream storage north-east of Strensall, on the River Foss, was deemed to be the most beneficial and cost-effective.

The proposed site for development is located in a rural area, along the River Foss, north-east of Strensall and the City of York. The site and the surrounding area are sparsely populated and mostly consist of arable farmland intersected by occasional hedgerows and ditches with small interspersed patches of woodland habitat. Two residential properties and one farm are also located within the red line boundary. The site is crossed by multiple watercourses, including the River Foss which runs through the middle of the red line boundary, and the Black Dyke which flows from the east and parallel to a southern stretch of the proposed embankment.

The proposed storage area would be designed to store up to approximately 820,000 m³ of excess flood water and occupy an area of approximately 87 hectares. This would include the construction of a bund approximately 2.5 km long, running from the west bank of the River Foss, over the river and parallel to (but mainly set back from) the west bank of Black Dyke before bifurcating north-east towards, and ending just before, Lilling Low Lane. The 2.5 km of

embankment also includes three stretches adjacent to the south of Lilling Low Lane (east of Ings Lane), which would protect the road at three low points from inundation by the proposed storage area during an extreme flood event. It is currently being considered that a land drainage diversion channel or pipe will be required for land drainage which is currently passing through the site. This diversion channel or pipe would potentially pass along Lilling Low Lane (north side) and connect into Black Dyke via a route yet to be determined at the detailed design stage. The proposed storage area will be designed to provide a Standard of Protection (SoP) of 1 in 100yrs plus climate change (2070 epoch) to properties downstream, with only a small number of properties still requiring further Property Level Protection to attain this SoP.

The total area of the development red line boundary is currently approximately 150 hectares and includes the area of the Proposed Development (c. 87 ha) as well as allowance for the land drainage diversion, access tracks and potential compounds. Please note that these figures are approximate, and that exact areas, dimensions and volumes of the Proposed Development may be subject to change following the completion of the design. (Any such changes, including changes to the design, would also have to be reviewed for potential environmental impact and whether it would affect the Screening Opinion. However, we do not expect any fundamental changes to the design, nor extensions to the red line boundary at this time).

The material for the Proposed Development will be sourced using material from within the storage area itself ('cut and fill'), providing the opportunity to create new wetland habitat and thus a potential net gain for ecology / biodiversity. The materials extractions would be maximum 1.5 m in depth and cover approximately 8.5 ha.

1.3. Location and site description

The Foss Upstream Storage site straddles Ryedale District Council and City of York administrative areas, centred on NGR SE 65122 62565 (Figure 1). It lies north-east of Strensall approximately 12 km north-east of York, part within Lillings Ambo civil parish and part within Strensall civil parish.

The site largely comprises a mix of pasture and some arable cropping, with the Black Dyke forming the southern boundary and the River Foss bisecting the site. Within the pasture area towards the southern boundary, there is evidence of marshy areas and also a pit excavated by the current landowner in recent years.

The majority of the site was accessible apart from the far eastern extent where a crop had not been harvested and on the request of the landowner was not walked over. This included the length from East Lilling House Farm to Lilling Low Lane. Elsewhere the vegetation was low and the site easily visible.

The immediate vicinity and environs of the site comprise largely agricultural land with some pasture, small villages/residential areas, blocks of woodland and rivers/streams.

1.4. Geology and topography

Solid geology at the site is Mercia Mudstone with superficial deposits of Aine Glaciolacustrine (comprising clay and silt) to the east and Alluvium (comprising silts, clays, sand and gravels) to the west.

BGS borehole data generally confirms this with 30-40cm of topsoil with the following borehole logs:

- SE66SW25 Strensall STW1
- SE66SW26 Strensall STW1

- SE66SW27 Strensall STW1

Geotechnical survey data was not available at the time of writing, and this will be added at a later date. (Archaeological monitoring of the geotechnical test pits was undertaken, and information from the resultant archaeological report is included herein.) The site visit encountered spoil from the sampling on-site, and general observations were that it mirrored the BGS data.

Cartographic evidence suggests that in the 19th and 20th centuries, the southern part of the site adjacent to the Black Dyke was largely prone to flooding. LiDAR analysis did not identify any new archaeological sites. It is considered possible that upcast from the excavation of the Black Dyke could have masked underlying archaeological deposits.

The site is generally level with land rising towards the north/northeast. It comprises a mix of pasture with marshy pockets and arable land. A pit has been excavated in recent years by the current landowner to aid drainage. In the general area, other pits are present and were described as marl pits with the excavation of clays to lay on the sand soils in the area to reduce wind erosion.

2. Legislation and policy

2.1. The Ancient Monuments and Archaeological Areas Act 1979 (as amended)

The Act imposes a requirement for Scheduled Monument Consent for any works of demolition, repair and alteration that might affect a Scheduled Monument. The Act affords protection for York's designated Areas of Archaeological Importance (AAIs) and requires that the Operations Notice Procedure must be followed for all excavation and tipping operations within the designated area.

For non-designated archaeological assets, protection is afforded through the development management process as established both by the Town and Country Planning Act 1990 and the National Planning Policy Framework (NPPF 2018).

2.2. The Planning (Listed Buildings and Conservation Areas) Act 1990

The Act sets out the principal statutory provisions which must be considered in the determination of any application affecting either listed buildings or conservation areas. Section 16 (2) of the Act states that in considering whether to grant listed building consent for any works the local planning authority or the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.

Section 66(1) of the Act states that in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses. By virtue of Section 1(5) of the Act a listed building includes any object or structure within its curtilage.

Section 72 (1) of the Act states that in the exercise, with respect to any buildings or other land in a conservation area, special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area.

Recent case law (see particularly *E Northants DC v Secretary of State for Communities and Local Government* [2014] EWCA Civ 137) makes it clear that the duty imposed in the Act means that in considering whether to grant permission for development that may cause harm (substantial or less than substantial) to a designated asset (listed building or conservation area) or its setting, the decision-maker should give considerable importance and weight to the desirability of avoiding that harm. There is still a requirement for a planning balance, but it must be informed by the need to give that weight to the desirability of preserving the asset and its setting.

2.3. National Planning Policy Framework (NPPF 2018)

The NPPF establishes a set of core land-use planning principles that should underpin both plan-making and decision-taking. The conservation of heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations, is one of these core planning principles.

The NPPF sets out the key considerations in relation to requiring good design. It states that planning policies and decisions should aim to ensure that developments such as in conjunction

with other requirements respond to local character and history, and reflect the identity of local surroundings and materials, while not preventing or discouraging appropriate innovation.

However, it continues to state that it is proper to seek to promote or reinforce local distinctiveness. Planning policies and decisions should address the connections between people and places and the integration of new development into the natural, built and historic environment. Permission should be refused for development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions.

Section 16 of the NPPF sets out the key considerations in relation to heritage assets. Where changes are proposed, the NPPF sets out a clear framework to ensure that heritage assets are conserved, and where appropriate enhanced, in a manner that is consistent with their significance. They work in conformity with the heritage consent regimes established in the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990.

The NPPF sets out the importance of being able to assess the significance of heritage assets that may be affected by a development proposal. Significance is defined in Annex 2 as the value of an asset because of its heritage interest. This interest may be archaeological, architectural, artistic or historic and can extend to its setting. The setting of a heritage asset is defined in Annex 2 as “the surroundings in which a heritage asset is experienced”.

In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset’s importance and no more than is sufficient to understand the potential impact of the proposal on their significance (paragraph 189). Similarly, there is a requirement on local planning authorities to identify and assess the particular significance of any heritage asset that may be affected by a proposal; and that they should take this assessment into account when considering the impact of a proposal on a heritage asset (paragraph 190).

In determining planning applications, local planning authorities should take account of the following three points:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
- the desirability of new development making a positive contribution to local character and distinctiveness (paragraph 192).

Paragraph 189 of the NPPF introduces the concept that heritage assets can be harmed or lost through alteration or destruction or development within their setting. This harm ranges from less than substantial through to substantial. With regard to designated assets, paragraph 194 states that the more important the asset, the greater the weight should be on its conservation. Scheduled monuments, protected wrecks, battlefields, grade I and grade II* listed buildings, grade I and grade II* registered parks and gardens, and World Heritage Sites are identified as assets of the highest significance. Any harm or loss of heritage significance requires clear and convincing justification. Substantial harm or loss should be exceptional and wholly exceptional with regard to those assets of highest significance.

In instances where development would cause substantial harm to or total loss of significance of a designated asset, consent should be refused unless that harm or loss is ‘necessary to achieve substantial public benefits that outweigh that harm or loss’ (paragraph 195). In instances where development would cause less than substantial harm to the significance of a designated asset the harm should be weighed against the public benefits of the proposal including its optimum viable use (paragraph 196). In relation to non-designated assets a

balanced judgment is required, taking into account the scale of harm or loss and the significance of the asset (paragraph 197).

Guidance on the application of heritage policy within the NPPF is provided by on-line Planning Practice Guidance and best practice advice is provided by a series of Historic England Good Practice Advice notes.

National Planning Practice Guidance (PPG) The Planning Practice Guidance (PPG) is a government produced interactive on-line document that provides further advice and guidance to accompany policies in the NPPF. It expands on terms such as 'significance' and its importance in decision making. The PPG clarifies that being able to properly assess the nature, extent and the importance of the significance of the heritage asset and the contribution of its setting, is very important to understanding the potential impact and acceptability of development proposals (Paragraph: 009, Ref. ID: 18a-009-20140306, Revision date: 06 03 2014).

The PPG states that in relation to setting a thorough assessment of the impact on setting needs to take in to account, and be proportionate to, the significance of the heritage asset under consideration and the degree to which proposed changes enhance or detract from that significance and the ability to appreciate it (Paragraph: 013, Ref. ID: 18a-011-20140306, Revision date: 06 03 2014).

The PPG usefully discusses how to assess if there is substantial harm. It states that what matters in assessing if a proposal causes substantial harm is the impact on the significance of the asset. It is the degree of harm to the asset's significance rather than the scale of the development that is to be assessed (Paragraph: 017, Ref. ID: 18a-017-20140306, Revision date: 06 03 2014). In relation to conservation areas it is the demolition of a non-designated asset that is assessed has making a positive contribution to character or appearance that is more likely to amount to substantial harm (paragraph 018, Ref. ID: 18a-018-20140306, Revision date: 06 03 2014). Generally, harm to heritage assets can be avoided or minimised if proposals are based on a clear understanding of the heritage asset and its setting (Paragraph: 019, Ref. ID: 18a-019-20140306, Revision date: 06 03 2014).

The NPPF indicates that the degree of harm should be considered alongside any public benefits that can be delivered by development. The PPG states that these benefits should flow from the proposed development and should be of a nature and scale to be of benefit to the public and not just a private benefit. However, benefits do not always have to be visible or accessible to the public in order to be of public benefit. Public benefits may include heritage benefits, such as:

- sustaining or enhancing the significance of a heritage asset and the contribution of its setting;
- reducing or removing risks to a heritage asset; and,
- securing the optimum viable use of a heritage asset in support of its long-term conservation. (Paragraph: 020, Ref ID: 18a-020-20140306, Revision date: 06 03 2014)

2.4. City of York Draft Local Plan Incorporating the 4th Set of Changes (April 2005) and the associated proposals maps for north York, south York and the city centre

The Local Plan Strategy for Safeguarding the Historic Character and Setting of York is contained within Chapter 1 of the Local Plan with Chapter 4 containing policies relating specifically to the historic environment and those relevant to the Site are:

- HE1 Designation of Conservation Areas;
- HE2 Development in Historic Locations;
- HE4 Listed Buildings;
- HE5 Demolition of Listed Buildings and Buildings in Conservation Areas;

- HE9 Scheduled Ancient Monuments;
- HE10 Archaeology;
- HE11 Trees and Landscape; and
- HE12 Historic Parks & Gardens.

2.5. City of York Local Plan Publication Draft (February 2018)

York Council is currently preparing a new Local Plan, with the Publication Draft submitted to the Secretary of State for Examination on 25th May 2018. The draft has some weight given it is at an advanced stage. The following draft policies relate to heritage and are relevant to the Site:

- Policy D1: Placemaking
- Policy D2: Landscape and Setting
- Policy D4: Conservation Areas
- Policy D5: Listed Buildings
- Policy D6: Archaeology
- Policy D7: The Significance of Non-designated Heritage Assets
- Policy D9: City of York Historic Environment Record

2.6. Ryedale District Council Local Plan Strategy (2013)

The Local Plan Strategy outlines the councils approach to heritage. Objective 4 states:

Protect and, where appropriate, enhance the distinctive character of the District's settlements, landscapes and biodiversity, safeguarding those elements of the historic and natural environment that are recognised as being of local, national or international importance.

Policy SP12 sets out the council's position on Heritage. Particular note should be made of the preamble in relation to landscape which states:

Encouraging an awareness of the value of the District's historic landscapes will also be an important way in which they are protected and this is something that this Strategy seeks to support.

3. Methods

3.1. Aims and objectives

The aim of the desk-based assessment is to identify heritage assets within the study area of the scheme and to describe the significance of any heritage asset affected, including any contribution made by their setting. The assessment is a baseline document from which the need for additional heritage investigation and assessment can be determined, as the scheme develops.

The objectives of the desk-based assessment are to:

- describe the proposed interventions;
- identify designated heritage assets with the potential to be affected by the preferred option;
- identify non-designated heritage assets with the potential to be affected by the preferred option;
- describe the significance and any contribution made by the setting of the heritage assets affected;
- make recommendations for additional heritage investigation and assessment needed to enable construction of the project; and
- make recommendations for the potential mitigation of the potential impacts proportionate to the significance of the heritage assets and the effects of the project.

3.2. Historic England guidance

Historic England have published a series of Good Practice Advice (GPA) of which those of most relevance to this appraisal are GPA2 Managing Significance in Decision-taking (March 2015) and GPA3 (Second Edition) The Setting of Heritage Assets (December 2017).

GPA2 emphasises the importance of having a knowledge and understanding of the significance of heritage assets likely to be affected by the development and that the 'first step for all applicants is to understand the significance of any affected heritage asset and, if relevant the contribution of its setting to its significance' (para 4). Early knowledge of this information is also useful to a local planning authority in pre-application engagement with an applicant and ultimately in decision making (para 7).

GPA3 (Second Edition) provides advice on the setting of heritage assets and consolidates and supersedes earlier advice on that matter published by Historic England in 2015 and 2011 (Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets and Seeing the History in the View: a Method for Assessing Heritage Significance within Views

The assessment is carried out in accordance with current best practice guidance including:

- *Standard and guidance for historic environment desk-based assessment*. (2014; rev 2017) Chartered Institute for Archaeologists
- *Minimum Technical Requirements 801_14_SD01 Cultural Heritage and archaeology standard* (2015). Environment Agency.

It was carried out by an appropriately experienced archaeologist. Jenny Young BA (Hons), MA; undertook and prepared the assessment and is a Member of the Chartered Institute for Archaeologists.

The information in this document is presented with the proviso that further data may yet

emerge. Capita-Aecom cannot, therefore, be held responsible for any loss, delay or damage, material or otherwise, arising out of this report. The document has been prepared in accordance with the Code of Conduct of the Chartered Institute for Archaeologists.

3.3. Significance and setting

In terms of significance, the assessment of the significance of the asset is considered in accordance with guidance and good practice issued by Historic England and the NPPF (2018). A methodology for the assessment of significance of heritage assets is outlined in Conservation Principles (English Heritage, 2008).

Significance is often established by statutory designations such as listed buildings, scheduled monuments and conservation areas. These designations provide a formal framework of significance, but are in themselves too broad to reflect the heritage interest of a particular building or site.

More particular advice as to what makes up significance is set out in Conservation Principles (p.30-60), in which is set out a method for thinking systematically and consistently about the heritage values that can be ascribed to a place. Historic England defines the heritage significance of an asset as the sum of its heritage values and includes consideration of factors such as the contribution made by setting and context. This guidance has informed the assessment but uses the terminology of NPPF in relation to heritage interest i.e. Archaeological, Architectural, Historic and Artistic interest.

Historic England (GPA2, 2015) identifies a stepped approach to the assessment of significance, comprising:

- identify which assets may be affected;
- assess whether and to what degree setting makes a contribution to significance;
- assess the effects of development on that significance; and
- look to maximise enhancement and avoid or minimise harm.

3.4. Study area

At the time of writing, the proposals were for a linear embankment with some suggestion of excavations / borrow pits for habitat creation and possible additional flood storage within the immediate area. Based on this, the extent of the study area was established through professional judgement of the author. A HER request was made an area of up to 1.5 km from site centre SE 64622 63400. For data from the City of York HER, the study area was extended slightly to the west on the advice of the HER Officer to provide more contextual information.

The geographical extent of the archaeological/built heritage study area has been judged as appropriate to provide the context of known assets and assess the potential for unknown archaeological remains to occur within the flood cell. It is also considered appropriate area to assess an effect either on the setting or on the significance of heritage assets.

3.5. Desk-based sources

The preparation of the baseline was informed by information collated from sources including:

- City of York Historic Environment Record (CoYHER)
- North Yorkshire Historic Environment Record (NYHER)
- Regional research agendas
- National Mapping Programme assessments

- Historic Landscape Characterisation
- North Yorkshire County Archives
- Borthwick Institute, York
- National Museum of Scotland for Ordnance Survey Maps
- National Heritage List for England
- British Geological Survey (BGS) Geology of Britain Viewer
- Archaeology Data Service
- Information gained through archaeological monitoring of geotechnical site investigations for the Project
- Aerial photographs
- LIDAR
- Any relevant planning applications were consulted to identify any heritage assessments which may not have been submitted to the relevant HER
- Opendomesday

3.6. Site Visit

A site inspection visit of the proposed embankment was conducted on 3rd August 2018. The purpose of the site visit was to:

- assess the general historic character of the site and surrounding study area
- assess the condition of known archaeological and built heritage assets and their setting
- identify areas within the Site that may contain previously unidentified archaeological remains
- identify the location, extent and severity of post-medieval and modern ground disturbance and previous construction impacts

The site was visited on the 3rd August 2018 and GI borehole and test pitting were still in progress. Conditions were dry and bright with good visibility. It comprises a mix of pasture with marshy pockets and arable land. A pit has been excavated in recent years by the current landowner to aid drainage. In the general area, other pits are present and were described as marl pits with the excavation of clays to lay on the sandy soils in the area to reduce wind erosion.

The Black Dyke and River Foss were almost dry. Banks were clear and channel/bank erosion measures comprising wood revetment had taken place in the channels. The wood appeared to be modern and discussion with the landowner indicated that the local drainage board had implemented them.

Known heritage assets have been given a unique reference number and are identified within the text, in brackets. They can be cross-referenced to the gazetteer in Appendix A of this report and are located on the Heritage Assets Plan, see Appendix B.

Assets are individually referenced using their relevant National Heritage List for England reference numbers, Historic Environment Record numbers (e.g. City of York: EYO, MYO or NYCC: ENY), or project specific identifiers as appropriate.



Plate 1. Looking northeast towards East Lilling Farm from the wooden bridge across Black Dyke



Plate 2. Pond excavated by landowner



Plate 3. An example of the wooden revetment in Black Dyke, undertaken by the drainage board



Plate 4. Looking northeast with East Lilling Farm to the right of shot and borehole material in foreground.

3.7. Consultation

The Archaeologist for City of York Council and for North Yorkshire County Council were consulted during the proposals for GI works associated with the Project. This consultation included the approach and methods for archaeological monitoring of geotechnical site investigations. They were also consulted through the HER Officer regarding any gaps in the data set provided by the HER. The scope of the assessment was agreed with Stephen Kemp, NEAS Archaeological Officer.

As the proposals do not affect scheduled monuments, listed buildings or conservation areas, Historic England and the local Conservation Officer were not consulted.

Consultation with the North Yorkshire HER indicated that the site lies within an area which is under-surveyed and researched.

4. Historical background

At the time of the Domesday Survey of 1086, it is likely the site lay within Strensall in Bulford Hundred in the North Riding (<http://opendomesday.org/place/SE6360/strensall>). It lay within a rural area likely to be arable or pasture. The construction date of the Black Dyke (forming the southern boundary) is unknown but it is likely to have been dug to drain Strensall Common into the Foss (River Foss Society, personal communication). Upcast from this excavation could be spread across the area between the Blake Dike and the River Foss.

4.1. Historic map analysis

Today the site lies partially within Strensall Civil Parish and Lilling Ambos Civil Parish. Historically it lay with Sheriff Hutton parish with Lillings Ambo being a township. Searches at the archives were made for the following:

- Strensall
- Lillings Ambo
- Sheriff Hutton
- East Lilling
- West Lilling
- key landowner names in the area

No historic mapping for the Site was available at the archives. The only mapping available at the time of writing is the Ordnance Survey mapping from the 19th century and later. It is not reproduced here but is readily available from internet sources.

The earliest OS map dates from a survey of 1852 and shows the Black Dyke forming the southern boundary, with the River Foss to the north. From the property known as Wallbutts, a track appears to cross the Black Dyke served by a wooden bridge. Either side of the track appear to be ditch like features. At the time of the site visit a line of darker green grass was seen, indicating infilled ditches either side of the track which has since gone.



Plate 5 showing the darker green line of infilling

By 1909, the OS 6inch series map indicates that the area bordering Black Dyke and the River Foss is liable to flood. Old Marl and Sand Pits are shown within the catchment (see Appendix C, Figure 3 where the features are clearly seen). By the 1950s, the track side ditches appear filled in.

In terms of Historic Landscape Character (HLC) (mapped from historic mapping) the Site lies within Enclosed Land: Modern Improved Fields (HNY6961). It is described as:

a large area of modern improved fields which consists of large irregular fields defined by erratic hedgerows. This is such an extensive area that it includes a number of previous characters, however the dominant one is planned enclosure. This seems to have originally been the Sheriff Hutton and West Lilling award which dates to the late 18th century, between 1769 and 1776. One of the interesting changes in this area is the creation of lots of ponds across the area which don't seem evident on the first or second edition OS

5. Archaeology

5.1. Designated Archaeology Assets

The closest scheduled monument is 1.3km to the northeast of the site and cannot be viewed from the site. The scheduled site comprises the deserted medieval village of East Lilling (NLHE 1003682).

5.2. Undesignated Archaeology Assets

The Historic Environment Record searches for both local authority areas returned very few results (Figure 2). The feedback from North Yorkshire County Council was that the site lies within an area which is under-researched and under-surveyed. There are no archaeological sites recorded within the Site itself. LiDAR data was obtained for the site but unfortunately only shows the southwestern section of the catchment. Applying hillshade to the raw data (50 cm DTM) did not highlight any archaeological features (Appendix C, Figure 3).

The earliest archaeological remains date to the Roman period and comprise remains indicative of settlement.

A Romano-British settlement with associated field systems (MNY17993) have been identified by aerial photography and are located 350m to the west of the catchment area.

A Roman villa is located 800m north of the catchment area (MNY23937). An archaeological evaluation (ENY14, ENY359, ENY551 & ENY571) of the Saltend ethylene pipeline a Roman villa and associated field system. A number of important artefactual and ecofactual assemblages were recovered.

A Roman road is recorded 900 m to the north-northeast (MNY190). It is thought that it lies on the course of an earlier road and can be traced through hedgerows, parish boundaries and place names from Thirsk to the River Tees.

Undated enclosure (MNY17994 & ENY4660), linear ditch (MNY17995) and trackway (MNY17996) are recorded 1km to the west and northwest of the catchment. An archaeological watching brief undertaken at Lilling Green Farm, during the construction of a cattery, garage and store did not record any archaeological remains (ENY6069).

Medieval cropmarks are recorded through aerial photographs 700m to the west of the site (MYO181). Their form is linear with an attached rectilinear ditch. There are also other ditches attached. These are also recorded as 'Events' on the HER as EYO1029; 1191; 1192; 1886; 1188; 1147 and 1030.

Ploughed out ridge and furrow (MYO2399 & 2400) is recorded nearly 1km to the west of the Site. Undated enclosure (MYO183) has been recorded west of the Site.

Two photographs are recorded within the vicinity of the site (EYO1862 & EYO1856) but are untraceable. They are no longer in the possession of the HER. A 1965 aerial photograph shows the site from a dataset called Flaxton Town Map Aerial Survey (EYO5976). No cropmarks are visible.

A search of the Historic England Aerial photograph catalogue identified three vertical shots within the immediate area: RAF/106G/UK/1491 (dating from 1946), RAF543/368 (dated 1958), and OS/04521 (dated 2004). These have not been viewed.

The Old Foss Navigation is recorded 570m to the west of the site (MYO182). Dating from the 18th century, the entry records its earthwork remains. The Foss Navigation Company (MYO2045) was formed in 1793 (MYO2045) and the company had the power to purchase land to make a navigable channel to link the junction of the River Foss and Ouse to Stillington Mill. Work began in 1794, with cutting, building of locks, lock-keeper cottages and bridges as far as Strensall. More funds were raised in 1801 and the cutting of a canal was started but continued only as far as Sheriff Hutton Bridge when funds ran out. By 1805 the work was completed.

Slit trenches identified on aerial photographs (MYO3591) are recorded 440m to the southwest of the Site. These have been interpreted as 20th century practice works.

Archaeological fieldwalking was undertaken in 1998 to the northeast of the site (ENY2432). The fieldwalking was carried out in relation to the Teesside to Saltend Ethylene Pipeline. No artefacts were recovered. This had been preceded by a Desk Based Assessment (ENY2444).

Geotechnical investigation work was undertaken as part of the scheme assessment. Archaeological monitoring was carried out by York Archaeological Trust during the excavation of 21 test pits within the catchment area. The report summarises the findings as:

Natural deposits were encountered at depths between 0.5m and 4m BGL and comprised of clay, sandy clay and sand deposits. These evidenced the alluvial and fluvial activity of the River Foss, with wood preserved in the fluvial waterlogged deposits close to the river.

The wood fragments were recovered from deposits 1.2 – 2.2 m below the present ground surface.

6. Built heritage

The nearest listed buildings are 700 m to the north-east of the site and cannot be viewed from the site. There are no Conservation Areas, Registered Battlefields or Registered Parks and Gardens within the study area.

The three listed buildings are:

- East Lilling Grange (NHLE 1173388) Grade II – mid 19th century house.
- East Lilling Farmhouse (NHLE 1149619) Grade II – late 18th century house
- Gennell Farmhouse (NHLE 1315751) Grade II – early 18th century farmhouse

Wallbutts to the southwest and East Lilling House Farm adjacent to the site are not listed buildings, but appear on 19th century maps. Wallbutts cannot be seen from the site, but East Lilling House Farm can.

7. Potential for impacts

7.1. Archaeology

The site lies in an area which is under-surveyed and under-researched. Historically, the Site appears to have been liable to flooding in the 19th century. The Black Dyke is a man-made feature dating prior to 1851 which is when it appears on historic mapping. In the wider area, undated cropmarks have been recorded along with medieval features.

It is considered there is a low potential for remains dating to the prehistoric and Saxon periods. There is medium potential for Roman and medieval remains and a high potential for post-medieval remains relating to the construction of the Black Dyke.

Monitoring of the geotechnical test pits (see Section 5.2 regarding geotechnical investigation) indicates that there is the potential for preserved organic remains at approximately 1.2 m deep. These are likely to indicate former channels of the River Foss.

However, this assessment comes with the proviso that as an under-surveyed and under-researched area, and remains of any date could be encountered.

7.2. Built heritage

There are three listed buildings approximately 700 m north-east of the proposed works. They cannot be viewed from the site. Wallbutts to the southwest is not a listed building and similarly cannot be seen. East Lilling House Farm can be viewed from the site but is not a listed building. In the latter case, setting could be compromised. The farm is surrounded by modern farm buildings.

8. Conclusions

8.1. Archaeology

No archaeological remains are recorded on the site and therefore the potential lies with those remains not yet identified. In order to identify such remains, it is advisable to undertake non-intrusive survey in the form of a geophysical survey to identify risk. The site is suitable for geophysical survey.

In terms of setting, without knowing the construction methodology, it is impossible to assess the effect on those designated archaeological receptors such as the deserted medieval village of East Lilling 1.3km northeast of the site. Once the details become known then an assessment on setting can be undertaken. This may just form a statement.

When the preferred option(s) and its/their design is known, and the suggested further survey work is completed, a Heritage Impact Assessment, incorporating archaeological impact assessment, should be undertaken to more accurately determine the impacts on archaeological receptors. It is expected that as a minimum a geophysical survey of the footprint of the proposed works is undertaken and the results incorporated in a report which details the data derived from the aerial photographs and LiDAR.

Any proposals for archaeological works must be agreed with relevant stakeholders and clients including the Environment Agency and the Local Authority.

If works have not started within 12 months from the date of this assessment, an updated HER search for the site should be undertaken to ensure that no new information has come to light in the intervening period.

8.2. Built heritage

In terms of setting, without knowing the construction methodology, it is impossible to assess the effect on those designated receptors such as the three nearest listed buildings 700 m+ east/northeast of the site. Once the details become known then an assessment on setting can be undertaken. This may just form a statement.

At present this document forms a desk-based assessment, once further information such as a geophysical survey and construction details become clearer, a Heritage Impact Assessment can be undertaken as a standalone document or as a chapter within a wider environmental assessment report or environmental statement.

9. References

English Heritage (2001). *Vale of York National Mapping Programme. Project Review.*

Historic England (2007). *Yorkshire Archaeological Research Framework; Research Agenda.*

MAP Archaeological Practice Ltd. (2013). *Land north of Brecks Lane.*

Ordnance Survey 6 inch Map Series Sheet 140 & 141 (Surveyed 1851; Published 1856)

Ordnance Survey 6 inch Map Series Sheet CXL.SE (rev. 1909; Pub 1912)

Ordnance Survey 6 inch Map Series Sheet CXL.SE (rev. 1950; Pub 1952)

Ordnance Survey 6 inch Map Series Sheet CXL.SW (rev. 1909; Pub 1912)

Ordnance Survey 6 inch Map Series Sheet CXL.SW (rev. 1950; Pub 1952)

Appendix A – Gazetteer of HER Data

HER No.	NGR	Description	Period/Activity
North Yorkshire HER			
MNY17993	SE 6403 6334	Roman British Settlement, and associated field system and enclosures, west of Lilling Green Farm	Roman
MNY17994	SE 6385 6215	Enclosure	Undated
MNY17995	SE 6427 6200	Ditch	Undated
MNY17996	SE 6356 6313	Trackway	Undated
MNY190	SE 660 644	Roman Road, from Thirsk to the River Tees	Roman
MNY23937	SE 63974 64458	TSEP Site 169, Roman Villa Site at West Lilling	Roman
ENY2432	SE 66082 63025	TSEP Fieldwalking Plot 51.6, North of Lilling Low Lane, Lillings Ambo	Fieldwalking
ENY2444	SE 46662 82771	TSEP, Preliminary Route Assessment	Desk-based assessment
HNY6961		Planned large scale parliamentary enclosure	18th Century - 1769 AD to 1776 AD
ENY14	SE 64000 64400	TSEP Site 169, Lilling Low Lane	Excavation
ENY359	SE 64027 64465	TSEP Site 169, Lilling Low Lane	Trial trenching
ENY4660	SE 4549 8639		Cropmark study
ENY551	SE 63960 64537	TSEP Site 169 (Part II), Lilling Low Lane	Magnetometer survey
ENY571	SE 64060 64444	TSEP Site 169, Lilling Low Lane	Magnetometer survey
ENY6069	SE 64394 63310	Lilling Green Farm, Ings Lane	Watching brief
City of York Council HER			
MYO181	SE 6384 6218	Enclosure	Medieval
MYO182	SE 6427 6199	Ditch	Unknown
MYO183	SE 6438 6186	Enclosure	Unknown
MYO2045	SE 62521 56671	Foss Navigation/River Foss	18 th century
MYO2399	SE 6394 6166	Ploughed out ridge and furrow	Medieval
MYO2400	SE 6422 6141	Ridge and furrow	Medieval
MYO3591	SE 6478 6161	Slit trenches	20 th century
EYO5883	SE 6421 6138	Land North of Brecks Lane Strensall	Desk-based Assessment

HER No.	NGR	Description	Period/Activity
EYO1029	SE 6379 6219	Ditches of fields systems	Aerial photograph
EYO1030	SE 6369 6199		Aerial photograph
EYO1136	SE 6389 6209		Aerial photograph
EYO1147	SE 6379 6219	Enclosure former field systems	Aerial photograph
EYO1188	SE 6379 6209		Aerial photograph
EYO1189	SE 6389 6209	Enclosure and fields	Aerial photograph
EYO1191	SE 6389 6219	Enclosure and fields	Aerial photograph
EYO1192	SE 6379 6209		Aerial photograph
EYO1856	SE 6530 6260		Aerial photograph
EYO1862	SE 6530 6209	Linear mark	Aerial photograph
EYO1886	SE 6359 6209	Ditches	Aerial photograph
EYO5976	SE 6480 6242		Aerial photograph

Appendix B – Aerial Photograph Gazetteer

HISTORIC ENGLAND Air Photographs Full single listing - Verticals, Standard order Customer enquiry reference: 114872											
Sortie number	Library number	Camera position	Frame number	Heid	Centre point	Run	Date	Sortie quality	Scale 1:	Focal length (in inches)	Film details (in inches)
RAF1106G/UK1491	255	RP	3042	P	SE 650 624	2	10 MAY 1946	A	10000	20	Black and White 8.25 x 7.5
RAF1106G/UK1491	255	RP	3126	P	SE 656 621	4	10 MAY 1946	A	10000	20	Black and White 8.25 x 7.5
RAF1106G/UK1491	255	RP	3127	P	SE 648 621	4	10 MAY 1946	A	10000	20	Black and White 8.25 x 7.5
RAF543/368	1654	F21	57	P	SE 650 627	1	28 AUG 1958	AB	10000	36	Black and White 8.25 x 7.5
RAF543/368	1654	F21	288	N	SE 652 626	4	28 AUG 1958	AB	10000	36	Black and White 8.25 x 7.5
RAF543/374	1657	F21	63	P	SE 651 627	5	03 SEP 1958	A	10000	36	Black and White 8.25 x 7.5
RAF543/1889	2111	F22	78	P	SE 653 632	6	03 OCT 1962	AB	10000	20	Black and White 8.25 x 7.5
RAF543/1889	2111	F22	79	P	SE 647 631	6	03 OCT 1962	AB	10000	20	Black and White 8.25 x 7.5
MAL67045	4649	V	8	P	SE 656 621	1	12 JUN 1967	A	7500	6	Black and White 9 x 9
RAF1106G/UK1417	5027	RP	3220	P	SE 654 630	4	15 APR 1946	A	9800	20	Black and White 8.25 x 7.5
RAF1106G/UK1417	5027	RP	3221	P	SE 648 629	4	15 APR 1946	A	9800	20	Black and White 8.25 x 7.5
MAL72066	6046	V	161	P	SE 645 626	4	17 JUL 1972	A	10000	6	Black and White 9 x 9
OS967339	11062	V	88	P	SE 649 627	4	01 SEP 1967	A	7500	12	Black and White 9 x 9
OS967339	11062	V	89	P	SE 656 627	4	01 SEP 1967	A	7500	12	Black and White 9 x 9
OS94514	14764	V	42	P	SE 656 617	1	09 OCT 1994	A	8100	12	Black and White 9 x 9
OS99661	23140	V	118	N	SE 650 625	3	02 AUG 1999	A	6900	12	Black and White 9 x 9
OS99661	23140	V	119	N	SE 655 624	3	02 AUG 1999	A	6900	12	Black and White 9 x 9
OS90013	24048	V	58	N	SE 647 627	4	12 APR 2003	A	5000	12	Colour 9 x 9
OS90013	24048	V	59	N	SE 647 622	4	12 APR 2003	A	5000	12	Colour 9 x 9
OS904521	24482	V	195	N	SE 651 625	6	01 MAY 2004	A	8000	6	Colour 9 x 9
OS906903(Z)	24790	V	363	N	SE 646 633	2	04 JUN 2005	A	10000	6	Colour 9 x 9
OS906903(Z)	24790	V	364	N	SE 656 633	2	04 JUN 2005	A	10000	6	Colour 9 x 9
OS906904	24791	V	660	N	SE 646 616	10	04 JUN 2005	A	10000	6	Colour 9 x 9
OS906904	24791	V	661	N	SE 656 616	10	04 JUN 2005	A	10000	6	Colour 9 x 9
RAF58/2351	50012	F22	94	N	SE 647 619	9	19 JUN 1959	AC	10000	20	Black and White 8.2 x 7.0
RAF58/2351	50012	F22	95	N	SE 654 619	9	19 JUN 1959	AC	10000	20	Black and White 8.2 x 7.0
										Total Sorties	15
										Total Frames	26

Appendix C - Figures 1-3

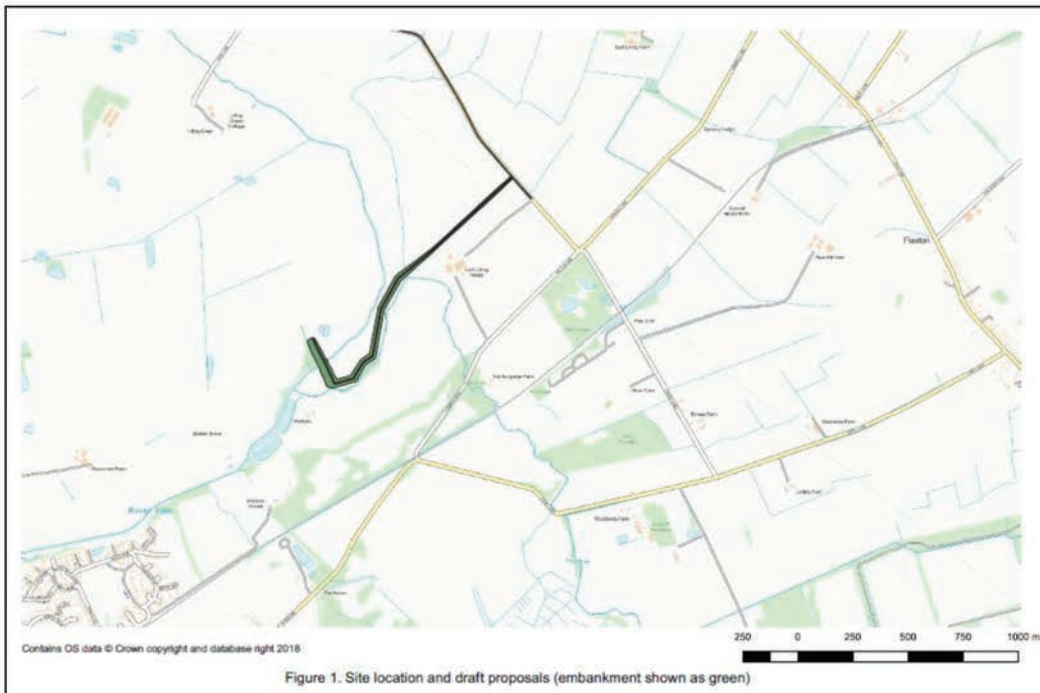
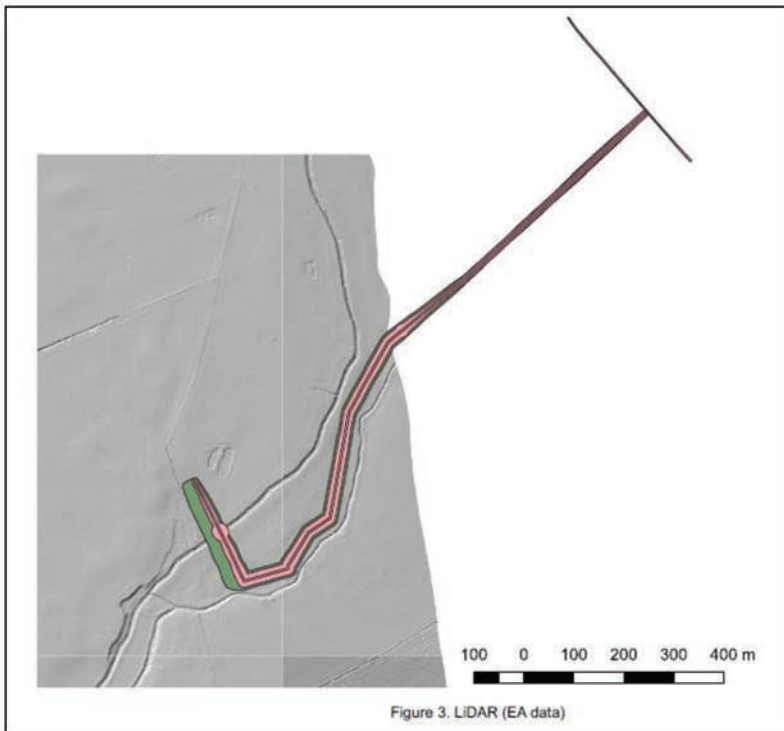


Figure 1. Site location and draft proposals (embankment shown as green)



Appendix B – Ground Investigations Archaeological Watching Brief



YORK ARCHAEOLOGICAL TRUST

Geoarchaeological Trial Pit Monitoring at Lilling Green, Strensall, North Yorkshire

By Mary-Anne Slater

YAT Evaluation Report 2018/135 September 2018



YORK ARCHAEOLOGICAL TRUST



York Archaeological Trust undertakes a wide range of urban and rural archaeological consultancies, surveys, evaluations, assessments and excavations for commercial, academic and charitable clients. We manage projects, provide professional advice and fieldwork to ensure a high quality, cost effective archaeological and heritage service. Our staff have a considerable depth and variety of professional experience and an international reputation for research, development and maximising the public, educational and commercial benefits of archaeology. Based in York, Sheffield, Nottingham and Glasgow the Trust's services are available throughout Britain and beyond.

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Abbreviations

YAT – York Archaeological Trust

BGL – Below Ground level

AOD – Above Ordnance Datum

NON-TECHNICAL SUMMARY

Between the 28th August and the 4th September 2018 York Archaeological Trust undertook monitoring of geoarchaeological trial pits at Lilling Green, Strensall (SE 65024 63189). Archaeological monitoring of site investigations for the Five Year Flood Management Plan for York (FMP) was undertaken for Capita. The work was based on a Written Scheme of Investigation produced by YAT. The works involved the monitoring and recording of 21 trial pits.

Natural deposits were encountered at depths between 0.5m and 4m BGL and comprised of clay, sandy clay and sand deposits. These evidenced the alluvial and fluvial activity of the River Foss, with wood preserved in the fluvial waterlogged deposits close to the river.

KEY PROJECT INFORMATION

Project Name	River Foss FMP WB
YAT Project No.	6088
Document Number	2018/135
Type of Project	Archaeological Trial Pit Monitoring
Client	Capita
NGR	SE 65024 63189
OASIS Identifier	yorkarch1-327086

REPORT INFORMATION

Version	Produced by		Edited by		Approved by	
	Initials	Date	Initials	Date	Initials	Date
1	MS	11/09/18	IDM	12/09/18	IDM	12/09/18

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1 INTRODUCTION

Between the 28th August and the 4th September 2018 YAT conducted archaeological monitoring of trial pits for the FMP at Lilling Green, Strensall (SE 65024 63189) (Figure 1).

The work was undertaken for Capita to assess the character of the deposits revealed by the trial pitting as part of Site Investigation works for the proposed River Foss Upstream Storage project.

2 METHODOLOGY

The trial pits were excavated by an 8-tonne tracked machine to a depth of 4m unless restrictions meant the trial pit was stopped earlier (field drains, water, trench collapse). An extra three trial pits were added to the original schedule, bringing the total to 21 (Figure 2). All trial pits were observed by YAT. Deposit characteristics and depths were recorded and digital photographs were taken.

3 LOCATION, GEOLOGY & TOPOGRAPHY

The site was located at Lilling Green, Strensall along the River Foss (Figure 1). The site measured c.180 hectares. The area is a low-angle river vale lying between 15.65m AOD and 18.75m AOD, with the River Foss running through the centre. The site was characterised by agricultural fields, bounded by Lilling Low Lane to the north, field boundaries to the east, the Black Dyke drain to the south, and the path/bridleway which connects Walbuts to Lilling Green to the west.

The geology of the site consists of superficial deposits of Alne Glaciolacustrine Formation clay-silts and glacial lake silty sands of the Sutton Sand Formation, with silty-clay alluvium in former channels of the River Foss. The underlying bedrock is Mercia Mudstone, a sedimentary bedrock formed approximately 201 to 252 million years ago in the Triassic Period (BGS).

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The following is taken from the Written Scheme of Investigation (Appendix 5).

The Vale of York was created as a major lake formed during the retreat of the last glaciers c. 12,000 years BP. As this lake slowly drained it created a landscape of mires, moorland and higher points that would have attracted Mesolithic human activity.

Very little is known about this area until the establishment of the Roman fortress at York, 12km to the south-west, but elsewhere in the Vale of York Iron Age settlements have been identified on areas of slightly raised ground bordered by marshes and, in this case, the early River Foss.

Geo-technical investigation has revealed potential earlier courses of the River Foss (Figure 3). If these are present, they could retain good environmental evidence of previous land use and human activity.

The site lies c.2.5km north-east of the village of Strensall, a settlement recorded in Domesday and thought by some to be associated with a 9th century reference to a place called

'Streonaeshalch' mentioned in conjunction with the AD 664 Synod of Whitby where the early Christian church of the Kingdom of Northumberland adopted a style of worship influenced by Rome rather than one developed in Ireland.

The deserted medieval settlement of East Lilling lies 2km to the north-east of the site. There is a low potential for medieval settlement activity in the proposal area.

The River Foss was canalised from its confluence with the River Ouse in York to Sheriff Hutton Bridge in the 1780s. The present course of the river derives from this period. The Navigation was closed up-stream of Layerthorpe in York by 1850.

The available historical mapping shows the development of the area from a mid 19th century enclosed landscape of small fields through gradual amalgamation to the larger agricultural fields currently present.

5 RESULTS

All 21 trial pits were assigned context numbers corresponding to their designation (Trial Pit 1 commenced with context 100 onwards, Trial Pit 2 commenced with context 200 onwards etc.). Full descriptions of these deposits can be found in the context table which forms Appendix 2 of this report.

5.1 Natural

Glacial boulder clay was the earliest natural deposit encountered; comprising of greyish brown sandy clay with large rounded stones (302, 604, 803, 1104, 1204, 2003), and greyish brown sandy clay without stones (204, 505, 702, 905, 1004, 1602, 2002, 2102). These were encountered between 1.1-4m BGL.

In Trial Pit 17, possibly in the area of a former channel of the River Foss, an orange brown silty sand (1702) was present rather than the glacial boulder clay. This was encountered between 2-3.6m BGL.

Probable alluvial clays were also present; comprising of mottled orange/blue sandy clay (102, 1402, 1701), brown clay (903), orange brown sandy clay (201, 301, 401, 501, 602, 902, 1102, 1202, 1301, 1501), blue grey clay (502, 601, 802, 901, 1002, 1101, 1201, 1803, 1903), orange sandy clay (503, 1902), and orange grey sandy clay (1901). These were present between 0.25-4m BGL.

In trial pits close to the River Foss, organic deposits were present, some of which contained wood. These potential fluvial deposits were composed of grey clayey sands (202, 402), dark blue grey silty sand (203), or dark greyish brown silty sand (504, 603, 904, 1003, 1103, 1203, 1804). These deposits were present between 1.2-3.8m BGL.

Above the alluvial and fluvial deposits in some of the trial pits were deposits of Sutton Sand Formation; consisting of orange/yellow sand (101, 1001, 1801, 2101), orange silty sand (701, 2001), or orange brown clayey sands (801, 1401, 1601). These deposits were present between 0.26-1.9m BGL.

The final deposit seen was topsoil; comprising of greyish brown clayey/sandy silts (100, 200, 300, 400, 700, 1000, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000, 2100), and reddish

brown sandy clayey silts (500, 600, 800, 900, 1100, 1200). The topsoil deposits were present between 0-0.5m BGL.

6 DISCUSSION

Natural glacial boulder clays were encountered between 1.1m and 4m BGL, apart from Trial Pit 17 which had a 1.6m thick silty sand deposit. The position of Trial Pit 17 close to a possible former channel of the River Foss would account for this change.

The presence of thick alluvial and fluvial deposits, indicate that the River Foss extended beyond its current banks during earlier periods, through substantial periods of flooding or a widening/changing of its course.

No evidence of human activity was seen in any of the trial pits, suggesting that the area around Lilling Green and the River Foss was undeveloped land, which was predominantly agricultural from at least the mid-19th century.

LIST OF SOURCES

British Geological Survey viewer (accessed 10/09/18)

<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>

REFERENCES

YAT 2009. *York Archaeological Trust Fieldwork Recording Manual*.

Milsted, I., 2018. *Written Scheme of Investigation for Archaeological Watching Brief, Lilling Green*. YAT report.

ACKNOWLEDGEMENTS

The author would like to thank Capita for commissioning the project and the staff of Geotechnics for their support on site.

APPENDIX 1 – INDEX TO ARCHIVE

Item	Number of items
Day Sheets/Trial Pit Logs	5
Digital photographs	78
Written Scheme of Investigation	1
Report	1

Table 1 Index to archive

APPENDIX 2 – CONTEXT LIST

Context Number	Trial Pit	Depth of deposit (BGL)	Description
100	TP01	0-0.39m	Topsoil. Mid grey brown friable clayey sandy silt
101	TP01	0.39-0.41m	Natural. Orange sand lens
102	TP01	0.41-4m	Natural. Mid orange/blue sandy clay with sand lens at 3m
200	TP02	0-0.35m	Topsoil. Mid grey brown sandy silt
201	TP02	0.35-1.6m	Natural. Mid orange brown sandy clay
202	TP02	1.6-1.9m	Natural. Mid grey clayey sand
203	TP02	1.9-3m	Natural. Dark blue grey silty sand
204	TP02	3-3.7m	Natural. Mid grey brown sandy clay
300	TP03	0-0.25m	Topsoil. Mid grey brown sandy silt
301	TP03	0.25-1.7m	Natural. Mid orange brown sandy clay
302	TP03	1.7-4m	Natural. Mid grey brown sandy clay with large stones
400	TP04	0-0.3m	Topsoil. Mid grey brown sandy silt
401	TP04	0.3-1.45m	Natural. Mid orange brown sandy clay with grey patches
402	TP04	1.45-3.5m	Natural. Dark grey clayey sands. Wood present.
500	TP05	0-0.3m	Topsoil. Mid reddish-brown sandy clayey silt
501	TP05	0.3-0.7m	Natural. Mid orange brown sandy clay
502	TP05	0.7-1.1m	Natural. Mid blue grey clay
503	TP05	1.1-2m	Natural. Light orange sandy clay
504	TP05	2-2.8m	Natural. Dark grey brown silty sandy clay
505	TP05	2.8-4	Natural. Mid grey brown sandy clay
600	TP06	0-0.3m	Topsoil. Mid reddish-brown sandy clayey silt
601	TP06	0.3-0.62m	Natural. Mid blue grey clay
602	TP06	0.62-1.4m	Natural. Mid orange brown sandy clay
603	TP06	1.4-2m	Natural. Dark grey brown silty sand
604	TP06	2-3.5m	Natural. Mid grey brown sandy clay with large stones
700	TP07	0-0.4m	Topsoil. Dark brown sandy silt
701	TP07	0.4-1.1m	Natural. Mid orange silty sand
702	TP07	1.1-3.8m	Natural. Mid grey brown sandy clay with reddish-brown sand patches
800	TP08	0-0.32m	Topsoil. Mid reddish-brown sandy silt
801	TP08	0.32-1.1m	Natural. Mid orange brown clayey sand with light grey patches
802	TP08	1.1-1.3m	Natural. Dark blue grey sandy clay
803	TP08	1.3-4	Natural. Mid grey brown sandy clay with large stones

Context Number	Trial Pit	Depth of deposit (BGL)	Description
900	TP09	0-0.4m	Topsoil. Mid reddish-brown sandy silt
901	TP09	0.4-0.65m	Natural. Mid blue grey clay
902	TP09	0.65-1.9m	Natural. Mid orange brown sandy clay
903	TP09	1.9-2.2m	Natural. Mid brown clay
904	TP09	2.2-2.7m	Natural. Dark grey brown silty sand. Wood present
905	TP09	2.7-4m	Natural. Mid grey brown sandy clay
1000	TP10	0-0.3m	Topsoil. Mid grey brown sandy silt
1001	TP10	0.3-1m	Natural. Mid orange sand
1002	TP10	1-3.7m	Natural. Dark blue grey clay
1003	TP10	3.7-3.8m	Natural. Mid grey brown silty sand
1004	TP10	3.8-4m	Natural. Mid grey brown sandy clay
1100	TP11	0-0.31m	Topsoil. Mid reddish-brown sandy clayey silt
1101	TP11	0.31-0.61m	Natural. Mid blue grey clay
1102	TP11	0.61-1.2m	Natural. Mid orange brown sandy clay
1103	TP11	1.2-2.41m	Natural. Dark grey brown silty sands
1104	TP11	2.41-4m	Natural. Mid grey brown sandy clay with large stones
1200	TP12	0-0.3m	Topsoil. Mid reddish-brown sandy clayey silt
1201	TP12	0.3-0.6m	Natural. Mid blue grey clay
1202	TP12	0.6-1.2m	Natural. Mid orange brown sandy clay
1203	TP12	1.2-2.2m	Natural. Dark grey brown silty sands. Wood present
1204	TP12	2.2-4m	Natural. Mid grey brown sandy clay with large stones
1300	TP13	0-0.14m	Topsoil. Mid grey brown sandy silt
1301	TP13	0.14-3.7m	Mid orange brown sandy clay
1400	TP14	0-0.44m	Topsoil. Mid grey brown clayey sandy silt
1401	TP14	0.44-0.51m	Natural. Mid orange brown sand
1402	TP14	0.51-4m	Natural. Mid orange and blue sandy clay
1500	TP15	0-0.37m	Topsoil. Mid grey brown clayey sandy silt
1501	TP15	0.37-0.8m+	Natural. Mid orange brown sandy clay. Stopped at 0.8m as field drain present
1600	TP16	0-0.38m	Topsoil. Dark grey brown clayey silt
1601	TP16	0.38-2m	Natural. Mid orange brown clayey sand
1602	TP16	2-4m	Natural. Mid grey brown sandy clay

Context Number	Trial Pit	Depth of deposit (BGL)	Description
1700	TP17	0-0.37m	Topsoil. Dark grey brown clayey silt
1701	TP17	0.37-2m	Natural. Mid orange brown and blue clay
1702	TP17	2-3.6m	Natural. Mid orange brown silty sand
1800	TP18	0-0.26m	Topsoil. Mid grey brown sandy silt
1801	TP18	0.26-1.47m	Natural. Yellow orange sands
1802	TP18	1.47-1.63m	Natural. Dark brown clayey sand. Wood present
1803	TP18	1.63-1.71m	Natural. Mid blue grey clay
1804	TP18	1.71-2.9m	Natural/ Dark grey silty sand and gravels
1900	TP19	0-0.19m	Topsoil. Mid grey brown sandy silt
1901	TP19	0.19-0.4m	Natural. Mid orange grey sandy clay
1902	TP19	0.4-2.1m	Natural. Mid orange sandy clay
1903	TP19	2.1-4m	Natural. Mid blue grey clay
2000	TP20	0-0.32m	Topsoil. Dark brown sandy silt
2001	TP20	0.32-0.6m (south end) 0.32-1.2m (north end)	Natural. Mid orange silty sand
2002	TP20	0.6-1.9m (south end) 1.2-1.9m (north end)	Natural. Dark grey brown clay
2003	TP20	1.9-4m	Natural. Mid grey brown sandy clay with large stones
2100	TP21	0-0.5m	Topsoil. Dark grey brown sandy clay silt
2101	TP21	0.5-0.95m	Natural. Mid yellow sand
2102	TP21	0.95-3.4m	Natural. Mid grey brown sandy clay

Table 2 Context list

APPENDIX 3 – PLATES

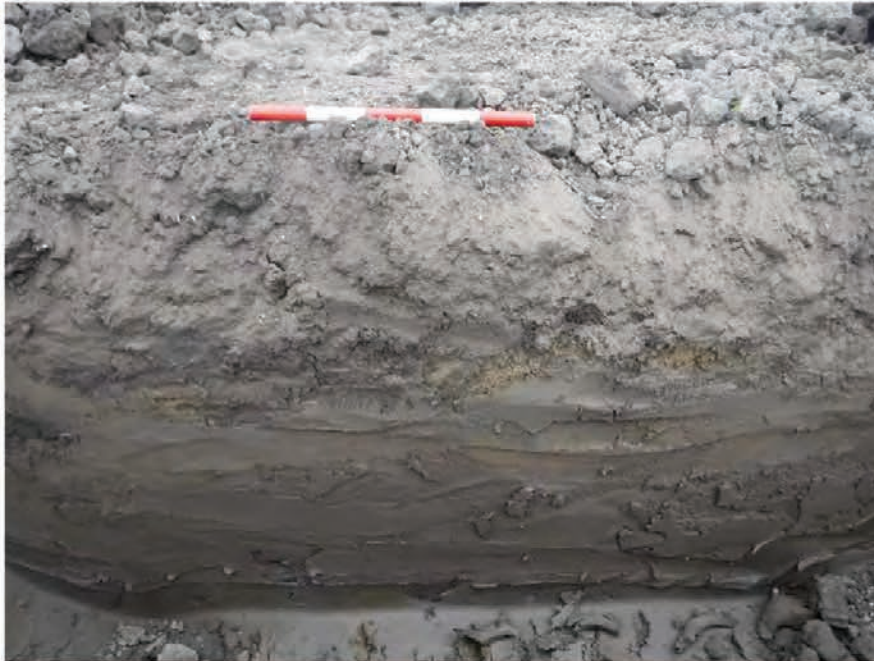


Plate 1 TP01, looking north



Plate 2 TP05 showing possible fluvial deposits, looking north-west



Plate 3 TP08, looking south-west



Plate 4 TP10, looking south-east



Plate 5 TP13, looking north-east



Plate 6 TP21, looking north-east

APPENDIX 4 - FIGURES

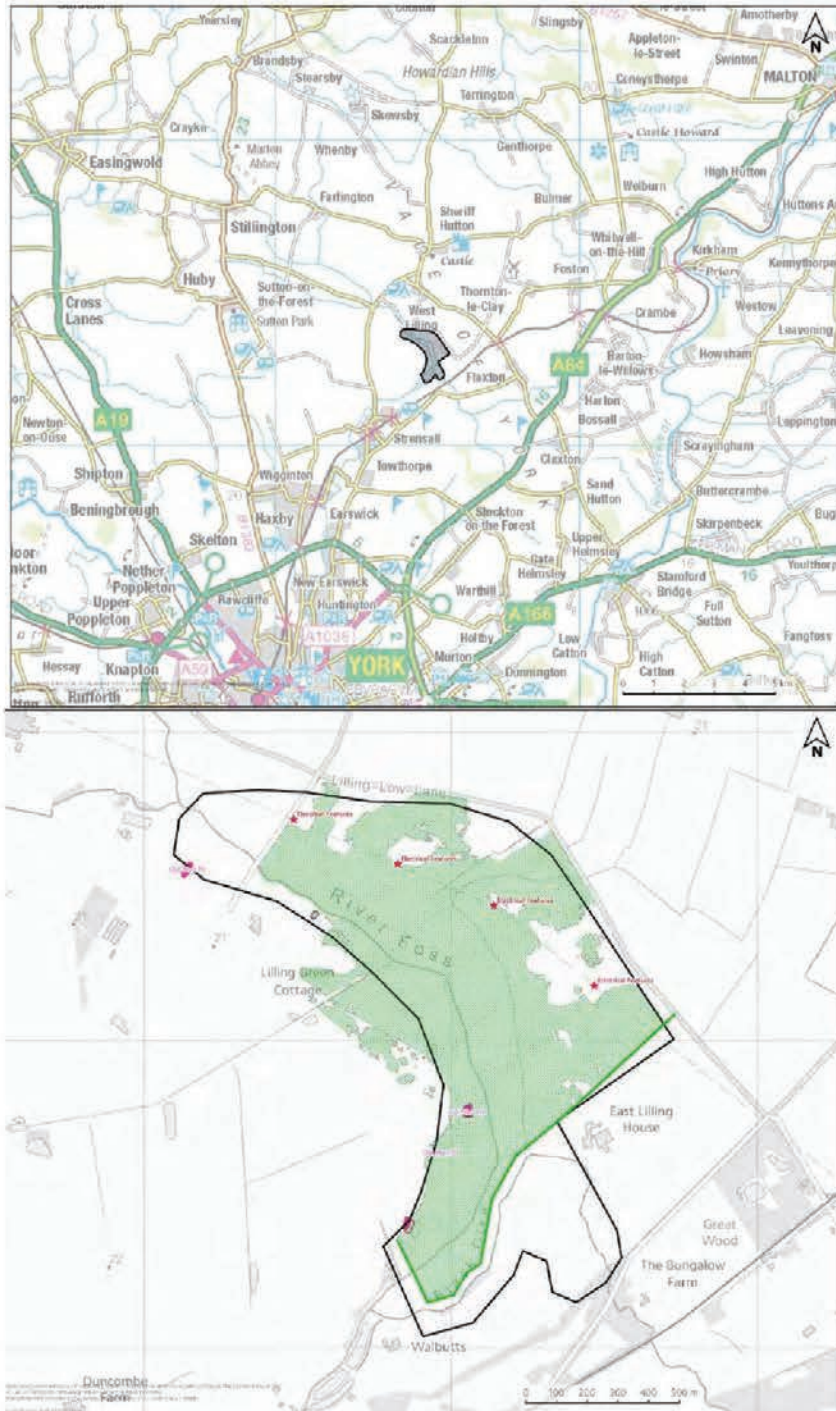


Figure 1 Site location

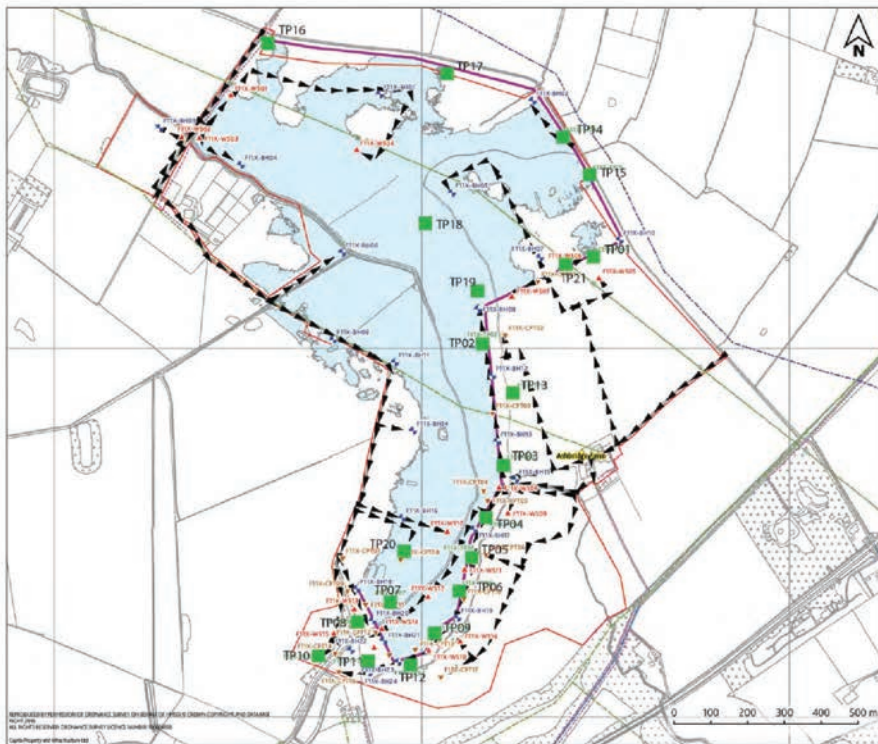


Figure 2 Trial pit locations



Figure 3 Trial pit and River Foss palaeochannels locations



YORK ARCHAEOLOGICAL TRUST

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL WATCHING BRIEF

Site Location: Lilling Green

NGR: SE 65024 63189

Proposal: Ground Investigation test pits

Planning ref: N/A

Prepared for: Capita

Version	Produced by		Edited by		Approved by	
	Initials	Date	Initials	Date	Initials	Date
1	IDM	24/08/18	BS	24/08/18	IDM	24/08/18

1 SUMMARY

- 1.1 Capita are undertaking Ground Investigation works at Lilling Green (SE 65024 63189) consisting of machine-excavated test pits. These works are to assess the location for potential use as a flood water storage area as part of the Environment Agency York Flood Management Plan.
- 1.2 An archaeological watching brief is required to monitor these works.
- 1.3 This Written Scheme of Investigation (WSI) has been prepared in response to a Brief supplied by the client. The work will be carried out in accordance with the Brief and this WSI.

2 SITE LOCATION & DESCRIPTION

- 2.1 The proposal site is at Lilling Green (Figures 1 and 2).
- 2.2 The proposal site measures c.180ha. The area is a low-angle river vale at between 15.65m AOD and 18.75m AOD, with the River Foss running through the centre. The site is characterised as agricultural fields, bounded by Lilling Low Lane to the north, field boundaries to the east, the Black Dyke drain to the south and the path/bridleway connects Walbuts to Lilling Green to the west.
- 2.3 The geology comprises superficial deposits of Glaciolacustrine clay-silts and glacial lake silty sands of the Sutton Sand Formation with silty-clay alluvium in former channels of the River Foss. The bedrock is Mercia Mudstone at c.7m BGL (Ascolani, 2018).

3 DESIGNATIONS & CONSTRAINTS

- 3.1 There are no Scheduled Monuments or Listed Buildings within the site and it does not lie in a Conservation Area.
- 3.2 Access is via the Main Contractor's compound at East Lilling House Farm, Flaxton, YO60 7QU; SE 6547 6269
- 3.3 The site contains a number of former marl extraction pits now surviving as ponds.
- 3.4 There is an overhead high voltage (400kV) cable and five pylons crossing the site north of East Lilling Farm. Main Contractor will devise safe working practises.
- 3.5 The contamination risk from agricultural chemicals has been assessed as Low to Moderate for direct contact with soil during excavation works. This risk can be reduced to Low through appropriate PPE.
- 3.6 The UXO risk has been assessed as Low, to be managed via UXO awareness briefings to staff provided by the Main Contractor.

4 ARCHAEOLOGICAL INTEREST

- 4.1 The Vale of York was created as a major lake formed during the retreat of the last glaciers c. 12,000 years BP. As this lake slowly drained it created a landscape of mires, moorland and higher points that would have attracted Mesolithic human activity.
- 4.2 Very little is known about this area until the establishment of the Roman fortress at York, 12km to the south-west, but elsewhere in the Vale of York Iron Age settlements have been identified on areas of slightly raised ground bordered by marshes and, in this case, the early River Foss.
- 4.3 Geo-technical investigation has revealed potential earlier courses of the River Foss (Figure 3). If these are present, they could retain good environmental evidence of previous land use and human activity.
- 4.4 The site lies c.2.5km north-east of the village of Strensall, a settlement recorded in Domesday and thought by some to be associated with a 9th century reference to a place called 'Streonaeshalch'

mentioned in conjunction with the AD 664 Synod of Whitby where the early Christian church of the Kingdom of Northumberland adopted a style of worship influenced by Rome rather than one developed in Ireland.

- 4.5 The deserted medieval settlement of East Lilling lies 2km to the north-east of the site. There is a low potential for medieval settlement activity in the proposal area.
- 4.6 The River Foss was canalised from its confluence with the River Ouse in York to Sheriff Hutton Bridge in the 1780s. The present course of the river derives from this period. The Navigation was closed up-stream of Layerthorpe in York by 1850.
- 4.7 The available historical mapping shows the development of the area from a mid 19th century enclosed landscape of small fields through gradual amalgamation to the larger agricultural fields currently present.

5 GROUNDWORKS TO BE MONITORED

- 5.1 This work will comprise a **continuous** watching brief, on the excavation of 18 machine-dug test pits excavated to a maximum depth of 4m BGL (Figure 2).

6 DELAYS TO THE GROUND INVESTIGATION SCHEDULE

- 6.1 All earth-moving machinery must be operated at an appropriate speed to allow the archaeologist to recognise, record and retrieve any archaeological deposits and material.
- 6.2 It is not intended that the archaeological monitoring should unduly delay ground Investigation works. However, the archaeologist on site should be given the opportunity to observe, clean, assess and, where appropriate hand excavate, sample and record any exposed features and finds. In order to fulfil the requirements of this WSI, it may be necessary to halt the earth-moving activity to enable the archaeology to be recorded properly.

7 RECORDING METHODOLOGY

- 7.1 If a base plan of intervention areas is available, the areas being monitored will be determined using this information. If a plan is not available, or the watching brief work involves monitoring of long linear works, interventions which are not mapped, or large open areas, the location of the monitoring will be determined using a hand-held GPS, which will provide accuracy to c.2m.
- 7.2 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.
- 7.3 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.
- 7.4 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 record shall comprise digital photographs at a resolution of no less than 10 megapixels. All site photography will adhere to accepted photographic record guidelines.
- 7.5 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.
- 7.6 All finds will be collected and handled following the guidance set out in the ClfA 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.
- 7.7 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.
- 7.8 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 Historic England guidelines (Campbell, Moffatt and Straker 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 30 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. (Given the nature of an archaeological watching brief, it is anticipated that the implementation of a systematic sampling methodology will not be possible).
- 7.9 Industrial activity is not expected at this site. 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) (Historic England 2015).
- 7.10 Other samples will be taken, as appropriate, in consultation with YAT specialists and the Historic England 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.
- 7.11 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 7.12) and retained for assessment.
 - Any grave goods or coffin furniture will be retained for further assessment.

- 7.12 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, ClfA Technical Paper 13 (1993) and Historic England 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 as necessary.
 - 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 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 Yorkshire Museum 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, as outlined in the Brief, will be made.
- 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 The timetable is scheduled for the 28th – 31st August 2018.

10.2 Specialist staff available for this work are as follows:

- Human Remains - Malin Holst (York Osteoarchaeology Ltd)
- Palaeoenvironmental remains – PRS
- Head of Curatorial Services - Christine McDonnell
- Finds Researcher - Nicky Rogers
- Medieval Pottery Researcher - Anne Jenner
- Finds Officers – Nienke Van Doorn
- Archaeometallurgy & Industrial Residues – Dr Rod Mackenzie & Dr Roger Doonan
- Conservation – Ian Panter

11 MONITORING OF ARCHAEOLOGICAL FIELDWORK

11.1 As a minimum requirement, the City of York Archaeologist 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 the City of York Archaeologist 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 the City of York Archaeologist.

12 COPYRIGHT

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

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For the latest Historic England guidance documents see:

<https://historicengland.org.uk/advice/latest-guidance/>



YORK ARCHAEOLOGICAL TRUST

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Appendix C – Geophysical Survey Report and Interpretative Note

**Appendix D – Written Scheme of Investigation: Proposed Additional
Archaeological Investigation**



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