



PLANNING COMMITTEE

Tuesday 8 December 2020 at 6.00 pm

Virtual Meeting

Agenda

1 Apologies for absence

2 Declarations of Interest

Members to indicate whether they will be declaring any interests under the Code of Conduct.

Members making a declaration of interest at a meeting of a Committee or Council are required to disclose the existence and nature of that interest. This requirement is not discharged by merely declaring a personal interest without further explanation.

3 Urgent Business

To receive notice of any urgent business which the Chairman considers should be dealt with at the meeting as a matter of urgency by virtue of Section 100B(4)(b) of the Local Government Act 1972.

4 Schedule of items to be determined by the Committee (Page 2)

5 19/01263/MFULE - Land Adj to River Foss Lilling Low Lane West Lilling (Pages 3 - 330)

6 20/00770/OUT - Land at Sutton Grange Langton Road Norton (Pages 331 - 391)

7 Any other business

Agenda Item 4

APPLICATIONS TO BE DETERMINED BY RYEDALE DISTRICT COUNCIL

PLANNING COMMITTEE - 08/12/20

5

Application No: 19/01263/MFULE

Application Site: Land Adj To River Foss Lilling Low Lane West Lilling

Proposal: Formation of flood storage area consisting of construction of earth embankment with spillway, excavation of two temporary and two permanent borrow pits, erection of river flow control structure, re-profiling of sections of the River Foss, realignment of short section of Black Dike, raising of section of Ings Lane, carriageway edge protection to part of Lilling Low Lane and associated new and improved access arrangements, drainage, accommodation works, landscaping and biodiversity mitigation (cross boundary application with York)

6

Application No: 20/00770/OUT

Application Site: Land At Sutton Grange Langton Road Norton Malton YO17 9PU

Proposal: Residential development of 5 no. dwellings (site area 0.72ha) - access to be considered

Item Number: 5
Application No: 19/01263/MFULE
Parish: Lillings Ambo Parish Council
Appn. Type: Major Environmental Statement
Applicant: Mr Richard Lever (Environment Agency)
Proposal: Formation of flood storage area consisting of construction of earth embankment with spillway, excavation of two temporary and two permanent borrow pits, erection of river flow control structure, re-profiling of sections of the River Foss, realignment of short section of Black Dike, raising of section of Ings Lane, carriageway edge protection to part of Lilling Low Lane and associated new and improved access arrangements, drainage, accommodation works, landscaping and biodiversity mitigation (cross boundary application with York)
Location: Land Adj To River Foss Lilling Low Lane West Lilling

Registration Date: 12 November 2019
8/13 Wk Expiry Date: 3 March 2020
Overall Expiry Date: 26 May 2020
Case Officer: Rachael Balmer **Ext:** 43357

CONSULTATIONS:

Environment-Agency Yorkshire Area Sabic Ethylene Pipeline	Recommend conditions SABIC should be consulted by the developer before construction commences on site.
Natural England	No objection, Comments and recommendations
Yorkshire Water Land Use Planning	No observation comments
Highways North Yorkshire	Recommend conditions
Public Rights Of Way	Info re the public right of way
National Grid Plant Protection	No objection
Archaeology Section	Recommend conditions
NYCC Natural Services	Recommendations
Foss Internal Drainage Board	Recommend condition and informative
Yorkshire Wildlife Trust	We are encouraged to see that the ecologist has made attempts to discharge our concerns with regards to our previous comments. However, at this time we would wish to support those comments made by ecologist, Martin Hammond. In particular we would be further encouraged to see compensation and precautionary measures secured for farmland birds through integration into the proposal design and for a revised LEMP to incorporate detailed planting schedules.
Highways England	No objection. Recommend Conditions
Flood Risk	Recommend conditions
Lillings Ambo Parish Council	Cannot support the application
Health And Safety Executive	HSE's Advice: Do Not Advise Against, consequently, HSE does not advise, on safety grounds, against the granting of planning permission in this case.
Neighbour responses:	Mr D Wadsworth, Mrs D Wadsworth And Mr S Wadsworth, Mr James Crawford, Robin Barker, Mr Brian Little, Mr Philip Swiers, Mr David Armitage, Mrs Amanda Hodgson, Mrs Elaine Magee, Mrs Fiona Hill, Mr And Mrs Hodgson, Mr Paul Wreglesworth, Mr Tom Watson, Mr Philip David, Mr AW and BW Mook, Ms Claire Wesley, James Copeland (NFU), Mr John

1.0 SITE:

1.1 The application site, in terms of the red outline, covers an area of 151.88 hectares, and is owned by seven landowners. It is an application which straddles two Local Planning Authority jurisdictions: Ryedale District (RDC) and City of York (CYC). Although the majority of the site is within RDC. A relatively small area to the extreme south of the scheme is the part in CYC authority. The site is to the north east of Strensall and to the south of West Lilling. The land is agricultural, used for crops and some grazing. One farm holding, with two dwellings, is within the site red outline (Lilling Green Farm and Lilling Green Cottage). The River Foss runs through the site, on a broadly central alignment. The site includes a public footpath which is part of the following Long Distance Walks: Centenary Way, Ebor Way and Foss Walk. The site area also includes the road known as Lilling Low Lane, and the access track which serves Lilling Green and forms part of the Long Distance Walk route (known as Ings Lane). The site also runs close to the Ethylene pipeline, and National Grid power lines (some of which are to be grounded).

2.0 PROPOSAL:

2.1 The proposal is titled the Foss Flood Storage Area (Foss FSA), and is part of a wider York Flood Alleviation Scheme (York FAS). It is an engineering operation which combines a number of elements to provide additional flood storage capacity upstream for up to 1,000,000m³ of water. This is to significantly reduce the risk of flooding of the land and properties downstream of the River Foss, in an area described as the 'Foss Corridor', which is already at high risk of flooding (greater than 1 in 100 year chance of being flooded). The Design and Access Statement states that the key impetus for this is the impacts of the 2015 flooding in York. The Environment Agency advises that whilst the Ouse responds more slowly to extreme rainfall, the Foss does not, and flooding can occur very quickly (as in 2007). Climate change predictions also show the incidence of extreme weather events will increase, and therefore so will the risk of flooding. The red outline of the application broadly corresponds with the extent of 1 in 100 years flood probability, this post development, and is in conjunction with any infrastructure considerations. Although the plan does show some areas within the red outline where flood risk is not expected to increase. This is discussed within the report.

2.2 Two identical planning applications have been submitted to the respective Local Planning Authorities. The respective Case Officers have liaised together on the application's consideration. The CYC Planning Committee voted unanimously to approve the application at its meeting on the 19 November 2020. It is understood that the CYC has referred the application to the Planning Casework unit on the basis that within its administrative area the site falls within the York Green Belt. Some components of the scheme are not within Ryedale's planning area, and these are identified in the report. To ensure that there are no contradictory requirements, or confusion in the event of an approval, RDC and CYC will need to ensure that any mutually applicable conditions imposed, and the date of decision issued, are the same.

2.3 The engineering scheme described as the Foss FSA is made up of the following original components which are described in summary:

- Construction of an earth embankment (1.65km long and 19.85m above Ordnance Datum) with spillway. This embankment runs from Lilling Low Lane in a westerly direction, and then diverts southwards to follow the alignment of the River Foss, where at the southern extent the structure then straddles the River Foss at the point of the flow control structure siting. Approximately 400m of this embankment are in the CYC boundary. The clay core is to ensure that it is impermeable. The spillway is designed, in the event of overtopping, to allow excess water to flow into Black Dike
- Excavation of two temporary and two permanent borrow pits, which have been chosen based on their ability to yield clay. The former are to aid in the construction, and will be backfilled with

the material which does not meet the necessary requirements for the embankment, it will be returned to pre-existing levels and use. The latter will be a means to hold back water and provide a wetland habitat.

- Erection of a river flow control structure with 1900mm diameter aperture - with two tarmac/asphalt access tracks to that structure- its purpose is to regulate the flow of water leaving this area.
- Re-profiling sections of the River Foss (225 metres)
- Realignment of a section of Black Dike of 119 metres in length, formed by a two-stage channel. This is necessary due to the position of the embankment. This work is within the CYC area.
- Raising a section of Ings Lane between the bridge and Lilling Low Lane to the existing level of the bridge.
- Carriageway edge protection to part of Lilling Low Lane and creation of new hardstanding/parking in tarmac/asphalt.
- Associated new track (560m long) and improved access arrangements (in unbound crushed stone), drainage and accommodation works, with one permanent parking space
- Landscaping and biodiversity mitigation- including tree planting.

2.4 The scheme would also require:

- Temporary diversion of the Public Right of Way along Ings Lane;
- The grounding of various electrical power lines (subject to a different consent regime);
- Temporary diversion of the River Foss to permit construction of the flow control structure;
- Four temporary bridge crossings on the River Foss and one on Black Dike.

2.5 The scheme also originally proposed to potentially import c.2,3000m³ of clay to facilitate the timely formation of the embankment. Due to implications on the highway network and changes to the construction schedule, this clay is now not required.

2.6 The application has been determined in an earlier EIA screening exercise as an EIA development due to the scale of the scheme and its potential to impact on the internationally designated Strensall Common Special Area of Conservation (SAC). Whilst the site is not within the designated area, the drainage regime has the capacity to influence the hydrology. The Environmental Statement has therefore focused on the environmental biodiversity considerations on that basis. This is considered in more detail in the body of the report.

2.7 During the course of the consideration of the application, the following revisions have been made:

- Re-profiling sections of the River Foss has been extended to 1.3km, following further consultation with the Environment Agency's Fisheries, Biodiversity and Geomorphology team;
- The proposed habitat creation and tree planting has been revised, in order to ensure that these provide appropriate mitigation for effects on breeding birds and ponds, following recommendations from the North Yorkshire County Council's County Ecologist and the Yorkshire Wildlife Trust;
- Outfalls from the permanent borrow pits P1 and P2 have been changed from flapped pipe outfalls to open channel; and
- Minor changes have been made to the design of the Black Dike realignment (which is not within RDC area)

2.8 As the integrity of a site of International Biodiversity Importance (a Natura 2000 site) is being considered; the 'Component Authority' (RDC and CYC) are required to undertake a Habitats Regulation Assessment (HRA). This HRA is to establish what, if any, 'Likely Significant Effects' could affect the 'Conservation Objectives' of a Natura 2000 site. It is common for the applicant to undertake the HRA, and then the Competent Authority can choose to adopt the HRA. The initial HRA was a section in the Environmental Statement and was undertaken as a screening exercise. However, in response to the representation of Natural England, which took account of the 2018 judgement of the Court of Justice of the European Union in the matter of People Over Wind and Sweetman v Coillte Teorant, the court ruled that applying mitigation at the Screening stage was not the appropriate procedure to follow when undertaking a HRA. The screening exercise should either rule such effects out categorically, or if they

cannot be ruled out then to proceed to an Appropriate Assessment with detailed analysis and any mitigation is then applied accordingly. Natural England considered, and the LPAs agreed, that the level of analysis was that of an appropriate assessment, and no Likely Significant Effects could be ruled out at Screening stage.

2.9 It should be noted by Members, that whilst Natural England disagreed with the procedure, they ultimately concurred with the overall findings. Both Ryedale and CYC advised that in order for the Competent Authorities to be clear that full procedural compliance with the Habitats Directive had been undertaken, a revised HRA, covering both Screening and Appropriate Assessment was required. A revised HRA covering both stages was then submitted and subject to consultation. Based on the re-consultation response from Natural England, in relation to the consideration of this application, both RDC and CYC have adopted the revised HRA, as Competent Authorities, and have not sought to undertake a further Appropriate Assessment. In conclusion, no likely significant effects on the integrity of the conservation objectives of the Strensall Common SAC has been confirmed.

2.10 The application is accompanied by a range of further technical documents, which are summarised below and referred to in detail as required in the report:

- Design and Access Statement -which sets out the context and options testing; it briefly sets out the different scenarios for impact based on different levels of intervention, from do nothing, to downstream flood alleviation schemes. It sets out in summary the reasons for the proposed scheme.
- Planning statement - how the proposal seeks to align to national and local planning policies
- Statement of Community Involvement - how the Environment Agency has engaged with the various interest parties and communities on the project.
- Landscape and Ecological Management Plan;
- Tree Survey and Arboricultural Impact Assessment;
- Transport Assessment - traffic generation will be very much focussed on the construction phase, and this sets out how traffic will be expected to move in the site and on the surrounding road network; An addendum was subsequently provided to confirm the impact of the non-importing of clay.
- Flood Risk Assessment- how flood risk will change along the Foss Corridor as a result of the scheme;
- Geomorphology Assessment;
- Geotechnical Interpretive report;
- Heritage Statement

2.11 Subsequent further Plans related to revisions on the borrow pits, and the Black Dike Realignment. The landscaping masterplan was revised in areas A and E and the planting schedule accordingly updated.

Subsequent further documents include:

- HRA - Screening and Appropriate Assessment stages (with a further addendum)
- Environmental Action Plan updates
- Biodiversity Impact Assessment Calculator (updated to supersede the original in the Environment statement)
- Environmental Statement Addendum (additional information and updates to the original ES in relation to the changes proposed)
- Environmental Statement Addendum (Agricultural Land and Soils)
- Transport Statement Addendum
- Geomorphological Technical Note in relation to the Water Framework Directive (WFD)-mitigation measures in relation to the River Foss, The Black Dike and retained borrow pits.
- Explanatory Note- Landowner Compensation
- Minerals Resource Assessment

2.12 The applicant also submitted a series of supplementary statements in response to the consultation responses received:

- Response to comments made by the Foss Internal Drainage Board
- Response to comments made by the National Farmers' Union
- Response to Public representations (landowners, their agents and interested parties)
- Response to Ecology Bodies (NE, Yorkshire Wildlife Trust and CYC and NYCC Ecologists)
- Response to Natural England (Soils and Agricultural Land)

2.13 The key plans and supporting documentation are appended to this report. The remainder of the detailed technical information is available to view on the Council's website.

3.0 HISTORY:

3.1 Whilst a sizable area, there is limited relevant planning history relating to historic permissions for development in association with agriculture or domestic extensions.

3.2 A planning application at Lilling Green Farm (20/00032/FUL) was approved in March 2020 for 6 lodges. They are within the red outline of this application, but are within Flood Zone 1 and will remain in Flood Zone 1 based on the Environment Agency Flood extent maps produced as part of this application.

3.3 EIA Screening requests (18/01374/SCR) were received to each LPA and determined in February 2019 as a combined consideration by both CYC and RDC and NYCC (Minerals). It concluded that the development was an EIA application due to the uncertain effects on the hydrological regime of the Strensall Common SAC and SSSI. This would be considered through the submission of an Environmental Statement. The Environment Agency confirmed that they would undertake such a statement.

4.0 POLICY:

4.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 confirms that the determination of any planning application must be made in accordance with the Development Plan unless material considerations indicate otherwise. The Development Plan comprises:

The Ryedale Local Plan Strategy (2013)

The Policies Map (2019)

The Local Plan Sites Document (2019)

The Yorkshire and Humber Plan (Regional Spatial Strategy)- York Green Belt Policies (YH9 and Y1)*

The Local Plan Minerals NYCC 1997 saved policies

4/18 Restoration to Agriculture

5/6 Borrow Pits

4/6a Nature Conservation and Habitat Protection

4/14 Local Environment and Amenity

4/15 Public Rights of Way

*the area of the site within the York Green Belt is exclusively within the City of York boundary. As such, the City of York Council will consider the detailed impact of the scheme on the York Green Belt.

The Ryedale Plan - Local Plan Strategy (5 September 2013)

Policy SP1 General Location of Development and Settlement Hierarchy

Policy SP9 The Land-Based and Rural Economy

Policy SP10 Physical Infrastructure

Policy SP12 Heritage

Policy SP13 Landscapes

Policy SP14 Biodiversity

Policy SP15 Green Infrastructure Networks

Policy SP17 Managing Air Quality, Land and Water Resources
Policy SP18 Renewable and Low Carbon Energy
Policy SP19 Presumption in Favour of Sustainable Development
Policy SP20 Generic Development Management Issues

Material Considerations:

National Planning Policy Framework (NPPF) (2019)
National Planning Practice Guidance
NERC Act s.40 (2006)

4.2 The City of York Council has advised that The Minerals and Waste Joint Plan (of which Ryedale is part of) is currently at the examination phase. Examination hearings took place in Spring 2018 and in January 2019. The Strategic Environmental Assessment (SEA) and Habitat Regulation Assessment (HRA) are currently being finalised by consultants and the joint authorities have sent through a Schedule of Modifications on the Plan following the hearing sessions and additional government guidance on Fracking. A Main Modifications consultation has been delayed due to the Covid-19 pandemic.

4.3 Paragraph 48 of the NPPF gives advice to the decision-maker concerning the extent of weight which can be attributed in the decision making process concerning emerging planning policy.

"Local planning authorities may give weight to relevant policies in emerging plans according to:

a) the stage of preparation of the emerging plan (the more advanced its preparation, the greater the weight that may be given);

b) the extent to which there are unresolved objections to relevant policies (the less significant the unresolved objections, the greater the weight that may be given); and

c) the degree of consistency of the relevant policies in the emerging plan to this Framework (the closer the policies in the emerging plan to the policies in the Framework, the greater the weight that may be given)."

4.4 The Joint Minerals and Waste Plan is at an advanced stage in the examination process with only limited comments on those policies that are specifically relevant to this application. These include: M13, M25, S02, DO2, D05, DO6, DO7, DO9, D10 and D12. Moderate weight can be given to these relevant policies as a material consideration.

5.0 CONSULTATIONS:

5.1 A brief summary of the position of statutory and non-statutory consultees is included on the front sheet of the report, and issues raised are addressed in the relevant appraisal sections of the report. All consultation responses are available for Members to view on the public access webpage, and referred to in the report accordingly.

5.2 In terms of Parish Council responses, no responses have been received from Sheriff Hutton (as Ward area), Flaxton and Thornton le Clay Parishes. Lillings Ambo Parish is the Parish Council serving the area in which the scheme is situated. At the writing of the report three formal responses of objection has been received from the Lillings Ambo Parish Council. A summary of the initial concerns raised include:

- Construction traffic issues ;
- Increased flooding via drains backing up of land to the north of the Foss;
- The implications of the flooding around Lilling Green Farm and the access road;
- Maintenance of the piping to ensure no silting up;
- Loss or diversion of the Centenary Way do to construction work or flooding; and

- The ecological implications as raised by NYCC.

Subsequent objections are summarised as follows:

- Concerned about the amount of construction traffic the Environment Agency propose to bring through the village of West Lilling. As we previously pointed out there are alternative routes they could use. The route through the village has two pinch points where vehicles cannot pass. One being a single track bridge, which has already suffered damage, and at a bend in the centre of the village. We already endure heavy goods traffic taking a short cut from the A64 to the A19. Any more traffic would make life extremely unbearable, and extremely dangerous. The foot path is narrow. You have to stand back from the road when heavy goods vehicles approach. They drive very close to the curb because the road is narrow. The EA says the foot path is one metre deep. At one metre you are standing extremely close to large wheels thundering past!
- Other observations that have not been addressed is the amount of water locked into agricultural land causing more substantial damage. This agricultural land, not designated to flood, will not be compensated.
- The amendment says there may be temporary closures of Centenary Way and other foot paths. This is unacceptable.
- Lilling Low Lane is expected to flood. Fold down signs will be placed to warn people. Who will monitor this and who will change the signs?
- Who will maintain and clear the silt ponds which capture the water before it feeds into the River Foss? Responsibility needs to be decided before construction commences.
- There appears to be little maintenance strategy at present, only discussion with the Drainage Board. Surely, who maintains any work should be in place prior to commencement of the construction.
- Huge disappointment at the response to our request that construction vehicles use an alternative route other than the one through West Lilling.
- Pleased that there is no longer a need to import clay but the number of extra vehicles will still dramatically increase the already heavy traffic inflicted on the village.

5.3 Three responses of support been received. One of which is from the Foss Society, with the other responses from members of the public who live in the area downstream from the Foss, and who have experienced flooding of their homes. They consider that flood storage area is urgently needed. CYC have received a similar level of responses in support from residents.

5.4 26 letters of objection have been received from 19 individuals, families or organisations, including the NFU. A summary of the issues raised which are planning considerations is listed below:

- Loss of best and most versatile agricultural land;
- Loss of food production; quality assurance of food; and carbon footprint implications;
- Increasing flood risk in an area which currently does not flood;
- Concerns about the implications of the scheme for inadvertent flooding upstream;
- Concerns about the backing up of wider drainage ditches and current and former works to drains rendered useless;
- Disagree that the water will only remain for 36 hours but even so depending on the crops this will have a critical effect on the types of crops which can be planted flooded ground takes months to regenerate, and would affect the cropping rotation system from an arable perspective;
- The owner of Lilling Green is concerned about the implications for their access road- the quality of the surfacing, the implications of the raising flood water for the condition of the

existing bridge and the wear and tear on the lane. With no input from the EA for on-going maintenance;

- Concerned that the flood waters will come dangerous close to our property (Lilling Green Farm);
- How will compensatory sites be secured for biodiversity?
- Concerns about the accuracy of the plans and their variance- the reasons for their changing over time;
- Query about property being within the red-outline of the application;
- Concerned about the use of 2007 data, as they have chosen the worst possible year for flooding- in terms of standing water, which does not reflect the situation the situation now;
- Implications for flooding upstream and hampering drainage ditch operation- detrimental to arable crop growing to the adjacent farms whose drainage ditches connect to the Foss;
- Damage to drainage ditches;
- Future maintenance of the drainage scheme has not been assured;
- East Lilling Grange already has problems with water in the cellar- this scheme will make that worse- issues in in 2007 with the flash flood and 2015 when the surface water was unable to discharge quickly enough;
- Detrimental effects of the scheme underestimated- already with no construction large areas of land have been under water at regular period within recent years- a situation that can only worsen with the proposed works;
- Other alternative long term management and maintenance proposals for the entire length of the River Foss should be developed;
- Increased traffic levels through West Lilling along narrow road and footpath, there are pinch points and a weak bridge- access route should be via the A64- Scotchman Lane- Bull Moor Lane-Rice Lane-Gennel Lane and Lilling Low Lane- which is a shorter route if the extra material is brought in;
- What about the remedial works necessary to the repair the roads;
- Flooding of Lilling Low Lane should not be permitted;
- Concern over safety of walkers and pets with the borrow pits- fencing;
- Hardstanding will need surveillance as a target for antisocial behaviour ;
- On-going maintenance of the structure;
- NYCC Ecologist critical of the scheme- need to reflect and respond to this;
- How are the borrow pits to be backfilled- concerns about soil quality and effects on soil structure;
- How will the normal flow of the river be changed? What is the normal flow? Would the plate restrict this?
- What is the actual area likely to flood is it 111ha or 130ha;
- Financial losses to agricultural land vs property are not fully addressed;
- The planning system should improve resilience to flood risk, but when determining any planning applications Local Planning Authorities should ensure that flood risk is not increased elsewhere;
- Food production loss due to flood storage have yet to be addressed by either York or Ryedale Development Plans;
- What about the clay which does not meet the specification;
- Unclear compensatory measures;
- Unclear- inability to delivery mitigation measures;
- The Programme for the eradication of Giant Hogweed and Himalayan Balsam is not in the Environment Assessment;
- The biodiversity net gains does not take account of the permanent loss of agricultural land;
- The implications for the impact from flooding will vary depending on the crop grown- and a much larger area is affected;
- Are the IDB prepared maintain and manage the watercourses;
- Storage area of water is 87ha- could be to 130 needs a full assessment as the loss is not 20ha;
- There are adjacent planning applications which are in close proximity to the application boundary;

- The references to contractors should also include the Environment Agency;
- The agricultural community need access to the land;
- The permanent borrow pits how will these effect surface water drainage and the compensation scheme;
- The bund will create a significant landscape impact;
- Request CEMP provided as part of the planning application;
- Why has separate minerals application not been provided;
- Gennell Lane should be the route for construction traffic. It is unclear why our views on traffic flow are ignored
- The area shown as at risk of flooding in a supplementary statement is more extensive than previous plans submitted with the application and is outside of the red line area. Concerned that the environmental impact will not have been properly assessed
- Do not accept that there will be no increase in flooding on the right hand bank for the 1 in 2 year flooding event. The modelling is incorrect and does not reflect the true loss of BMV soils
- Request an independent drainage strategy is undertaken
- Impact on soils from inundation is not properly assessed
- It has still not been determined that the material in the borrow pits is suitable

5.5 Civil matters and matters relating to wider legislation have also been raised as issues which the objectors attest should be considered material in relation to the planning application and these are summarised below. The Local Planning Authority has considered that civil matters can present a material consideration where the ability to impose conditions required to make the development acceptable is in effect infringed/fettered by a civil matter. This is considered within the body of the report where relevant.

- Who will own the dam type structure- this is not clear;
- The concerns about the nature of compensation;
- No contact with those in the Foss Catchment in the upstream area to the scheme;
- The objections also relate to the consent to discharge regime- submission of a Inclosure Act of Parliament 1769 and the blocking of drainage ditches being contrary to those provisions;
- The implications of the scheme on their ability to use their land and the consequential adverse implications for their loss of income and stymieing of their operations;
- Loss of property value;
- Stipulate a condition should be imposed which duly compensates landowners- immediate loss of value; the area taken for the dam structure; value of the mineral/clay taken from the land and diminution value payment over the whole farm to reflect the risk that the scheme creates;
- The issues with the postponement consultation events;
- Not right that a handful of rural businesses in Ryedale should pay the price for it;
- Concerned about the lack of detail regarding compensation payments and the 'right to flood';
- No agreement has been given by ourselves, as landowners, regarding the permanent borrow pit, and the habitat mitigation measures, management of the banks and tree planting and so they are not deliverable;
- No consultation regarding a different farming regime in relation to prevent slurry and fertilisers getting washed into the river in a flood

5.6 One representation was received prior to application's validation. Other have submitted more than one submission, either online or by post, or have sought the NFU or agent to represent them.

5.7 The Council has sought legal advice in relation to some of the issues which are raised and this is discussed in the relevant section of the report.

5.8 In relation to the further re- consultations, responses have been received from a range of statutory consultees including NYCC Highways, Natural England, NYCC Heritage Services, NYCC Ecology, Yorkshire Wildlife Trust, the Environment Agency as a Regulatory Body, The Highways Agency; the Minerals and Waste Authority and Internal Drainage Board. They are considered in the report in the relevant sections.

5.9 The NFU have sought to reiterate their initial comments, and objection to the applications. They further add- in summary;

- The change of 225m to 1.3 km of the Foss riverbank re-profiling will further increase the loss of farmland along the Foss;
- The benefits to farmland south of the scheme (29.8ha) has no correlation with the land affected up stream (130ha);
- The impact of the lower level berms will be compensated for, by increasing storage volume by slackening of the bank slopes and widening of the channel, it is not clear how this has been included in the modelling note summary held in July 2019;
- We are pleased to see the applicant acknowledge the fact that the Foss FSA will lock land drains and hold back on agricultural land- the evidence does not quantify the full extent of the agricultural land impacted;
- There is an increasing case for a soils and agricultural land assessment, which should identify and address the loss of productive land and effects on agricultural businesses- and which is referenced in the environmental statement.

6.0 APPRAISAL:

6.1 In the consideration of this application the following matters are considered to be the key issues raised by the development proposed. (As noted in the policy section above, the implications of the scheme for the York Green Belt have been considered by the CYC as no part of the Green Belt extends into this part of Ryedale)

- Principle of the Development including Flood Risk Management and Drainage
- Impact on agricultural land use and businesses and agricultural land and soil resources
- Ecological implications
- Highways implications and general accessibility
- Landscape Setting
- Minerals Considerations
- Archaeology and the Heritage Environment
- Amenity
- Further procedural considerations raised by consultees

i) Principle of the Development including Flood Risk Management and Drainage

6.2 The nature of this engineering operation, and what it seeks to achieve and the implications for flood risk are intrinsically linked. This scheme is designed to provide flood water storage capacity as needed, and then to allow the water to flow at a managed rate back into the Foss, in a manner which does not lead to flooding downstream. There will be a permanent loss of some agricultural land- which is considered in the following section. In particular, the formation of the bund, spillway, access tracks and permeant borrow pits and some elements of the ecological mitigation will result in the areas of the application site being no longer capable of being used for agriculture, post development.

6.3 The Vision of the Ryedale Plan- Local Plan Strategy is not itself policy, but it sets out the overarching aspirations for Ryedale going forward into the future. It provides an important contextual basis for the policies of the development plan. It states in the section on the Countryside:

"Our countryside will be an attractive, productive and multi-functional resource. Traditional activities such as food production, tourism, recreation and leisure will be accompanied by wider roles for flood storage and prevention and new forms of energy production".

6.4 The countryside has a key role to play in delivering a range of ecosystem 'services' including food production, flood alleviation, recreation, biodiversity and other ecosystem services. One of the specific aims of the Plan is to minimise the risk of flooding and increased resilience to climate change (Aim 3).

An objective of the plan (Objective 12) is to help Ryedale to adapt to the impacts of climate change through flood risk minimisation and enhancing Green Infrastructure opportunities. As part of minimising that risk, there is a recognition that in extreme weather events heavy rainfall will drain to rivers, and how this process is managed is of vital importance to reducing the risk of flooding to property wherever possible. Flood storage is part of that process.

6.5 Policy SP1 (General Location Development and Settlement Hierarchy), states that in the Open Countryside development will be "*restricted to that which is necessary to support a sustainable, vibrant and health rural economy and communities*". This is then expressed in more detail within Policy SP9 (The land Based and Rural Economy). Policy SP9 states that "*Ryedale's land based economy will be sustained and diversified with support for:*
"appropriate new uses for land including flood management..."

6.6 It is clear that as part of the general operations within the countryside and in recognition of the need to respond to mitigating the impacts of climate change; the formation of a flood storage areas within Ryedale for flood management is, in principle, a Plan-compliant use.

6.7 Policy SP17 (Managing Air Quality, Land and Water Resources) states the following

Flood risk will be managed by:

- *Requiring the use of sustainable drainage systems and techniques, where technically feasible, to promote groundwater recharge and reduce flood risk. Development proposals will be expected to attenuate surface water run off to the rates recommended in the Strategic Flood Risk Assessment. In addition, major development proposals within areas highlighted as having critical drainage problems in the North East Yorkshire Strategic Flood Risk Assessment (or future updates) as Critical Drainage Areas may, if appropriate, be required to demonstrate that the development will not exacerbate existing problems by modelling impact on the wider drainage system*
- *Ensuring new development does not prevent access to water courses for the maintenance of flood defences*
- *Undertaking a risk based sequential approach to the allocation of land for new development and in the consideration of development proposals in order to guide new development to areas with the lowest probability of flooding, whilst taking account of the need to regenerate vacant and previously developed sites within the towns. In considering development proposals or the allocation of land, full account will be taken of the flood risk vulnerability of proposed uses and the national 'Exception Test' will be applied if required.*

6.8 The NPPF (2019) post-dates the Ryedale Plan- Local Plan Strategy and is a significant material consideration in the decision-taking process. It has a section on 'meeting the challenge of Climate Change, Flooding and Coastal change'. Within that heading is an inherent recognition in national policy of the need to balance different priorities in relation to the interface between the human environment and natural systems and processes- whether they have been intensified by climate change or not. It is considered that no other section of the NPPF so explicitly recognises that difficult, balanced decisions are required in response to the need to create a more sustainable approach to water management in relation to development.

6.9 Paragraph 155 of the NPPF states that "*inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere*".

6.10 In making such an assessment in plan-making, Paragraph 157 of the NPPF states:

"All plans should apply a sequential, risk-based approach to the location of development - taking into account the current and future impacts of climate change - so as to avoid, where possible, flood risk to

people and property. They should do this, and manage any residual risk, by:

a) applying the sequential test and then, if necessary, the exception test as set out below;

b) safeguarding land from development that is required, or likely to be required, for current or future flood management;

c) using opportunities provided by new development to reduce the causes and impacts of flooding (where appropriate through the use of natural flood management techniques); and

d) where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to relocate development, including housing, to more sustainable locations."

6.11 It is considered that Policy SP17 of the Ryedale Plan is reflective of those objectives and fully compliant with national policy in this respect.

6.12 The NFU have stated the planning system should improve resilience to flood risk, but that when determining any planning applications Local Planning Authorities should "ensure that flood risk is not increased elsewhere". This statement is correct for the vast majority of planning applications a Local Planning Authority could be expected to consider. However, such as stance does not take account of the situation where there is no alternative but to increase temporary flooding within a given area, as an objective of the development in order to reduce flood risk in a much more sensitive location (a very much built up area).

6.13 Paragraph 163 of the NPPF therefore states:

"When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:

a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;

b) the development is appropriately flood resistant and resilient;

c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;

d) any residual risk can be safely managed; and

e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan.

6.14 The application is supported by a Flood Risk Assessment, and it proposes to increase flooding in a given area. The maps show the changes in the extent of Flood Zone classification after the scheme would be operation in a 1:100 year event, and this area will be identified as being in Flood Zone 3. The Local Planning Authority is therefore required to perform the sequential test and exception test. This takes into account, as part of the FRA, why the development is proposed to be located where it is. The Design and Access statement sets out the site selection process both in terms of:

- Flood risk impact on vulnerable area;
- Technical; level of engineering
- Environmental impacts (which could also be cultural/amenity/heritage);
- The consent regimes;
- Economic impacts;

6.15 The chosen scheme offered the greatest level of flood risk reduction, with the ability to capitalise on the confluence of multiple upstream sources of flood risk, together with the opportunity to use indigenous clay resources on site. The scheme is also able capitalise on the geomorphology and topography, with a lack of structures and buildings. As such the scheme cannot be located elsewhere, and therefore proceeds to the Exception Test.

6.16 Parts of the scheme are within Flood Zone 3, with some areas of Flood Zone 2 and majority Flood Zone 1. Flood Control Infrastructure is confirmed as water-compatible development in the national Planning Practice Guidance (PPG) and therefore can take place, based on the Flood Risk Vulnerability Classification, in any Flood Zone Category. Water-compatible uses, should be designed and constructed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows and not increase flood risk elsewhere.

6.17 A number of consultation responses raise concerns about the level and duration of flooding which would occur in the event of the operation of the Foss FAS. The scheme is designed to be operational and safe in times of flood; increases flood plain storage and is not increasing flood risk elsewhere but that required to deliver the flood storage capacity. By virtue of the word 'elsewhere' there is an implicit recognition that it does mean flood risk may very well increase within the site in question. This is to reflect the need to consider flood risk as a consequential aspect of what happens upstream. Water flows are not impeded by obstruction to the point they are blocked, but are regulated to allow a managed flow. The water will be held back and released at a maximum rate of 10 cubic meters per second. This means that up to 130ha of land may be needed in times of an extreme flood event, but only for c.27 hours once the flow volume subsides. (At 1 million cubic metres of water being released at 10 cubic metres a second). Officers agree that this figure would increase depending on the duration of the flood event, and so with the existing flow rate it would be c.36 hours but the water would built up over time.

6.18 The NPPF Paragraph 158 states that:

For the exception test to be passed it should be demonstrated that:

a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and

b) the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

Both elements of the exception test should be satisfied for development to be allocated or permitted.

6.19 Officers consider that test a) is satisfied. Rivers are historically often boundaries for administrative areas, but their catchment areas pay no heed to administrative boundaries. There is a real and pressing need to consider the benefits of the scheme beyond the boundaries of the District. Whilst this would increase the flood risk in the immediate operation of the scheme, on an area of agricultural land, it would reduce the flood risk for 490 properties (465 homes and 25 commercial buildings) and 28 ha of agricultural land downstream. The scheme is an engineering operation, and whilst it increases flood risk intermittently in its locality, it ultimately reduces flood risk in a much more sensitive location. As such it is considered to satisfy test b).

6.20 Criticisms have been levelled at the modelling work undertaken, such as the use of 2007 data (which was an extreme event on the Foss). The Environment Agency are the national, Government body for the management of water. They have undertaken detailed modelling of flooding events which represent robust, real-time data for an extreme event. This approach has then been assessed by the regulatory arm of the Environment Agency and is considered to be appropriate. Officers consider that in terms of modelling an event, it is appropriate to use data which shows extreme events to give robustness to the modelling. The scheme is, after all, expected to operate in extreme events.

6.21 Concern has been raised that the application area (red line) does not accurately include all of the areas liable to flood within a 1 in 100 year event and that this could then impact on the ecology of ponds outside of the application area. This response followed the production of more recent technical information submitted by the applicant to assess the impact of flood water inundation on soils. The applicant has responded to these concerns and has confirmed that the areas and ponds in question shown in the additional material are not part of the operational flood storage area. These are areas which already experience flooding and will continue to do so when the scheme is operational. The scheme will

not result in an ecological impact on the ponds in question.

6.22 Concerns have been raised around the implications for the operation of drainage ditches which currently feed into the Foss, including the locking of drains and the management of the drainage ditches. The applicant has undertaken significant modelling to assess the impact of the scheme on the key components of the drainage network and has concluded that at times of extreme flooding events when the scheme is operating at a maximum, land drains could be locked for a maximum of between 15-35 hours, depending on their position upstream of the control structure. A number of landowners dispute these findings although the applicant considers the modelling to be robust. It should be noted that the area of the application site is low lying and underlain with clay and that within this context, land drains will lock regularly under existing circumstances/ baseline conditions.

6.23 The York Drainage Consortium (Foss 2008 IDB) has commented on the planning application in detail. Their initial response (which has now been superseded by later responses), refers to the standard consent regime. It is supportive of the principle of the scheme but objects to elements of the application as it was initially presented for the following reasons:

"The Board is in general in support of the scheme as it appears the most practical option to reduce flood risk from the River Foss along with the improvements being made to the Foss Barrier. The Board does not want to hinder the progress of this work and none of the matters raised in this advice are new. However, the Board believes the applicant can easily address the above matters and if this is not possible, any remaining outstanding matters are potentially able to be addressed by appropriate conditioning of any approval granted. At this stage, the Board would therefore object to the application on the below basis:- Insufficient information has been provided by the applicant at this stage to determine the potential impact the proposals may have on the existing drainage systems."

6.24 These concerns covered a range of aspects from drainage implications, access, maintenance and management, drainage of impermeable area, discharge arrangements and control on drain down of the storage area, the designation of the River Foss, proposals to manage an extreme event if the flood storage area becomes full and maintenance of the borrow pits.

6.25 In response to the IDB's concerns, the applicant has prepared a detailed response to the matters raised. The IDB have now confirmed that in light of this response that they are in general support of the scheme, and that the additional information provided "*demonstrates that Agency is trying to address the boards concerns*". They do have some reservations about the ownership and whether the 1991 Water Resources Act applies to the proposals on privately owned land when they are remote from a Main River. The board now recommends that approval should include two conditions on the specification of the drainage works to be agreed and to clarify the method and intention of future maintenance of the scheme.

6.26 In terms of other statutory consultee responses, the Environment Agency have no objections to the scheme in respect of the flood risk. The Lead Local Flood Authority (LLFA) has no objections subject to compliance with their proposed conditions. The LLFA states that the submitted documents demonstrate a "reasonable approach to the management of surface water on the site" and has recommended a series of conditions concerning;

- Standard detailed drainage design condition;
- Details of the maintenance and responsibilities of each component on the scheme;
- Details of the exceedance flow routes;
- Details of the management of surface water during the construction phase;

6.27 One objector has called for the implementation of other alternative long term management and maintenance proposals for the entire length of the River Foss. However, the Environment Agency has looked at different schemes, and this scheme represents the most efficacious and cost effective means of delivering flood risk mitigation to properties downstream.

6.28 In terms of flooding and flood risk, the scheme, subject to conditions, is considered to be

acceptable taking account of:

- the views of the regulatory arm of the Environment Agency, and other statutory consultees;
- the spatial principles and objectives of the development plan and compliance with Policies SP1, SP9 and SP17 as outlined above;
- consideration of the NPPF as a material consideration in relation to development which increases flood risk in an area;
- the application of the sequential test and exception test for development in a flood plain,

ii) Impact on agricultural land use and businesses and agricultural land and soil resources

6.29 Policy SP20, which is concerned with Generic Development Management Issues, states that that in considering the impacts of proposed uses and activity, schemes will be expected to *"not prejudice the continued operation of existing neighbouring land uses"*.

6.30 The scheme will result in the permanent loss of some agricultural land. There will also be a temporary flooding of land. This will be both intermittent and unpredictable in its activity. Also it will cover a range of extents depending on the event in question. The implications for this are considered in the following section around agricultural land.

6.31 Responses from Lilling Green Farm and East Lilling Grange Farm have specifically raised concerns around their properties. The scheme does not propose to increase flooding to an extent whereby existing buildings are compromised; as shown on the Location Plan which shows the "potential 1:100 year flood event outline post development". Lilling Green Farm also raised issues around the access track to their property. The level of existing flood risk already has the capacity to flood the access track that they use, which is in private ownership. The works proposed by the Environment Agency are as a one off event (given it is not adopted highway) to lift the section of road which would be subject to increased flooding in the occurrence of a 1:100 year event. This track is also a Public Right of Way, and so the works will indirectly improve the ability to pass and repass the road based on existing conditions. It is this access road which will serve recently approved 6 holiday lodges, which is in Flood Zone 1 currently, and will remain in Flood Zone 1 post operation of the Foss FSA scheme.

6.32 The land that is the subject of this application was Inclosed (Now Enclosed) in the late 18th Century. (which is around legal rights and ownership). As part of that the land was drained more extensively. Responses already indicate that areas of land currently within their workings already either seasonally flood or have a high water table. The Environment Agency has confirmed that as a result of the structure there will be less pressure on the surrounding drainage network (or it backing up from the Foss). The continued management of the drainage ditches and access to fields has been set out in the earlier sections on flooding. Objections were raised due to the agricultural community needing access to the land- and this has been addressed through the formation of a bridge over the north eastern (topmost) extent of the bund for a combine harvester- the largest type of equipment on a farm which is moveable.

6.33 There are adjacent planning applications which are in close proximity to the application boundary. Members may wish to note the above referenced planning application 20/00032/FUL. Future planning applications will need to be cognisant of the changes to the Flood Zone designations if the application is approved, but planning policies are generally against the development of isolated agricultural buildings away from the main farm complex and so it is unlikely to prevent a farming enterprise from expanding or diversify (subject to any prior approval procedures, general Development Plan Compliance and environmental permitting regimes).

6.34 It is perhaps not surprising that the majority of the objectors to scheme are the landowners who own the land that would flood or that would be directly lost to agricultural production through the construction of the earth embankment, areas of hardstanding and habitat creation. Whilst the maximum extents of flooding can be calculated, the timing of those events cannot. The value of an existing crop could be effected and that of a following year. The frequency of flooding may also effect the extent to which specific parts of the application area could continue to be used to grow specific products, including, for example, 'higher value' products such as turf.

6.35 The Environment Agency have identified that in terms of the modelling work up to 130ha could be inundated, in a 1:100 year event. The Environment Agency have also identified that water could be held for up to c.36 hours. But this is a worst case scenario and any flooding event is intermittent, making it hard to predict in its impacts. Furthermore, critically, it would not prevent the land from being brought back into agricultural use, in due course. Questions have been raised over the actual quantum of amount of land which could be made temporarily inactive. Officers consider that apart from the key modelling extents, which have set out the maximum extent expected, there is a spectrum of impact - a function of the amount of rainfall and current river level in combination with ground saturation.

6.36 The objectors to the scheme consider that the loss could be more significant. They disagree that the water will only remain for up to 36 hours, but even so depending on the crops, this will have a critical effect on the types of crops which can be planted. Flooded ground takes months to regenerate, and would affect the cropping rotation system from an arable perspective.

6.37 Officers agree that the impact of a flooding event on agricultural productivity at a point in time would depend very much on the timing of such an event. Influenced by what stage in the growing cycle the crops were affected, and any knock-on effects on planting schedules. This is not capable of being quantified in any firm manner because it is not known what stage the crop could be affected. It would also, fundamentally, not prevent the land from coming back in agricultural use in due course and is not an irreversible impact.

6.38 There is a common theme in the objections about the lack of detail regarding compensation payments and the Environment Agency's legal 'right to flood'. The National Farmers Union (NFU) have sought to stipulate a condition should be imposed which duly compensates landowners in respect of - immediate loss of value; the area taken for the dam structure; value of the mineral/clay taken from the land and diminution value payment over the whole farm to reflect the risk that the scheme creates. The impact/loss of income, whether directly or indirectly and loss of property value are not material planning considerations, accordingly, nor is the compensation payment scheme- and right to flood agreement. They are civil matters considered under different legislative regimes. Therefore the Local Planning Authority is unable to impose any such condition on the Environment Agency regarding compensation. This is noting that there is a compensatory framework which will be implemented as and when required.

6.39 It is considered that that the proposal does not raise any issues of policy compliance in respect of Policy SP20, in terms of material planning considerations as it does not directly, permanently prejudice the continued operation of existing neighbouring land uses in terms of existing operations, access rights or drainage provisions.

6.40 A number of the objections have been concerned with the loss of best and most versatile agricultural land (grade 3a and above) (BMV). This is also a material consideration, within a general policy context of seeking where possible to minimise the irreversible loss of best and most versatile agricultural land. Policy SP17- Managing Air Quality, Land and Water Resources states that:

"Land resources will be protected and improved by "Prioritising the use of previously developed land and protecting the best and most versatile agricultural land from irreversible loss. New land allocations will be planned to avoid and minimise the loss of the Best and Most Versatile Agricultural Land. Proposals for major development coming forward on sites that are not allocated for development which would result in the loss of the Best and Most Versatile Agricultural Land will be resisted unless it can be demonstrated that the use proposed cannot be located elsewhere and that the need for the development outweighs the loss of the resource".

6.41 Policy 4/18 - Restoration to Agriculture- of the adopted, saved, Minerals Plan states that: *Where agriculture is the intended primary after use, the proposed restoration scheme should provide for the best practicable standard of restoration. Such restoration schemes should, where possible, include landscape, conservation or amenity proposals provided that these do not result in the irreversible loss of best and most versatile land.*

6.42 There is commonality with the emerging Joint Minerals and Waste Plan. Policy D12- Protection of agricultural land and soils - states that the Best and Most Versatile agricultural land will be protected from unnecessary and irreversible loss. Where development of best and most versatile agricultural land is justified proposals should prioritise the protection and enhancement of soils and the long term potential to recreate areas of best and most versatile land. Where relevant, development will be subject to aftercare requirements to ensure that a high standard of agricultural restoration can be achieved. Development proposals will be required to demonstrate that all practicable steps will be taken to conserve and manage on-site soil resources, including soils with environmental value, in a sustainable way. Development which would disturb or damage soils of high environmental value such as peat or other soil contributing to ecological connectivity or carbon storage will not be permitted. The latter aspect, in the case of this application, is not applicable.

6.43 The Development Plan and emerging Development Plan policies reflect key elements of national policy (NPPF Para 170) that requires planning decisions to recognise the economic and other benefits of best and most versatile agricultural land; of the need to protect and enhance soils and to prevent unacceptable soil pollution.

6.44 The Foss rises in the Howardian Hills, but is soon on the lower land of the Vale of York which subject to extensive draining- and this is what makes the River Foss subject to short, sharp inundations of water, what can be termed 'flashy'. Prior to the formation of these drainage ditches, there would have been increased flooding, and it one of the reasons why the soil quality in the Vale is given a BMV rating. Members are reminded that Best and most Versatile Agricultural Land (BMV) is land falling within Grades 1, 2 and 3A.

6.45 The proposed development will result in a direct loss of 18.87ha (updated to 19.4ha in recent supporting information) of agricultural land. At the time the application was submitted this included an unspecified proportion of Grade 2 and Grade 3 agricultural land. In view of the amount of BMV land potentially affected, Natural England initially confirmed that it considered that the application fell outside the legislative arrangements that require it to be consulted on BMV matters and advised that they:

"do not propose to make any detailed comments in relation to agricultural land quality and soils, although more general guidance is available in Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, and we recommend that this is followed. If, however, you consider the proposal has significant implications for further loss of 'best and most versatile' agricultural land, we would be pleased to discuss the matter further."

6.46 The NFU has queried the amount of land directly lost given that the change of 225m to 1.3 km of the Foss riverbank being re-profiling will further increase the permanent loss of farmland along the Foss. They consider it to be in excess of 20ha and that an agricultural soil appraisal should be required as part of the application. Officers consider that the re-profiling of the river bank is necessary for river management. It is not considered to represent a materially significant loss of agricultural land because of its extreme proximity to the river, and as such would not be farmed in the first instance. The NFU also raised the point that the quality of agricultural land may also be affected by inundation by floodwater.

6.47 Members may recall that the in June of this year Natural England clarified its position following concerns (raised by the NFU and on behalf of landowners) that the scheme could have a greater impact on BMV agricultural land. Natural England confirmed that its previous advice had been incorrect and that the impact on soils and BMV land should also take account of the effects of flood inundation as well as direct loss. Natural England requested that an Agricultural Land Classification survey and an impact assessment on BMV soils be undertaken in order to establish the significance of the impacts in terms of the loss and/ or degradation of BMV soils and the scope for mitigation.

6.48 In response, the applicant undertook a desk-based study which modelled the impact of inundation across the application site and an Agricultural Land Classification survey to establish the amount of BMV land that would be directly lost as a result of the permanent elements of the scheme. The

information was included in an addendum to the Environmental Statement.

6.49 The further work concluded that the scheme would result in the permanent loss of 9.07 ha of BMV and that this would be in part mitigated by the relocation of BMV topsoil from the site of the permanent elements of the scheme to areas of lower quality – the temporary borrow pits. The desk based study assumed inundation at a frequency of a 1 in 10 year event and a worst case scenario that the application site was all grade 3a BMV. The study concluded that the effects of regular inundation across the site would not lead to a reduction in its agricultural land classification grade.

6.50 The EA addendum concludes that the scheme would result in a moderate negative impact on the BMV soil resource at the site, with a slight benefit to (22-33ha) agricultural land downstream as a result of a reduction in flooding.

6.51 Following the further work, Natural England has confirmed that it has no objection to the application subject to appropriate mitigation measures being secured.

6.52 One landowner has questioned the further work undertaken in relation to the impact on BMV soils. The landowner does not accept that the modelling (which indicates no increase in flooding on the right hand bank for the 1 in 2 year event) is accurate and does not reflect the true loss of BMV soils. In response, the applicant has confirmed that the modelling has followed best practice and industry accepted methodologies and has been validated by recent observed flood events. They are of the view that the work undertaken provides a high degree of confidence in modelled river and main land drain levels in the current baseline scenario and FOSS FAS scenario and are confident in the conclusions in respect of the impact on BMV soils.

6.53 The landowner has also pointed out that the work fails to properly consider the impact of inundation as the Agricultural land Classification survey was not undertaken for the whole site. The applicant has confirmed that the impact of inundation has been considered across the whole site and is confident in the desk based assessment that was undertaken to establish the impact on BMV soils on the land not affected by permanent structures. It considers the work to be robust and based on a worst case scenario.

6.54 The NFU have raised concerns about soil quality and effects on soil structure regarding the back-filling of the temporary borrow pits. These cover 4.95ha of land of which approximately half is BMV. Natural England has confirmed: that subject to conditions to undertake suitable soil handling and restoration scheme which safeguards soil resources and an appropriate aftercare scheme, that in its view, it should be possible to reinstate this land back to an equivalent land value. Natural England in their standing advice have referred to the need for an experienced soil specialist to advise on soil handling, to make the best use of soils on the site during and post construction. There will need to be a structured approach to the backfilling, and this can be set out in a Construction Environmental Management Plan, which is capable of being conditioned. This would also satisfy the policy requirements of Policy 4/18 of the adopted Minerals Plan.

6.55 Policy SP17 states the *"loss of the Best and Most Versatile Agricultural Land will be resisted unless it can be demonstrated that the use proposed cannot be located elsewhere and that the need for the development outweighs the loss of the resource."* The earlier section on flooding has identified why this engineering operation is to take place in this location, and cannot be undertaken upstream, nor within the built environment of the City of York. There are also aligned benefits regarding the use of indigenous clay resources- reducing the environmental impacts during construction. Whilst the NFU have identified that the benefits to farmland south of the scheme has "no correlation" with the land affected up stream, the benefit of protecting agricultural land downstream is a benefit, albeit not the reason for the scheme. The scheme is designed to provide longstanding protection to 465 homes and 25 commercial buildings from flooding, and will bring wider benefits as further properties would benefit due to the Foss levels being maintained into the Ouse. It is considered that this benefit of reducing flood risk to such a large number properties, significantly outweighs the loss/ degradation of BMV soils and the permanent loss of agricultural land and intermittent loss and disruption to agricultural productivity. In this respect the scheme is considered to comply with Policy SP17 of the adopted Development Plan and the relevant policies of the adopted and emerging Minerals and Waste Plans. (Policies 4/18 (

Restoration to Agriculture) and D10 (Reclamation and After-Use), D12 (Protection of Agricultural Land and Soils)

6.56 Wider implications regarding loss of food production and implications for quality assurance of food have been raised. The first is a potential consequence, although to what extent this would materially result in a loss of food is dependent on the timing of the event, as discussed earlier. There is also no direct correlation that there would be a direct consequential loss of quality assurance in relation to food as a result of this loss of agricultural land, both permanently, and intermittently.

6.57 The carbon footprint implications are also not quantifiable to any measured degree. However, Officers consider that the carbon footprint in replacing flood damaged cars, drying and repairing buildings, whitegoods, furniture and soft furnishing such as carpets for 465 properties (plus any commercial operations) would clearly be far greater, than a failed crop. Furthermore, in respect of the considerations around energy efficiency and carbon footprint, the proposal now seeks to fully use indigenous clay resources- which reduces vehicular trips by 460 journeys. This use of indigenous clay is very much with in the spirit of Policy SP18, which is concerned with the use of renewable and low carbon sources, and which also seeks to ensure that schemes adopt the principles of the Energy Hierarchy. This is concerned with reducing energy demands of a development in the first instance, whether this during construction or operation.

iii) Ecological Implications

6.58 S.40 of the NERC Act of 2006 places a duty on Local Planning Authorities to conserve biodiversity:

"the public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity...Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat."

6.59 The EIA screening request, concluded that it was an EIA application. The need for an EIA application related to the uncertainties around the impacts on the hydrological regime of the Strensall Common Special Area of Conservation (SAC) and SSSI so designated for its lowland heath, which are adjacent to the works. The impacts needed to be ascertained in a detailed manner to establish what the likely impacts could be, and in doing so establish any mitigation to ensure that the proposal will not have an adverse impact on the wider ecology of the SAC/SSSI. There is also a Ryedale SINC site (480m to the west of the red line boundary) so designated for its lowland fen habitat - which is again potentially susceptible to changes in the hydrology/surface water drainage regime.

6.60 Accordingly, the Environmental Statement was expected to be tailored to considering the ecological implications of the proposed development on the Strensall Common SAC/SSSI and the potential impact on the proximal SINC site. This approach has been followed, and is considered within the following paragraphs.

6.61 As discussed earlier in the report, a Habitats Regulation Assessment was prepared, and both Authorities have adopted the report. This is separate to the EIA requirements, due to its specific remit: considering the potential for Likely Significant Effects on the conservation objectives of the SAC designation alone. The HRA concluded that there would be no likely significant effects on the conservation objectives of the SAC as a result of the scheme. This was ascertained through the detailed hydrological modelling work undertaken in the Appropriate Assessment stage. Natural England were eventually satisfied with the HRA process undertaken, and agreed with its conclusions. Therefore given the modelling work has been conducted by a statutory body and assessed by another statutory body the Local Planning Authority do not consider it necessary to verify the modelling work.

6.62 Policy SP14 (Biodiversity) of the Ryedale Plan - Local Plan Strategy states:

Biodiversity in Ryedale will be conserved, restored and enhanced by, amongst other aspects which are relevant to this application:

- *Minimising the fragmentation of habitats and maximising opportunities for the restoration and enhancement of habitats and improving connectivity between habitats through the management of development and by working in partnership with landowners and land managers*
- *Maintaining, creating and improving ecological networks and Green Infrastructure routes to assist the resilience of habitats and species in the face of climate change*
- *Supporting, in principle, proposals for development that aim to conserve or enhance biodiversity and geodiversity through the prevention of loss of habitat or species and the incorporation of beneficial biodiversity features*
- *Requiring a net gain in biodiversity to be provided as part of new development schemes*
- *Resisting development proposals that would result in significant loss or harm to biodiversity in Ryedale*
- *Encouraging the use of native and locally characteristic species in landscaping schemes*

6.63 Policy SP15 is concerned with promoting *"A network of green open spaces and natural features will be created and managed across Ryedale"*

This will be achieved by protecting, enhancing, creating and connecting wider elements of Green Infrastructure including: Protecting and enhancing a range of aspects including:

- *Public Rights of Way;*
- *Informal open spaces, allotments, street trees, hedgerows, stream corridors and beck sides, woodlands, formal public open spaces, recreational and play space*
- *Biodiversity, wildlife corridors and buffer zones necessary to support these features or areas*
- *New habitats which reflect the locally distinctive habitat types included in Policy SP14*
- *Habitats to support the resilience of biodiversity.*

"New development will be managed in accordance with wider policies in this Plan, to assist the protection and improvement of Green Infrastructure assets and the connectivity between them. New development which would result in irreparable fragmentation of connections between green spaces will be resisted."

6.64 The Yorkshire Wildlife Trust raised a number of issues and concluded their first response to the application by stating

"...the development of a flood storage area on the Foss provides a unique opportunity to join up habitat in the area. Improved habitat creation, connecting up habitat within the farmed areas, and well-designed long term catchment habitat management could provide major gains for biodiversity. The Trust would urge the local authority to ask for improvements to the scheme."

6.65 Similar concerns were raised by NYCC Ecology. During the course of the application, the scheme has been modified to address concerns raised by both these organisations regarding the ecological mitigation measures proposed to bring net benefits to the site (as required by the NPPF and Policy SP14 of the Ryedale Plan - Local Plan Strategy). The regulatory arm of the Environment Agency also proposed specific conditions, which they consider are necessary to ensure that the scheme complies with Water Framework Directive.

6.66 Natural England, whilst not verifying the matrix provided, have endorsed the biodiversity net gain in each of the units in light of revisions to the mitigation measures. NYCC Ecology welcomed the provision of Biodiversity Impact calculations, and noted uplift for hedgerows and for habitats in terms of biodiversity units. They note the uplift for river habitat is low but note that the scheme is expected to provide significant improvement in ecological quality through provision of a more natural channel form. As such, it meets the over-all policy objective of biodiversity net gain.

6.67 The NFU have stated that the Programme for the eradication of Giant Hogweed and Himalayan Balsam is not in the Environment Assessment, and the biodiversity net gains does not take account of the permanent loss of agricultural land. The YWT and NYCC Ecology are satisfied that, subject to detailed conditions, that the scheme would be appropriately considering biodiversity implications of agricultural land. This includes measures for farmland birds, known as "conservation headlands" which are strips at the periphery of a cropped field where inputs (herbicides, insecticides,

fertilisers) are reduced or avoided to provide more favourable habitat for farmland birds, especially improved chick-food resources (weed seeds, invertebrates). The applicant has confirmed that these are to be delivered in the short to medium term during construction and would be able to commit to longer term management, and this will be discussed in consultation with the landowners. This is considered in more detail below.

6.68 Given the complexity of the biodiversity considerations, key consultees have stated that they are content that sufficient information is provided at this stage to understand key principles, and they are able to recommend conditions. Measures are to be set out in detail in a Construction Environmental Management Plan and a Landscape and Environmental Management Plan. The Environment Agency, as applicant, have confirmed their agreement to conditions and the submitted Plans will be subject to further consultation with the Environment Agency, NYCC Ecology and Yorkshire Wildlife Trust.

6.69 Objections have been received concerning the imposition of a different farming regime in relation to preventing (pig) slurry and fertilisers getting washed into the river in a flood. Conversely concerns have been raised about whether such pollution can indeed be prevented/mitigated by the Yorkshire Wildlife Trust. The Environment Agency have advised the Foss FAS is within a Nitrate Vulnerable Zone. Such pollution incidences and land-use considerations are subject to the Reduction and Prevention of Agricultural Diffuse Pollution (England) Regulations 2018. This means that land use decisions and operations will need to reflect the anticipated hydrology associated with the operation of the FAS. They further state that activity which leads to a pollution incident that could have reasonably been foreseen or avoided would be an offence. This is out with the planning system.

6.70 Habitat and biodiversity mitigation measures are integral to the scheme's ability to not just mitigate its impact, but to bring biodiversity gains. The landowners involved in the scheme's construction have stated that they have not consented to the various mitigation measures imposed, and as such they are not deliverable. The Environment agency have confirmed, as the applicant, that they are legally in a position to both undertake and maintain the ecological mitigation measures that are proposed for the scheme, and would be subject to conditions:

"If planning permission is granted for the Foss FSA then the Environment Agency (EA) would expect a condition or conditions to be imposed which required the carrying out and subsequent maintenance of the compensatory habitat measures shown on the revised landscape master plan revision P05 dated 11th February 2020. We would expect that such condition or conditions would be drafted in such a way as to prohibit activities which harmed or destroyed the compensatory habitat, and if such harm or destruction took place, that the compensatory habitat would be reinstated."

"The EA has powers under the Water Resources Act 1991 to carry out and maintain flood risk management works. The EA also has a power under Section 37 of the Environment Act 1995 to do anything which, in its opinion, is calculated to facilitate or conducive or incidental to, the carrying out of its functions. The EA's functions include its powers under the Water Resources Act 1991. Therefore, the EA could undertake the compensatory habitat measures and maintain them pursuant to its power under s 37. To do so would be calculated to facilitate, and would be conducive to, the carrying out of the Foss FSA scheme. The imposition of a condition or conditions which required the carrying out and subsequent maintenance of the compensatory habitat measures would reinforce this position."

6.71 It is therefore considered that, subject to the imposition of the detailed conditions, as set out by statutory consultees, that this EIA application is policy compliant in respect of Policy SP14 of the Development Plan, concerning biodiversity mitigation and net gain and compliant with saved policies of the North Yorkshire Minerals Plan. As part of this increased habitat diversity, connectivity and resilience, it is also in accordance with Policy SP15, which is concerned with the enhancement of Green Infrastructure. Also, inter-alia the Environmental Statement and the Habitats Regulations assessment have confirmed that the Strensall Common SAC and SSSI will not be affected by the scheme.

iv) Highways implications and general accessibility

6.72 The principal source of vehicular movements, particularly in terms of HGVs is during the construction phase. Maintenance will be sporadic, and operation of the orifice control can be done

remotely. A total of 12 trips per year is anticipated to be generated. As such, in terms of the operation of the scheme, the levels of vehicles generated does not raise any implications for the highway network.

6.73 The Transport Statement sets out four phases of construction, lasting a period of two years. The submitted access arrangements are to travel via the A64, turning at the Scotchman Lane junction, pass through the villages of Flaxton and West Lilling (Goose Track Lane) then turning left on to the Sheriff Hutton Road and then onto the site access to the left of the Sheriff Hutton Road at Bridge Farm and Lilling Low Lane (to undertake the works to Ings Lane). In the submitted details the return journey would follow the same route. It would off the main road utilise existing tracks and a new section of track.

6.74 Vehicular movements are broken down into personnel and material onto the site. Personal movements are expected to result in a maximum of 36 two-way daily trips throughout the construction phase. Material deliveries would correspond with phase of delivery- and are predicated on the need for clay to be externally provided. A maximum of 71 two-way trips would take place over a three week period in the set up stage, with then a worst case scenario of 107 two way trips per day with car trips included.

6.75 The rationale for the route was to capitalise on the upgraded A64 Scotchman Lane Junction, and to reduce overall the impact on local communities: Flaxton and West Lilling being smaller settlements than Strensall. In terms of the Strategic Road Network, Highways England have made no objections to the scheme.

6.76 A Construction Traffic Management Plan (CTMP) would be required to be approved as a condition on the granting of any approval, and produced post decision to set out in detail and passing points of widenings at road bends. This would be considered in conjunction with both Local Highway Authorities (City of York and North Yorkshire County Council) and Highways England.

6.77 Objections have been received from the local community of West Lilling. They are concerned that the frequency and size of vehicles will be significantly more disturbing for them due to the narrowness of the road, and the general absence of general space (such as front gardens, grass verges, wider pavements) through the village when compared to Flaxton or Strensall. Concerns have been raised about the road infrastructure being used to facilitate these trips. They are also concerned by the narrowness of the road and the two pinch points, one in the centre of the village, the other the bridge over Howl Beck. They have indicated that they would prefer no traffic to pass through the village.

6.78 Within the NYCC LHA area, concerns were identified with aspects of the submitted routing. This was in relation to the following aspects:

- Concerns raised about the impact on settlements such as West Lilling. Aligned to this was concerns about the lack of exploration of using either an alternative route or a one-way system which spread the vehicular movements.
- Further details of the proposed works to Gennell Lane & Lilling Low Lane, which will be the routes required to access the road raising works for Ings Lane, the highway strengthening works along Lilling Low Lane and the access / car park etc. to be provided off it at the north-eastern extremity of the proposed embankment barrier.
- The Goose Track Lane pinch point at the bridge over Howl Beck and any left turn out onto Sheriff Hutton Road is quite tight due to the small junction radius. An alternative from West Lilling would be to use the Finkle Street junction south of Sheriff Hutton village. It is also advised that temporary direction signing be placed to encourage this route and / or be specifically mentioned as part of the required Construction Traffic Management Plan (CTMP).
- Further details regarding speed restrictions, signage, passing places and traffic movement breakdowns were sought.

6.79 These concerns became the subject of a formal objection from the Local Highway Authority. This was because the applicant was concerned that the alternative routes would have involved going through greater areas of population (as set out above). The objection to the level of traffic using the proposed route was very much influenced by the level of heavy goods vehicle movements which would

be required in order to deliver the import of Clay (2,300m³).

6.80 The Applicant has however, been able to re-examine their construction timelines/schedule and the need for the clay has now become unnecessary. It has submitted an addendum to the Transport Assessment which sets out that without this increased volume of traffic it has removed c.230 delivery trips and c.460 total journeys. The applicant is also comfortable for the use of a condition which precludes the importation of clay. The Local Highway Authority and the Parish Councils of Flaxton and Lillings Ambo were re-consulted.

6.81 The Local Highway Authority have advised that

"The removal of the concentrated HGV movements during the lead-in period, and abandonment of the construction route via Gennell Lane / Lilling Low Lane (save for any construction works which can only be undertaken via access along this route alone), enables the highway authority to reconsider its earlier recommendations of refusal in its consultation response dated 2nd April 2020.

Whilst it is acknowledged that construction / delivery traffic for the scheme will, for the main, access the site along the route off the A64 and through Flaxton & West Lilling villages, the aggregated daily movements (now exclusive of the activities associated with the clay fill importation originally proposed), are not thought to constitute a materially detrimental effect on that route over the time-span of the construction phase.

Furthermore, the applicant is prepared to accept a planning condition to ensure a comprehensive Construction Traffic Management Plan is prepared and implemented to cover the whole works construction programme, including an agreement to splitting any additional HGV traffic arrival / delivery routes in the unlikely event of any extraneous circumstances arising."

6.82 The Local Highway Authority has sought to impose the following conditions;

- The specification of the access at Lilling Low Lane;
- The specification of the off-site highway mitigation measures; and
- The development of a Construction Environmental Management Plan for each phase of the project.

6.83 Therefore, for the avoidance of doubt, Officers proposed a condition which precludes the importation of clay, unless approved in writing by the Local Planning Authority. The applicant is accepting in principle of such a condition- as they are confident that there is sufficient indigenous clay reserves to construct the scheme. The avoidance of the importation of clay has resulted in highway objections being lifted to the scheme, and so this is very much a material consideration. Officers have been prepared to accept the approach on the basis that the applicant is confident that imported clay is not required.

6.84 A further consideration is the implications for accessibility and use of Public Rights of Way (PROW). Lillings Ambo Parish object to the temporary closures of Centenary Way and other foot paths. Concern is also raised over safety of walkers and pets with the borrow pits- if there is to be no fencing. The PROW is not to be permanently diverted. There is a separate consent regime for any formalised diversions as a result of temporary obstructions. NYCC, who manage PROWs have requested that a condition is imposed regarding this and works which indirectly or directly affect the PROW. The scheme does provide an alternative route which would only be required in a major flood storage event. This also involves measures which ensure the safety of those using the PROW. It is considered that the proposal will not result in the sustained/permanent loss of the Public Right of Way, and as such the proposal is neither contrary to the provisions of Policy SP10, which seeks to improve connectivity of Rights of Way, nor to Policy SP20 which seeks to ensure safe movement within a site by pedestrians.

6.85 Concerns have also being raised regarding the flooding of Lilling Low Lane, in principle and the measures to warn people and diversions. Also the remediation of the roads in relation to wear and tear as a result of the vehicular movements. They are concerned that the hardstanding will need

surveillance, as it will be a target for antisocial behaviour. The likelihood of such an inundation is a 1 in 30 year event, and is a lightly trafficked country lane and so if and when diversions are required, they will not generate significant impacts on the diversion route network. The applicant would be required to make good any roads which were damaged as a result of the vehicular movements during construction. The antisocial behaviour potential is not capable of being substantiated, and would, if it did occur, be addressed through other legislative regimes. The applicant would, through general maintenance, be able to monitor activity, as would the local community. As such, these aspects are not considered to undermine the benefits of the scheme.

6.86 In conclusion, the implications of the proposed scheme for the operation of the highway and public rights of way are considered to be capable of being policy compliant.

v) Landscape Setting

6.71 Concerns have been raised regarding the landscape impact of the bund. As referred to earlier, detailed matters concerning the Green Belt are the consideration of the City of York Council. The area of the site in Ryedale is not located within the York Green Belt and it is considered that the development of the site in Ryedale would not result in harm to the Green Belt. Most of the works proposed as part of this application will have sub-surficial implications. Although there are some key implications regarding the embankment as the sole elevated, engineered feature, and the landscaping of the scheme.

6.73 Policy SP13 (Landscapes) is concerned with seeking to ensure that the quality, character and value of Ryedale's diverse landscapes is protected and enhanced. It expresses this through encouraging new development and land management practises which reinforce the distinctive elements of landscape character within the District's broad landscape character areas. Development proposals are expected to contribute to the protection and enhancement of distinctive elements of landscape character that are the result of historical and cultural influences, natural features and aesthetic qualities including, amongst other matters:

- The pattern and presence of distinctive landscape features and natural elements (including field boundaries, woodland, habitat types, landforms, topography and watercourses);
- Visually sensitive skylines, hill and valley sides;
- The ambience of the area, including nocturnal character, level and type of activity and tranquillity, sense of enclosure/exposure

It further states that *"The Council will work with landowners and statutory agencies to encourage land management practises that will protect and reinforce landscape character across the District and proposals which seek to restore areas of degraded landscape or individual landscape elements will be supported"*.

6.74 The site is within the Vale of York National Character Area (NCA). This is generally described as being an area of relatively flat, low-lying land; surrounded by higher land to the north, east and west. NCA Profile notes a key feature of the NCA is the rivers that drain surrounding higher land and run southwards through the Vale on towards the Humber basin. Food and water provision and the regulation of water flow and water quality are described as the key ecosystem services provided by this NCA. Key aspects of the landscape character for this part of the Vale of York are:

- Predominantly agricultural land use, with medium- to large-scale arable fields defined by hedgerows (which are often low and intermittent with sparse hedgerow trees) and fences. Large dispersed farmsteads and small villages on higher land are set within a quiet rural landscape;
- Some areas of heathland remaining on poorer sandy soils (for example Strensall, Stockton and Allerthorpe commons), along with small scattered broadleaved woodlands and larger conifer plantations;
- The settlement patterns of the NCA, which broadly follow that of linear villages, with buildings (built with traditional materials of mottled brick and pantile roofs) set back behind wide grass verges and village greens, and dispersed large farmsteads.

6.75 The NCA profile also identifies that there are opportunities for improved flood storage, to

restore wetland habitat within river corridors to alleviate fast water flows. It should be noted that the Foss is a highly modified river, and 'restoration' of river systems will also maintain and improve natural soil fertility for productive agriculture, improve the ecological networks and strengthen the ability of biodiversity to adapt to current - and future - pressures.

6.76 The 2011 North Yorkshire and York Landscape Characterisation Project defines this area as being within Vale Farmland with Plantation Woodland and Heathland. In terms of key characteristics it describes the area as having:

- A patchwork of low lying, predominantly arable fields, often delineated by a network of mature hedgerows and interspersed with patches of regular-shaped mixed and coniferous plantation woodlands;
- Large heathlands are key features on sandy soils;
- Distant visual containment is provided by higher Landscape Character Types to the east and west;
- Strong sense of openness throughout much of this Landscape Character Type;
- Scattered settlement pattern of towns, villages and farmsteads within the landscape around the main historic City of York (which forms part of the Urban Landscapes Primary Landscape Unit);
- A network of trunk roads linking the larger settlements and towns.

6.77 Within the description of the LCA type is identified that there are: "large rivers (such as the Ouse, Foss, Kyle and Derwent) and small stream corridors are also key landscape and ecological features." In terms of sensitivity to change, it describes it as being of "Moderate visual sensitivity" overall. Whilst there is a strong sense of openness within much of the farmland as a result of the flat or gently undulating topography, patches of plantation woodland disrupt views to adjacent Landscape Character Types in places.

6.78 In the section on "Guidance for Managing Landscape Change", one of the key aspects is around physical and ecological character:

- Manage, restore and thicken hedgerows for landscape structure and biodiversity;
- Replace and plant new hedgerow trees;
- Retain and bring back into active management existing copses, shelterbelts and small woodlands to improve carbon storage levels and aid water infiltration;
- Plan for the significant extension and enhancement of riparian and wetland habitats assisting the adaptation of biodiversity to climate change and aid flood management;
- Seek opportunities for wetland creation and restoration.
- Ensure effective catchment management to sustain water quality;
- Encourage conservation of existing key habitats and landscape features and expand the resource through habitat restoration and re-creation guided by ecological networks;
- Seek opportunities to revert arable farmland to permanent pasture, particularly in floodplains or areas of archaeological interest;

6.79 Further objectives which are of relevance to the consideration of this proposal are:

- Conserve open views along and across the river floodplains towards adjacent Landscape Character Types;
- Protect and enhance public enjoyment of the landscape, including appreciation of the sense of escapism it provides, through identifying opportunities to create new circular routes or links to existing public rights of way.

6.80 There is some degree of undulation to the south of the Foss, but to the north the land is relatively flat, up to Lilling Low Lane, where the land begins to rise to the village of West Lilling. The height of the embankment is 2.89 metres, from existing ground level. For comparison, this is lower than a single storey dwelling, such as a bungalow. It would have an access track of between 4- 5 metres width, and the 1:4 slope would be covered with topsoil and grassed with grasscrete which will help to hold the soil in place. The overall width of the embankment would be between 25- 30 metres wide. As such the embankment would be clearly visible within the landscape. The embankment would represent a new feature within what is currently an area largely absent of any landform undulation. However,

given the modest height of the structure in combination with the gentle slope profile and its overall width, the feature would not represent a significant intrusion within the landscape. Importantly, views to higher ground would still be readily achieved from the PRoW and other public vantage points. Maintaining the intervisibility across the Vale of York LCA is a key objective in the Landscape Characterisation Project.

6.81 The City of York's qualified Landscape Architect has commented on the proposed scheme. She has noted that it is the flood bank which will alter the open vista where the Foss and Centenary Way walks meet at the bridge of the River Foss, presenting an 'artificial interruption' and blocking out lower portions of parts of the existing open vista across the valley bottom in northern and eastern aspects, and also in a south easterly direction along the Ebor Way, but at that point it would be read as grassland. She also notes that in blocking out the lower valley vista to the north and north east- in doing so it would "screen much of the less attractive giant sheds at East Lilling House".

6.82 She further comments that: "The scattering of trees along the west bank of the river Foss will pick out the line of the river in the landscape which will be an appealing addition to the scenery, and also draw attention away from the new flood bank."

6.83 The ecological mitigation will increase the presence of ponds and trees, and will enhance current landscape features. It will reinforce those elements of landscape character identified, such as the restoration of field ponds, tree planting generally, and support for enhancing habitat for farmland birds. The City of York Landscape Architect has also sought further clarification via a detailed planting schedule- which would be conditioned- as would the Landscape Masterplan and Landscapes Areas Plans.

6.84 It is considered that the embankment in the landscape will represent a new feature, and will alter some lower level vistas. However, the distanced views, will still be achieved, and the tree planting and screening of large, modern farm buildings will help to provide mitigation for the landscape impact as a result of the embankment. It is considered that in relation to the requirements and objectives of Policy SP13 the scheme would result in changes within the immediate landscape setting in relation to the loss of the lower valley views. But, in totality will:

- Enhance the pattern and presence of distinctive landscape features and natural elements through the tree planting and enhancing the appearance of the River Foss as a watercourse with the ability to condition habitat types;
- Still preserve visually sensitive skylines and longer distance views- which are a key element of the landscape character; and
- Accepting the noise and general activity during construction, the ambience of the area, will be sustained.
-

6.85 Furthermore, it is considered that the integration of the landscaping/ecology represents a significant landscape character benefit through the restoration of a significant section of the land surrounding the River Foss with planting. As such it is considered that the proposal complies with the objectives of Policy SP13 of the Ryedale Plan- Local Plan Strategy.

vi) Minerals considerations

6.86 There are reserves of sand and gravel and clay within the application area. The proposed development will involve the extraction of circa 112,000m³ of clay from borrow pits and as part of the excavation of the proposed embankment and some sand and gravel as part of the excavation of the southern part of the embankment.

6.87 This is not a minerals application although the implications of the proposed development on mineral resources require consideration against relevant policies of the relevant adopted and emerging Development Plan. An objector has questioned why a separate minerals application has not been provided. This is because the scheme is an engineering operation which is to result in a flood storage area, in a flood alleviation scheme. It proposes to utilise indigenous clay resources which are of a

suitable nature. It is not proposing to release clay resources for other projects. Therefore the extraction of the resource is solely in connection with the scheme for which planning permission is sought.

6.88 The adopted Development Plan is the saved policies of the North Yorkshire Minerals Local Plan. This is supplemented by the material considerations of the NPPF and the emerging Minerals and Waste Joint Plan which post-date this Minerals Local Plan. The relevant policies are listed in Section 4 of this report. It should be noted that the 'development management' policies in the minerals local plans are, for the most part only applicable to those elements of the application that relate to mineral extraction at the site. These are therefore referred to in other sections of this report.

6.89 Although it is contained in the aggregates section of the plan, saved Policy 5/6 of the North Yorkshire Minerals Local Plan establishes the criteria to be considered in relation to proposals for Borrow Pits. These are addressed in order below:

- i) It is not feasible to use secondary materials. The proposed borrow pits have construction and operational requirements which require their usage.
- ii) The site is located adjacent to the major construction or engineering project it is intended to supply. This is the case with this application.
- iii) The proposal would result in overriding environmental benefits compared with obtaining the material from existing sources. This is considered to be the case as the use of borrow pits will support a significant reduction in vehicular movements and the habitat creation opportunities for the permanent borrow pits.
- iv) The site can be restored within the associated project timescale to the satisfaction of the Mineral Planning Authority; and
- v) The use of the site will minimise or avoid use of public roads in the area. This is considered in the section concerning transport.

6.90 The use of borrow pits is also included in the emerging Joint Plan. It indicates that Borrow Pits are mineral workings used to supply material solely in connection with a specific construction or engineering project. They are typically located on the site of, or immediately adjacent to, the project to avoid or substantially reduce traffic associated with importation of minerals on public roads. Sometimes the voids created are backfilled with surplus or unusable material from the project and the land restored under a much shorter timescale than for a conventional quarry. Often, they can be restored within the timescale of the associated construction works. In some circumstances, borrow pits can be a sustainable form of development by reducing transportation impacts compared with supply from other sources. They can also help to prevent sterilisation of the resource, ensure higher quality materials are not used for a lower grade use and also reduce the need for new or expanded conventional quarries.

6.91 Policy M25 of the emerging Joint Plan states: that proposals for borrow pits, where permission is required, will be permitted where the required mineral cannot practicably be supplied by secondary or recycled material of appropriate specification from a source in close proximity to the construction project, and; where all the following criteria are met:

- i) The site lies on, or immediately adjoins, the proposed construction scheme so that mineral can be transported from the borrow pit to the point of use without significant use of the public highway system;
- ii) The site can be landscaped and restored to a high standard within an agreed timescale and to an agreed end-use without the use of imported material other than that generated on the adjoining construction project.

6.92 It is considered that in respect of the borrow pits, Policy 5/6 is satisfied and Policy M25 (i) is satisfied, and through the submission of evidence to support the application, and the subsequent production of a Construction Environmental Management Plan (CEMP), policy arm ii) is also capable of being satisfied.

6.93 Requests have been made that the Construction Environmental Management Plan (CEMP) be provided as part of the planning application. The production of a CEMP would be a condition of a planning permission in this case and required as part of discharging any -pre-commencement conditions, and as such is established prior to any development taking place.

6.94 Saved policy 4/18 also requires that where restoration to agriculture is proposed, that the best practicable standard of restoration is undertaken. Emerging policy D10 of the Joint Plan also covers reclamation and land use. Two of the proposed borrow pits are proposed to be restored to pre-existing levels and use and as noted above, with an appropriate CEMP, which includes soil storage, the requirements of these policies will be satisfied.

6.95 Queries have been raised over whether the clay to be used from the site is of a suitable specification for the construction of the embankment. The applicant has confirmed that the on-site resource is of a suitable specification and quantity to meet requirements.

6.96 In terms of the emerging Minerals and Waste Joint Plan Policy M01: Broad Geographical Approach to Supply of Aggregates in the Joint Minerals and Waste Plan indicates that NYCC area will be the main focus for the extraction of aggregate sand and gravel. It should be noted that the application site is not allocated for extraction of sand and gravel in the joint plan. In addition, the site is not allocated as a site for the extraction of clay. Policy M13- Continuity of Supply of Clay- criteria iv) indicates that working of unallocated brick clay resources will be permitted where it can be demonstrated that the mineral is needed to maintain an adequate supply to existing manufacturing facilities in line with national policy, where sufficient mineral cannot be provided from sites or preferred areas allocated in the Joint Plan and subject to compliance with relevant development management policies in the Joint Plan. The scheme proposes to use in-situ resources as part of the development and not to contribute to a wider manufacturing supply. It is considered that the proposal will not increase pressure on identified resources/supply.

6.97 The emerging Minerals and Waste Joint Plan does not identify the application site area as being within an areas safeguarded for aggregates. NYCC has confirmed that the reserves of sand and gravel are not considered to be of suitable quality and to warrant safeguarding. However, emerging Policy S02- Developments proposed within Minerals Safeguarding Areas - is of relevance to this application as the emerging Plan identifies the application area as being within a safeguarded clay resource.

6.98 Policy SO2 states in Part 1) - *Surface mineral resources that within Surface Minerals Safeguarding Areas shown on the Policies Map, permission for development other than minerals extraction will be granted where:*

- i) It would not sterilise the mineral or prejudice future extraction; or*
- ii) The mineral will be extracted prior to the development (where this can be achieved without unacceptable impact on the environment or local communities), or*
- iii) The need for the non-mineral development can be demonstrated to outweigh the need to safeguard the mineral; or*
- iv) It can be demonstrated that the mineral in the location concerned is no longer of any potential value as it does not represent an economically viable and therefore exploitable resource; or*
- v) The non-mineral development is of a temporary nature that does not inhibit extraction within the timescale that the mineral is likely to be needed; or*
- vi) It constitutes 'exempt' development (as defined in the Safeguarding Exemption Criteria list).*

Applications for development other than mineral extraction in Minerals Safeguarding Areas should include an assessment of the effect of the proposed development on the mineral resource beneath or adjacent to the site of the proposed development.

6.99 The applicant has submitted details which set out the resources proposed to be used on the site. The scheme demonstrates compliance with the following policy requirements.

- i) for vast majority of the site is not sterilised. Only the clay resource beneath the embankment and limited areas of hardstanding would not be available for future extraction
- ii) the borrow pits will be used to extract clay for use at the site and ensures the utilisation of indigenous resources
- iii) is simultaneously considered in respect of the specific location parameters and the need for the development in that location as part of the wider consideration of the application. It should be noted that each of those factors is mutually exclusive- i.e. only one of the policy criterion needs to be satisfied.

6.100 The Minerals and Waste Assessment which draws on information provided as part of the Environmental Statement, estimates that approximately 1 billion cubic metres of clay will be present within the application site area and that the development will utilise approximately 0.011 % of the clay resource.

6.101 This is not a minerals application, but its subsurface/minerals safeguarding implications require consideration against relevant policies of the adopted and emerging Development Plan considerations in respect of minerals resources. In this regard the scheme is considered to comply with both adopted and emerging policy. The Minerals and Waste Authority has reminded the Local Planning Authority of the relevant policy framework and has confirmed that the Minerals and Waste Assessment is satisfactory but has provided no comment on the merits of the scheme.

vii) Amenity

6.102 The operation of the structure will be negligible on the amenity of adjacent properties. It does not generate noise, nor significant vehicular movements in terms of operation and general maintenance and management. The embankment structure is not insignificant in size, but does not affect any residences in so far as creating adverse living conditions due to its distance from properties. Construction will result in increased vehicular movements which are close to Bridge Farm and properties along Goose Track Lane at West Lilling. This will result in some increased disturbance, although it is understood that the route into the site past Bridge Farm is regularly used by heavy agricultural vehicles accessing the surrounding land. In addition, Goose Track Lane at West Lilling is a route which currently experiences regular traffic movements without restriction by a range of vehicles including heavy vehicles. The increase in the type and frequency of vehicle movements during construction will result in some reduced amenity. However, within the context of the existing use of the road; the reduced vehicular movements as a result of changes to the scheme with no importation of clay; and the essentially temporary nature of the construction traffic and activity, the impact is considered to be acceptable. As such, in this regard the scheme complies with Policy SP20- Generic Development Management Issues- which is concerned with- amongst other matters protecting residential amenity, and also the saved policies of the North Yorkshire Minerals Plan.

viii) Archaeology and the Heritage Environment

6.103 The site is subject to only non-designated heritage asset considerations. There are no designated heritage asset considerations either within the site or within the context of any setting considerations. Archaeological investigation has focused on the former course(s) of the River Foss. The site has been subject of interim archaeological investigations, and the production assessment report prepared by the York Archaeological Trust. In due course the report will be revised with the results of a geo-archaeological borehole survey and environmental assessment of deposits as soon as is possible. The Heritage Services at NYCC have advised that it would be usual to wait until these results were available to fully understand the significance of the archaeological deposits before making a planning recommendation. In this regard, paragraph 189 of the NPPF requires that "local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting."

6.104 It further requires that the level of detail should be *"proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance"*. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

6.105 This has been undertaken to a level where the statutory consultee is able to make an informed judgement. NYCC Heritage Services advise, it is possible to make some assumptions about the significance based on the information in the trial trenching report and the earlier Geotechnical Trial Pit

Monitoring report: *"Both reports have demonstrated preservation of organic remains in areas of the site associated with former courses of the Foss. These consist of organic silts and clays with some wood fragments noted. As these deposits are fluvial or alluvial there is less likelihood of direct association with human occupation than, for example, lake edge deposits."*

"The trial trenching produced several archaeological features, the majority appear to be drainage gullies or land divisions and are likely to be later rather than earlier in date. There was a single pit with a high organic content (samples awaiting processing) that may be of interest, but this was an isolated example. It would not appear that extremely significant deposits are present, and if they are they will be limited in extent and along the line of the proposed embankment rather than the borrow pit areas where greater impact is expected. The organic deposits beneath the route of the embankment are at least 1.2m below existing ground level so direct impact is unlikely. The pit, at the very southern end of the embankment is just beneath the topsoil so impact would be expected on this type of feature."

6.106 The NYCC Archaeologist has advised that:

"Based on the information I have and knowledge of the types of archaeological deposits expected I recommend that further mitigation may be necessary during topsoil stripping in areas of shallow archaeological features and potentially during engineering works that might impact more deeply buried organic deposits. The extent of this mitigation would need to be agreed following receipt of the revised archaeological report."

I advise that via a condition a scheme of archaeological mitigation recording is undertaken in response to the ground disturbing works associated with this development proposal, to be followed by appropriate analyses, reporting and archive preparation. This is in order to ensure that a detailed record is made of any deposits/remains that will be disturbed."

6.107 Paragraph 197 of the NPPF requires:

"The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset."

6.108 In taking into account the available evidence and the nature of the deposits found to date and expert advice, it is considered that there would be very much less than substantial harm as a result of the scheme. Although not a primary consideration, mitigation recording is achievable in principle, based on the assets identified. As such, the consideration of archaeological remains is as required by the NPPF, the scheme does not raise issues of compliance concerning archaeology. The scheme is therefore in accordance with Policy SP12 of the Ryedale Plan- which seeks to protect features of local historic value and interest throughout Ryedale having regard to the scale of any harm or loss and the significance of the heritage asset.

ix) Further procedural considerations raised by consultees

6.109 Concerns about the accuracy of the plans and their variance have been raised- the reasons for their changing over time, particularly since consultation events. Officers are aware that the plans have undergone revisions over time, and this is a common feature of applications that they are modified prior to their submission and altered during the course of the applicant's consideration. The application has been subject to a further re-consultation in the course of the application's consideration in a manner which is proportional to the matters which it covers.

6.110 One of the landowners (Lilling Green Farm and Lilling Green Cottage) queries why their property was included in the site red-outline. According to their submission, the applicant stated it did not need to be in and would be removed. This has then not occurred. It should be noted that this particular part of the site shows no change post development in terms of flood risk. The correct certificates were completed by the applicant. The applicant would have had to submit revised plans, and since there is no material change in the planning considerations, it would have amounted to unnecessary revisions.

Conclusions

6.111 The Foss Flood Storage Area has been assessed against all relevant Development Plan Policy considerations, and material considerations of the NPPF, relevant legislation and emerging Development Plan Policy. It has also been subject to specific procedural assessment considerations around Environmental Impact Assessment and Habitats Regulations Assessment. The scheme will bring significant benefits in terms of reducing the risk of flooding to 465 homes and 25 businesses. The benefits of the scheme are considered to significantly outweigh the identified impacts associated with the development, which primarily relate to limited disruption to agricultural productivity and some limited reduction in the amenity of local residents, during the temporary construction period. As outlined in the report, the identified impacts of the scheme can be satisfactorily mitigated. Subject to the application of and compliance with a series of detailed conditions, this development is considered to comply with the provisions of the adopted Development Plan. Accordingly, Policy SP19 of the Ryedale Plan- Local Plan Strategy requires that in relation to the 'Presumption in Favour of Sustainable Development' "*Planning applications that accord with the Policies this Local Plan...will be approved without delay*". Furthermore no material considerations have indicated that this approach is not justified. As such this application is therefore recommended for conditional approval.

RECOMMENDATION: Approval subject to the following conditions

- 1 The development hereby permitted shall be begun on or before .

Reason:- To ensure compliance with Section 51 of the Planning and Compulsory Purchase Act 2004

- 2 The development hereby permitted shall be carried out in accordance with the following approved plan(s):

Site Location Plan:

ENV0000381C-CAA-00-00-MP-EN-C0400:9 Rev P06

General Arrangement Plan:

ENV0000381C-CAA-00-00-DR-C- I0500_23 (Rev P02) dated 10/02/2020

Black Dike Re-Alignment Plan and Section:

ENV0000381C-CAA-00-00- DR-C- I0500_36a (Rev P02) dated 27/01/2020

River Foss Re-Profiling South Locations:

ENV0000381C-CAA-00-00-DR-C-I0500_41 Rev P01 dated 08/11/2019

River Foss Re-Profiling North Locations:

ENV0000381C-CAA-00-00-DR-C-I0500_40 Rev P01 dated 08/11/2019

Flow Control Structure Sections:

ENV0000381C-CAA-00-00-DR-C-I0500_36 Rev P01 dated 08/11/2019

Outlet Channel Plan and Section:

ENV0000381C-CAA-00-00-DR-C-I0500_35 Rev P01 dated 08/11/2019

Inlet Channel Plan and Section:

River Foss Re-Profiling South Locations:

ENV0000381C-CAA-00-00-DR-C-I0500_34 Rev P01 dated 08/11/2019

Flow Control Structure Plan and Sections

River Foss Re-Profiling South Locations:

ENV0000381C-CAA-00-00-DR-C-I0500_33 Rev P01 dated 08/11/2019

Embankment Cross Sections:

ENV0000381C-CAA-00-00-DR-C-I0500_31 Rev P01 dated 08/11/2019

Embankment Long Section:

ENV0000381C-CAA-00-00-DR-C-I0500_30 Rev P01 dated 08/11/2019

Spillway General Arrangement:

ENV0000381C-CAA-00-00-DR-C-I0500_29 Rev P01 dated 08/11/2019

Earthworks Borrow Pit P1 Plan and Sections:

ENV0000381C-CAA-00-00-DR-C- B1301_22 Rev P03 dated 07/02/2020
Earthworks Borrow Pit P1 Plan and Sections:
ENV0000381C-CAA-00-00-DR-C- B1301_23 Rev P03 dated 07/02/2020

Site Access, Compound Area and Temporary Works:
ENV0000381C-CAA-00-00-DR-C-I0500_24 Rev P02 dated 02/12/2019
Services and Boreholes:
ENV0000381C-CAA-00-00-DR-C-I0500_25 Rev P01 dated 08/11/2019
Access Tracks:
ENV0000381C-CAA-00-00-DR-C-I0500_26 Rev P01 dated 08/11/2019
Ings Lane Raising Plan and Sections
ENV0000381C-CAA-00-00-DR-C-I0500_28 Rev P01 dated 08/11/2019
Landowner Access Ramp:
ENV0000381C-CAA-00-00-DR-C-I0500_32 Rev P01 dated 08/11/2019
Insitu Concrete Overrun Edge Repair:
Laxxxxxx/Patch/01 Rev 0 dated 28/06/2019

Landscape Masterplan:
ENV0000381C-CAA-00-00-DR-L-C0700_36 Rev P05 dated 11/02/2020
Landscape Area A:
ENV0000381C-CAA-00-00-DR-L-C0700_37 Rev P05 dated 11/02/2020
Landscape Area E Borrow Pit Proposals:
ENV0000381C-CAA-00-00-DR-L-C0700_41 Rev P05 dated 11/02/2020
Landscape Area D:
ENV0000381C-CAA-00-00-DR-L-C0700_40 Rev P02 dated 02/12/2019

Planting Schedule:
ENV0000381C-CAA-00-00- DR-L-C0700_43 Rev P04 dated 11/02/2020
Tree Constraints Plan:
ENV0000381C-CAA-1-XX-DR-C-001 Rev P01 dated 31/07/2019
Landscape Cross Sections:
ENV0000381C-CAA-00-00- DR-L-C0700_42 Rev P02 dated 02/12/2019

Reason: For the avoidance of doubt and in the interests of proper planning. To ensure that the proposal complies with:

Policy SP1 General Location of Development and Settlement Hierarchy
Policy SP9 The Land-Based and Rural Economy
Policy SP10 Physical Infrastructure
Policy SP12 Heritage
Policy SP13 Landscapes
Policy SP14 Biodiversity
Policy SP15 Green Infrastructure Networks
Policy SP17 Managing Air Quality, Land and Water Resources
Policy SP18 Renewable and Low Carbon Energy
Policy SP19 Presumption in Favour of Sustainable Development
Policy SP20 Generic Development Management Issues
All of the adopted Ryedale Plan - Local Plan Strategy.

- 3 Development shall not commence until a scheme detailing surface water drainage has been submitted to and approved in writing by the Local Planning Authority, in consultation with the Local Lead Flood Authority and the Internal Drainage Board. The scheme will make provision for sustainable drainage unless it can be demonstrated that this is inappropriate. The works shall be implemented in accordance with the approved surface water drainage scheme and maintained thereafter for the lifetime of the development. The development shall not be brought into use until the approved drainage works have been completed.

Reason: To ensure the provision of adequate and sustainable means of drainage in the interests

of amenity and flood risk, in accordance with Policy SP17 of the adopted Ryedale Plan – Local Plan Strategy

- 4 Prior to the commissioning of the development, an appropriate exceedance flow plan for the flood storage area shall be submitted to and approved in writing by the Local Planning Authority.

Reason: to prevent flooding to properties during extreme flood events and to mitigate against the risk of flooding on and off site in accordance with Policy SP17 of the adopted Ryedale Plan – Local Plan Strategy

- 5 No development shall take place until details of the means of operation, management, repair and maintenance of the flood storage area, associated apparatus/embankments and borrow pits have been submitted to and approved by the Local Planning Authority to meet the reasonable satisfaction of the Foss Internal Drainage Board's maintenance requirements. Details to include; plans and schedules showing the flood storage areas, associated apparatus/embankments and borrow pits to be vested with the relevant Statutory Undertaker/s, land owner and highway authority with a clear understanding of who will operate, repair and maintain at their expense, and any other arrangements to secure the operation and maintenance of the approved scheme. The development shall be carried out in accordance with the approved details.

Reason: To prevent the increase risk of flooding and to ensure the future maintenance of the scheme throughout the lifetime of the development in accordance with Policy SP17 of the adopted Ryedale Plan – Local Plan Strategy.

- 6 No development shall take place until details have been submitted to, and approved by the Local Planning Authority showing how surface water will be managed during the construction phase. Unless otherwise agreed in writing with the local planning authority, there shall be no piped discharge of surface water from the development prior to the completion of the approved surface water drainage works.

Reason: To prevent the increased risk of flooding during the construction period and to ensure that the Local Planning Authority may be satisfied that no surface water discharges take place until proper provision has been made for their disposal in accordance with Policy SP17 of the adopted Ryedale Plan- Local Plan Strategy.

- 7 Ecological mitigation & compensatory habitat for the Black Dike
In accordance with the planning documents submitted, to mitigate the impact of the proposed physical modifications and prevent the deterioration of WFD water body status, the proposed development must include the provision and management of adequate ecological mitigation or compensatory habitat on the The Syke from Source to River Foss (GB104027063530) water body. The scheme for mitigation must be implemented as approved. The ecological mitigation and compensatory habitat shall include, but not necessarily be limited to:
As per drawing I0500_36a P02 and the Geomorphology and WFD mitigation measures for the Foss Flood Storage Area Technical Note, measures to mitigate the impact of the Black Dike channel realignment - including the creation of a 119m two-stage meandering (sinuous) channel with alternating low level berms, a natural bed substrate and vegetated banks using locally appropriate water-dependent species.

Reason: These conditions are required to ensure any such impacts with the potential to contribute to deterioration of water body status are appropriately mitigated in order that no deterioration occurs as a result of the development, in accordance with the Water Framework Directive and the NPPF, and also therefore in accordance with Policies SP14 (Biodiversity) and SP17 (Managing Air Quality, Land and Water resources) of the adopted Ryedale Plan-Local Plan Strategy

- 8 Ecological mitigation & compensatory habitat for the River Foss

In accordance with the planning documents submitted, to mitigate the impact of the proposed physical modifications and prevent the deterioration of WFD waterbody status, the proposed development must include the provision and management of adequate ecological mitigation or compensatory habitat on the Foss from Farlington Beck to the Syke (GB104027063540) water body. The scheme for mitigation must be implemented as approved. The ecological mitigation and compensatory habitat shall include, but not necessarily be limited to:

As per Table 2 and Table 4 of the WFD Compliance Assessment, drawings I0500_40, I0500_41 and I0500_23 P02 and the Geomorphology and WFD mitigation measures for the Foss Flood Storage Area Technical Note, measures to mitigate the impacts of flow impoundment on sediment transport continuity associated with the operation of the proposed control structure - including bank re-profiling and the creation of a two-stage channel cross-section with alternating low level berms on the inside of meander bends over a total length of 1.3km of the River Foss from the control structure to the borrow pits.

As per Table 2 and Table 4 of the WFD Compliance Assessment, measures to mitigate the loss of soft and semi-natural river bank and bed associated with the embankment and new control structure - including the removal of existing failing hard engineered bank protection within the scheme's boundary.

As per Table 2 and Table 4 of the WFD Compliance Assessment and drawings I0500_34 P01 and I0500_35 P01, the provision of a natural channel bed substrate through the reaches immediately up and downstream of the proposed control structure.

As per Table 2 and Table 4 of the WFD Compliance Assessment, drawing C0700_36 P05 and the Geomorphology and WFD mitigation measures for the Foss Flood Storage Area Technical Note, the creation of marginal and riparian habitat and channel shading through the planting of trees and shrubs along the upper, mid and lower banks of the channel from the control structure up to the borrow pits.

As per Table 2 and Table 4 of the WFD Compliance Assessment, drawings C0700-41 P05, C0700-42 P02, C0700_36 P05 and the Geomorphology and WFD mitigation measures for the Foss Flood Storage Area Technical Note, the creation and retention of water dependent habitat and wetland areas within the two permanent borrow pits. These habitats must be hydrologically connected to the River Foss via open channels. The shoreline and surrounding area of the borrow pits must be graded and planted with native vegetation including reed beds, marginal planting and trees.

Reason: These conditions are required to ensure any such impacts with the potential to contribute to deterioration of water body status are appropriately mitigated in order that no deterioration occurs as a result of the development, in accordance with the Water Framework Directive and the NPPF, and also therefore in accordance with Policies SP14 (Biodiversity) and SP17 (Managing Air Quality, Land and Water resources) of the adopted Ryedale Plan-Local Plan Strategy.

- 9 No works shall take place until a Construction Environmental Management Plan (CEMP) is submitted to and approved in writing by the Local Planning Authority. The CEMP shall include -
- i. Risk assessment of potentially damaging construction activities
 - ii. Identification of biodiversity protection zones, e.g. areas which require protective fencing or signage during construction
 - iii. Farmland Bird Mitigation Plan to provide details of the temporary mitigation habitat during the construction period
 - iv. Method statements covering avoidance measures and sensitive working practices to minimise dangers to at-risk habitats and species; these should include procedures to follow if protected species mitigation licenses need to be obtained
 - v. Identification of where and when ecologists need to be present on-site to oversee works
 - vi. Responsible persons and lines of communication

vii. Role and responsibilities of an ecological clerk of works (ECoW) or similar person
The approved CEMP shall be adhered to and implemented throughout the construction period in strict adherence with the approved details, unless otherwise agreed in writing by the local planning authorities.

Reason: These conditions are required to ensure net gains to biodiversity are achieved in accordance with the NPPF, and also therefore in accordance with Policies SP14 (Biodiversity) and SP17 (Managing Air Quality, Land and Water resources) of the adopted Ryedale Plan-Local Plan Strategy.

10 A Landscape and Ecology Management Plan (LEMP) shall be submitted to and be approved in writing by the local planning authority before the end of the first earthworks season prior to commencement. This should be based on the LEMP previously submitted (November 2019) but updated to include the following;

Revisions to the tree planting in proximity to the Borrow Pit P2;

Formation of Conservation Headlands for compensation and precautionary measures for secured for farmland birds and detailed planting schedules.

It shall also reflect any updated ecological surveys (Water Vole) and the scheme of aquatic planting of local provenance.

Reason: These conditions are required to ensure net gains to biodiversity are achieved in accordance with the NPPF, and also therefore in accordance with Policies SP14 (Biodiversity) and SP17 (Managing Air Quality, Land and Water resources) of the adopted Ryedale Plan-Local Plan Strategy.

11 Within the first survey season after the development commences, the applicant will
a) undertake an ecological survey of all ponds within the footprint of the scheme using a recognised methodology such as PSYM and including species-level identification of aquatic macro-invertebrates where possible. A report including proposals for mitigation and enhancement should be submitted to the Local Planning Authority for approval in conjunction with North Yorkshire County Council (NYCC). Once approved, the applicant shall be responsible for implementing the recommendations within a timescale which has been agreed with NYCC.

b) A monitoring survey should be undertaken five years after completion of the scheme using the same methodology. A report shall be submitted to the authority for approval and the applicant shall be responsible for implementing any recommendations thereafter.

Reason: This information will allow important ponds to be identified and appropriate management undertaken to safeguard their biodiversity value. It will also allow for future monitoring of ecological quality. This will be part of contributing to ensuring net gains to biodiversity are achieved in accordance with the NPPF, and also therefore in accordance with Policies SP14 (Biodiversity) and SP17(Managing Air Quality , Land and Water resources) of the adopted Ryedale Plan-Local Plan Strategy.

12 A) No demolition/development shall commence until the post-excavation assessment report (for the archaeological work undertaken in December 2019 and January 2020) has been completed and submitted to the Local Planning Authority, in accordance with the previously approved Written Scheme of Investigation. The report will be accompanied by an assessment of the impact of the proposed development on any of the archaeological remains identified in the evaluation. The report shall also be deposited with the Historic Environment Record.

B) Where archaeological remains cannot be preserved in-situ, no demolition/development shall commence until a further Written Scheme of Investigation has been submitted to and approved by the Local Planning Authority in writing. The scheme shall include an assessment of significance and research questions; and:

1. The programme and methodology of site investigation and recording
2. Community involvement and/or outreach proposals

3. The programme for post investigation assessment
4. Provision to be made for analysis of the site investigation and recording
5. Provision to be made for publication and dissemination of the analysis and records of the site investigation
6. Provision to be made for archive deposition of the analysis and records of the site investigation
7. Nomination of a competent person or persons/organisation to undertake the works set out within the Written Scheme of Investigation.

C) No demolition/development shall take place other than in accordance with the Written Scheme of Investigation approved under condition (B).

D) The post investigation assessment, completed in accordance with the Written Scheme of Investigation approved under condition (B), shall be submitted to the Local Planning Authority within six months of the completion of the site investigation, and provision shall be secured for analysis, publication and dissemination of results and archive deposition. The report shall also be deposited with the Historic Environment Record.

Reason: The site lies within an area of archaeological interest. An investigation is required to identify the presence and significance of archaeological features and deposits and ensure that archaeological features and deposits are either recorded or, if of national importance, preserved in-situ, in accordance with Policy SP12 of the Ryedale Plan- Local Plan Strategy and Section 16 of the NPPF.

- 13 The existing Public Right of Way on the site must be protected and kept clear of any obstruction at all times with the exception of any section of the existing PROW which is the subject of a temporary diversion order.

Reason: To ensure that connectivity and accessibility is maintained to the established Public Right of Way network, in accordance with Policies SP10 and SP20 of the adopted Ryedale Plan- Local Plan Strategy

- 14 By the end of the first earthworks season, a detailed planting schedule shall be submitted to and approved in writing by the Local Planning Authority. This shall include the species, stock size, density (spacing), and position of trees, and other plants; and seed mixes, sowing rates and mowing regimes where applicable. It will also include details of ground preparation and tree planting details. This scheme shall be implemented within a period of six months of the practical completion of the development. Any trees or plants which within a period of five years from the substantial completion of the planting and development, die, are removed or become seriously damaged or diseased, shall be replaced in the next planting season with others of a similar size and species, unless the Local Planning Authority agrees alternatives in writing.

Reason: So that the Local Planning Authority may be satisfied with the variety, suitability and disposition of species of the proposed planting and to comply with Policies SP13 (Landscapes) and SP14 (Biodiversity) of the Ryedale Plan – Local Plan Strategy.

- 15 The development must not be brought into use until the access to the site at LILLING LOW LANE has been set out and constructed in accordance with the 'Specification for Housing and Industrial Estate Roads and Private Street Works" published by the Local Highway Authority and the following requirements:

The crossing of the highway verge and/or footway must be constructed in accordance with the approved details as shown on Drawing Number ENV0000381C-CAA-00-00-DR-C-10500_26 Revision P01 and/or Standard Detail number E10 Rev. A CONCRETE FIELD CROSSING and the following requirements.

- Any gates or barriers must be erected a minimum distance of 8 metres back from the

carriageway of the existing highway and must not be able to swing over the existing or proposed highway.

- That part of the access extending 8 metres into the site from the carriageway of the existing highway must be at a gradient not exceeding 1 in 30. Provision to prevent surface water from the site/plot discharging onto the existing or proposed highway must be constructed in accordance with the approved details shown on drawing number (as above) and maintained thereafter to prevent such discharges.
- The final surfacing of any private access within 8 metres of the public highway must not contain any loose material that is capable of being drawn on to the existing or proposed public highway.
- Measures to enable vehicles to enter and leave the site in a forward gear.

All works must accord with the approved details.

Reason: To ensure a satisfactory means of access to the site from the public highway in the interests of highway safety and the convenience of all highway users. This is in accordance with Policy SP20 of the adopted Ryedale Plan-Local Plan Strategy.

- 16 The following schemes of off-site highway mitigation measures must be completed as indicated below:

- Edge repair works to Lilling Low Lane to Drawing Number 'Insitu Concrete Overrun Edge Repair LAXXXXXX/Patch/01 Rev. 0' at location shown on Drawing Number General Arrangement Plan ENV0000381C-CAA-00-00-DR-C-10500_23 Rev. P02 prior to the development proposed being brought into use or as otherwise in advance as detailed on the construction programme.

For each scheme of off-site highway mitigation, except for investigative works, no excavation or other groundworks or the depositing of material on site in connection with the construction of any scheme of off-site highway mitigation or any structure or apparatus which will lie beneath that scheme must take place, until full detailed engineering drawings of all aspects of that scheme including any structures which affect or form part of the scheme have been submitted to and approved in writing by the Local Planning Authority.

An independent Stage 2 Road Safety Audit carried out in accordance with GG119 - Road Safety Audits or any superseding regulations must be included in the submission and the design proposals must be amended in accordance with the recommendations of the submitted Safety Audit prior to the commencement of works on site. A programme for the delivery of that scheme and its interaction with delivery of the other identified schemes must be submitted to and approved in writing by the Local Planning Authority prior to construction works commencing on site.

Each item of the off-site highway works must be completed in accordance with the approved engineering details and programme.

Reason: To ensure that the design is appropriate in the interests of the safety and convenience of highway users, in accordance with Policy SP20 of the adopted Ryedale Plan- Local Plan Strategy.

- 17 No development for any phase of the development must commence until a Construction Management Plan for that phase has been submitted to and approved in writing by the Local Planning Authority in consultation with the Local Highway Authority and the Highways Agency. Construction of the permitted development must be undertaken in accordance with the approved Construction Management Plan.

The Plan must include, but not be limited, to arrangements for the following in respect of each phase of the works:

1. Details of any TEMPORARY SPEED LIMIT TRAFFIC REGULATION ORDER AND WORKS DETAILS AT THE construction access to the site including measures for removal following completion of construction works;
2. restriction (EXCEPT FOR PROPOSED WORKS THAT CANNOT BE ACCESSED FROM ANY OTHER ROUTE) on the use of LILLING LOW LANE & GENNELL LANE access for construction purposes, INCLUDING TEMPORARY ROAD CLOSURES;
3. Details of any abnormal load vehicles and arrangements for agreeing abnormal loads with Highways England in advance of these occurring
- 4 Details of construction timescales, start and finish times and associated periods of traffic movements to the site
5. wheel and chassis underside washing facilities on site to ensure that mud and debris is not spread onto the adjacent public highway
6. the parking of contractors' site operatives and visitor's vehicles;
7. areas for storage of plant and materials used in constructing the development clear of the highway;
8. measures to manage the delivery of materials and plant to the site including routing and timing of deliveries and loading and unloading areas;
9. details of the volume and routes to be used by HGV construction traffic and highway condition surveys on these routes to include the A64/ Scotchman Lane junction, timescale for re-inspection and details of reinstatement
10. protection of carriageway and footway users at all times during demolition and construction;
11. protection of contractors working adjacent to the highway;
12. details of site working hours;
13. erection and maintenance of hoardings including decorative displays, security fencing and scaffolding on/over the footway & carriageway and facilities for public viewing where appropriate;
14. means of minimising dust emissions arising from construction activities on the site, including details of all dust suppression measures and the methods to monitor emissions of dust arising from the development;
15. measures to control and monitor construction noise;
16. an undertaking that there must be no burning of materials on site at any time during construction;
17. removal of materials from site including a scheme for recycling/disposing of waste resulting from demolition and construction works;
18. details of the measures to be taken for the protection of trees;

- 19. details of external lighting equipment;
- 20. details of ditches to be piped during the construction phases;
- 21. a detailed method statement and programme for the building works; and
- 22. contact details for the responsible person (site manager/office) who can be contacted in the event of any issue.

Reason: To manage construction impacts in the interests of public safety, the safe and efficient operation of the strategic and local highway network and amenity, in accordance with Policy SP20 of the adopted Ryedale Plan- Local Plan Strategy.

- 18 There shall be no importation of clay to the site for the development hereby approved, unless otherwise agreed in writing by the Local Planning Authority. This shall be in considered in conjunction with the relevant Local Highway Authorities.

Reason: For the avoidance of doubt and to ensure that the proposed construction traffic route is not unduly pressured, with consequential impacts on infrastructural capacity and amenity. In accordance with Policy SP20, of the adopted Ryedale Plan Local Plan Strategy.

- 19 In the event that contamination is found at any time when carrying out the approved development that was not previously identified, it must be reported in writing immediately to the Local Planning Authority. An investigation and risk assessment must be undertaken and where remediation is necessary a remediation scheme must be prepared, which is subject to the approval in writing of the Local Planning Authority. Following completion of measures identified in the approved remediation scheme a verification report must be prepared, which is subject to the approval in writing of the Local Planning Authority.

Reason: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors, in accordance with Policy SP20 of the Ryedale Plan – Local Plan Strategy.

- 20 Prior to the commencement of the development, a scheme of soil movement, stripping and storage should be submitted to and approved in writing by the Local Planning Authority in consultation with the Minerals Planning Authority. Construction work shall not commence in areas where restoration work to return the land to agricultural use is required until a Soil Restoration and After Care Method Statement is submitted to and approved by the Local Planning Authority in consultation with the Minerals Planning Authority. The method statement shall cover activities relating to the working, restoration and aftercare of all areas to be restored to agricultural use; the statement shall include details of:

- i. the areas to be restored;
- ii. arrangements to prevent spread of soil-borne diseases;
- iii land drainage arrangements;
- iv soil replacement including cultivation and seeding;
- vi. management of differential settlement;
- vi. removal of rocks and other materials capable of impeding cultivation;
- vii. detailed aftercare programme and
- viii. timetable for implementation including phasing.

The measures in the method statement shall be implemented in their entirety unless otherwise approved in writing by the Local Planning Authority in consultation with the Minerals Planning Authority.

Reason: To protect soil resources and the soil quality of the land to be returned to agricultural

use in accordance with SP17 (Managing Air Quality, Land and Water Resources) of the Ryedale Plan and Policy 4/8 (Restoration to Agriculture) of the North Yorkshire Minerals Plan.

- 21 No development shall take place until a scheme for ground water monitoring has been submitted to and approved in writing by the local planning authority. The monitoring shall be carried out in accordance with the approved scheme and the results submitted to the local planning authority.

Reason: To monitor ground water levels at the protected sites on Strensall Common in accordance with Policy SP14 (Biodiversity) of the Ryedale Plan – Local Plan Strategy.

INFORMATIVES

Ethylene Pipeline

You are advised that the verge stabilisation works, at c.41 metres from the Ethylene Pipeline fall within the 50m notification zone as required by operators of Major Accident Hazard Pipelines. Prior to commencement, any work within the zone would need approval from SABIC UK Petrochemicals UK.

Overhead Power Lines

National Grid's Overhead Line/s is protected by a Deed of Easement/Wayleave Agreement which provides full right of access to retain, maintain, repair and inspect our asset.

- National Grid requires 3D drawings to be provided at the earliest opportunity (DWG, DGN or DXF)
- Statutory electrical safety clearances must be maintained at all times. National Grid recommends that no permanent structures are built directly beneath our overhead lines. These distances are set out in EN 43 – 8 Technical Specification for “overhead line clearances Issue 3 (2004) To view EN 43 – 8 Technical Specification for “overhead line clearances Issue 3 (2004).
http://www.nationalgrid.com/uk/LandandDevelopment/DDC/devnearohl_final/appendixIII/appIII-part2
- The statutory minimum safety clearance is 7.6 metres to ground and 8.1 metres to a normal road surface. Further detailed information can be obtained from the Energy Networks Association's (www.energynetworks.org.uk) Technical Specification E-43-8 for “Overhead Line Clearances”, Issue 3 (2004)
- Any changes in ground levels which are proposed either beneath or in close proximity to our existing overhead lines would serve to reduce safety clearances. Safety clearances to existing overhead lines must be maintained in all circumstances.
- To view the Development Near Overhead Lines Document and Sense of Place Document.
[www.http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=23713](http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=23713)
[www.http://www2.nationalgrid.com/UK/Services/Land-and-Development/A-sense-of-place/](http://www2.nationalgrid.com/UK/Services/Land-and-Development/A-sense-of-place/)
- The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive's (www.hse.gov.uk) Guidance Note GS 6 “Avoidance of Danger from Overhead Electric Lines.”
- Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors at the point where the conductors are under their maximum ‘sag’ or ‘swing’ conditions. Overhead Line profile drawings should be obtained using the above contact details.
- If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the

risk of growth to a height which compromises statutory safety clearances.

- Drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or “pillars of support” of our towers. These foundations extend beyond the base of the tower. Pillar of Support drawings should be obtained using the contact details above.

- Due to the scale, bulk and cost of the transmission equipment required to operate at 275kV or 400kV we only support proposals for the relocation of existing high voltage overhead lines where such proposals directly facilitate a major development or infrastructure project of national importance which has been identified as such by government.

- To promote the successful development of sites crossed by existing overhead lines, and the creation of well-designed places, National Grid has produced ‘A Sense of Place’ guidelines, which look at how to create high quality development near overhead lines and offer practical solutions which can assist in avoiding the unnecessary sterilisation of land in the vicinity of high voltage overhead lines.

- Further information regarding our undergrounding policy and development near transmission overhead lines is available on our website at: <http://www.nationalgrid.com/uk/LandandDevelopment>

Public Right of Way

There is a Public Right of Way or a ‘claimed’ Public Right of Way within or adjoining the application site boundary. If the proposed development will physically affect the Public Right of Way permanently in any way an application to the Local Planning Authority for a Public Path Order/Diversion Order will need to be made under S.257 of the Town and Country Planning Act 1990 as soon as possible. Please contact the Local Planning Authority for a Public Path Order application form.

If the proposed development will physically affect a Public Right of Way temporarily during the period of development works only, an application to the Highway Authority (North Yorkshire County Council) for a Temporary Closure Order is required. Please contact the County Council or visit their website for an application form.

The existing Public Right(s) of Way on the site must be protected and kept clear of any obstruction until such time as an alternative route has been provided by either a temporary or permanent Order.

It is an offence to obstruct a Public Right of Way and enforcement action can be taken by the Highway Authority to remove any obstruction.

If there is a “claimed” Public Right of Way within or adjoining the application site boundary, the route is the subject of a formal application and should be regarded in the same way as a Public Right of Way until such time as the application is resolved.

Where public access is to be retained during the development period, it shall be kept free from obstruction and all persons working on the development site must be made aware that a Public Right of Way exists, and must have regard for the safety of Public Rights of Way users at all times.

Applicants should contact the County Council’s Countryside Access Service at County Hall, Northallerton via CATO@northyorks.gov.uk to obtain up-to-date information regarding the exact route of the way and to discuss any initial proposals for altering the route.

Highways

Applicants are reminded that in addition to securing planning permission other permissions may be required from North Yorkshire County Council as Local Highway Authority. These additional permissions can include, but are not limited to: Agreements under Sections 278, 38, and 184 of the Highways Act 1980; Section 38 of the Commons Act 2006, permissions through New Roads and Streetworks Act 1991 and Local Authorities’ Traffic Orders (Procedure) (England and Wales) Regulations 1996 (as amended and including all instruments, orders, plans, regulations and directions).

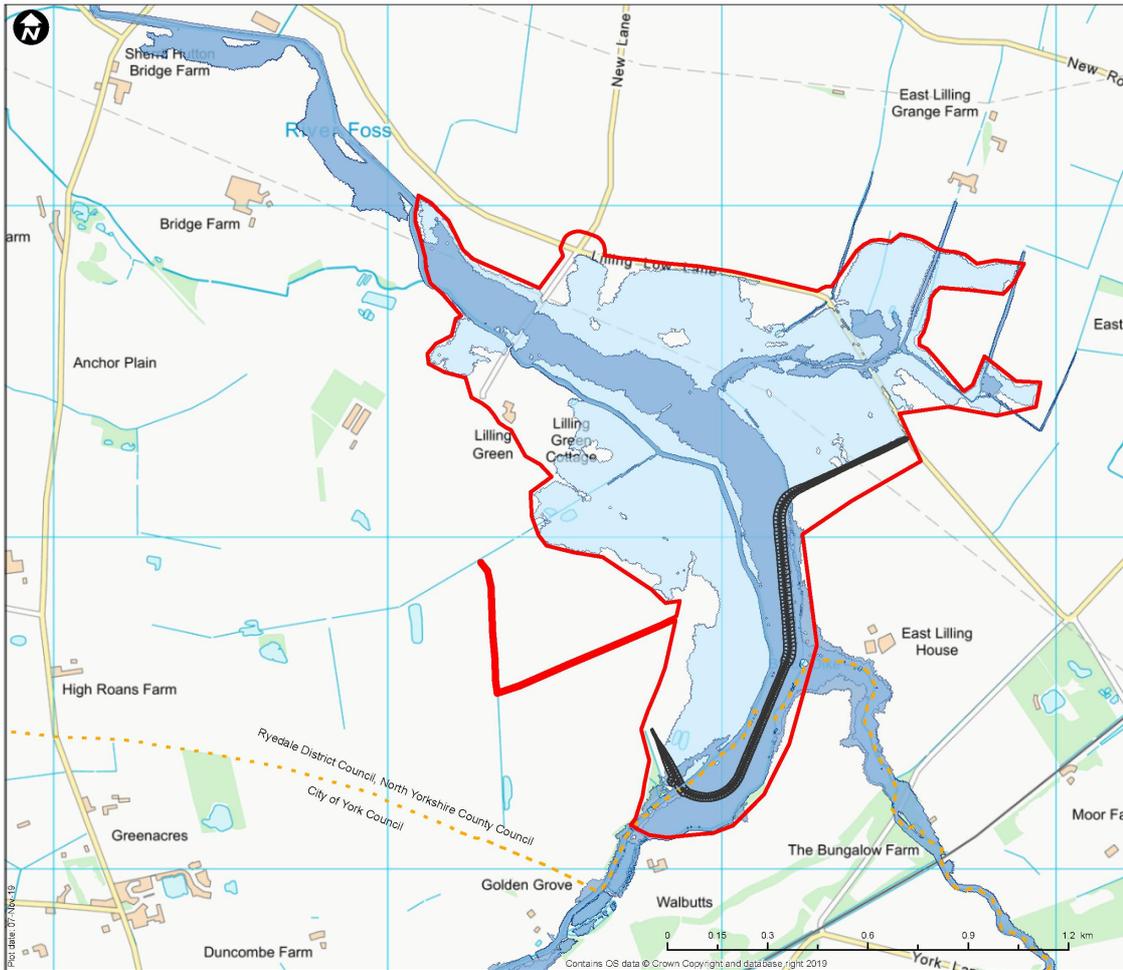
Further information on these matters can be obtained from the Local Highway Authority. Other permissions may also be required from third parties. It is the applicant's responsibility to ensure all necessary permissions are in place

Notwithstanding any valid planning permission for works to amend the existing highway, you are advised that a separate licence will be required from North Yorkshire County Council as the Local Highway Authority in order to allow any works in the existing public highway to be carried out. The 'Specification for Housing and Industrial Estate Roads and Private Street Works' published by North Yorkshire County Council as the Local Highway Authority, is available to download from the County Council's web site:

https://www.northyorks.gov.uk/sites/default/files/fileroot/Transport%20and%20streets/Roads%2C%20highways%20and%20pavements/Specification_for_housing___ind_est_roads___street_works_2nd_edition.pdf

City of York

The applicant is advised to read this decision in conjunction with the decision issued by the City of York Council. Where relevant, all conditions imposed will need to be discharged by each planning authority.



Legend

- Proposed embankment alignment
- Local authority boundary
- Planning application boundary
- 1 in 100 year flood outline - baseline
- 1 in 100 year flood outline - post development

Date valid 12/11/19

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Rev	By	Check	Appr	Description	Date
P1	NI	DS		FOR ISSUE	24/11/2019
P1	PF	NH	DS	FOR ISSUE	24/02/2019
P2	NI	SJ	DS	FOR ISSUE	23/11/2019
P3	NI	SJ	DS	FOR ISSUE	15/11/2018
P2	NI	SJ	DS	FOR RE-COMMUNICATION	05/10/2018
P1	NI	WJ	DS	FOR INFORMATION	19/07/2018

Purpose of issue
Planning Application

Classification
Public

Client
Environment Agency

Project
York Flood Alleviation Scheme

Drawing
Foss Flood Storage Area: Location Plan

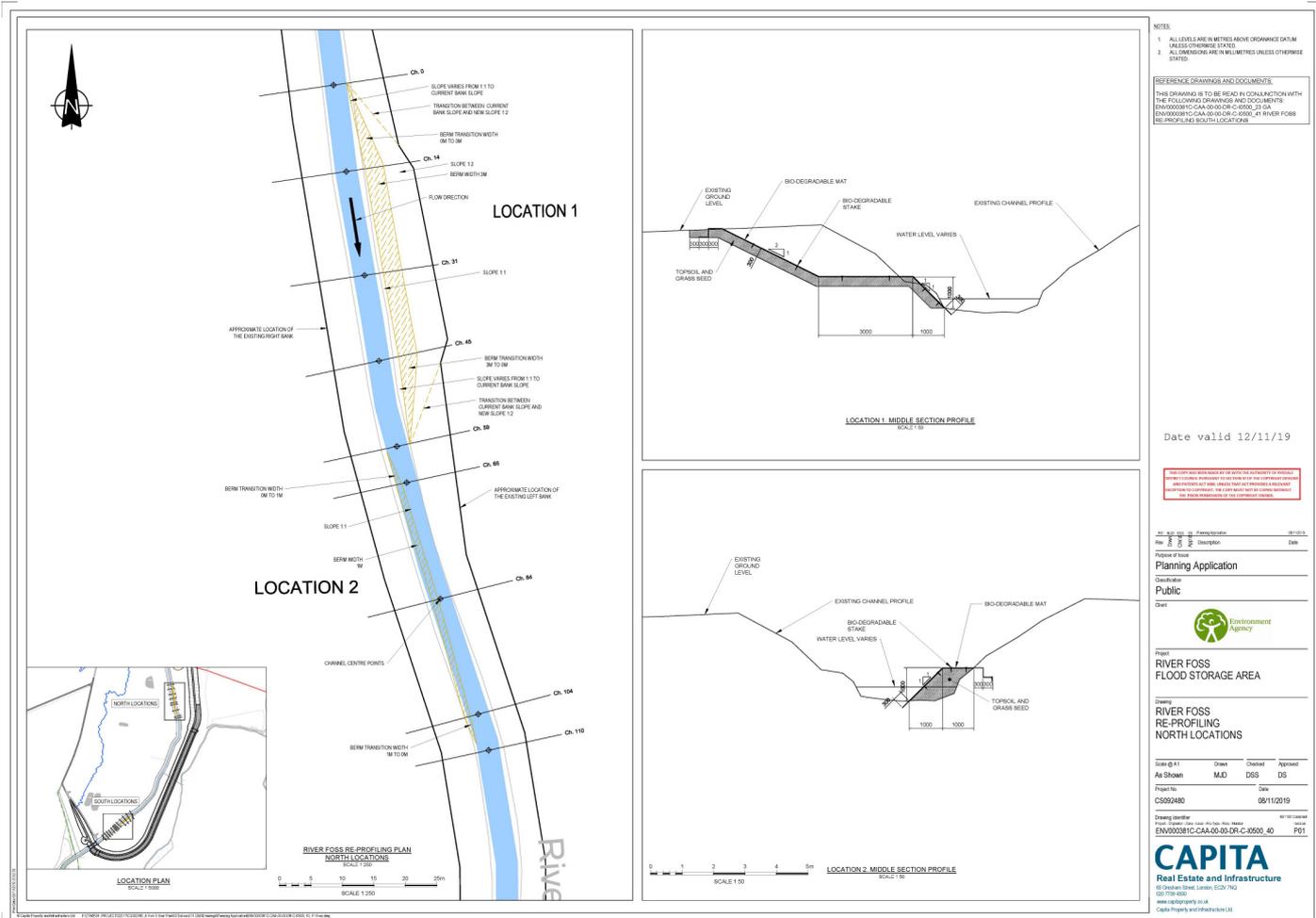
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1:10,000	PF	NH	DS

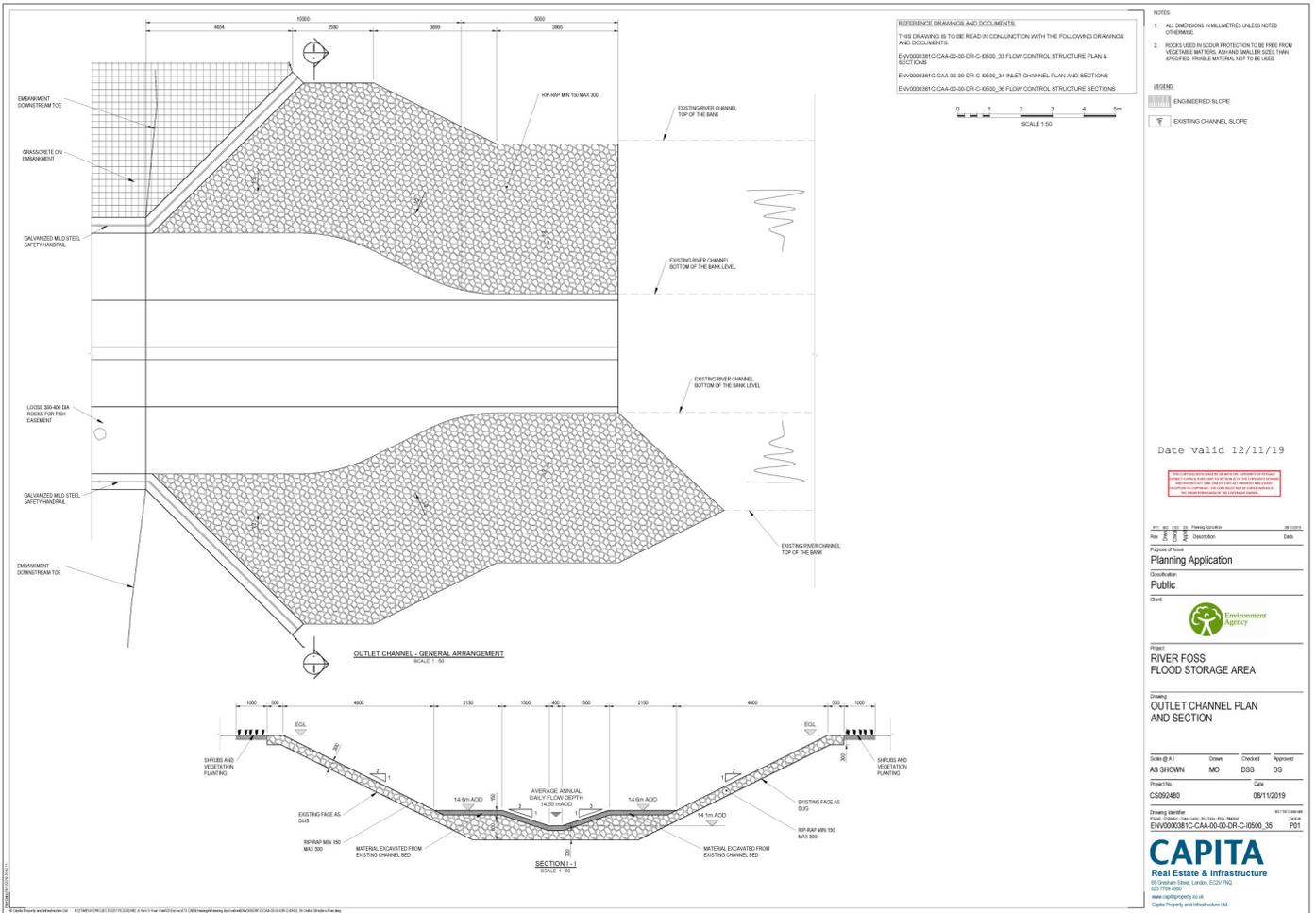
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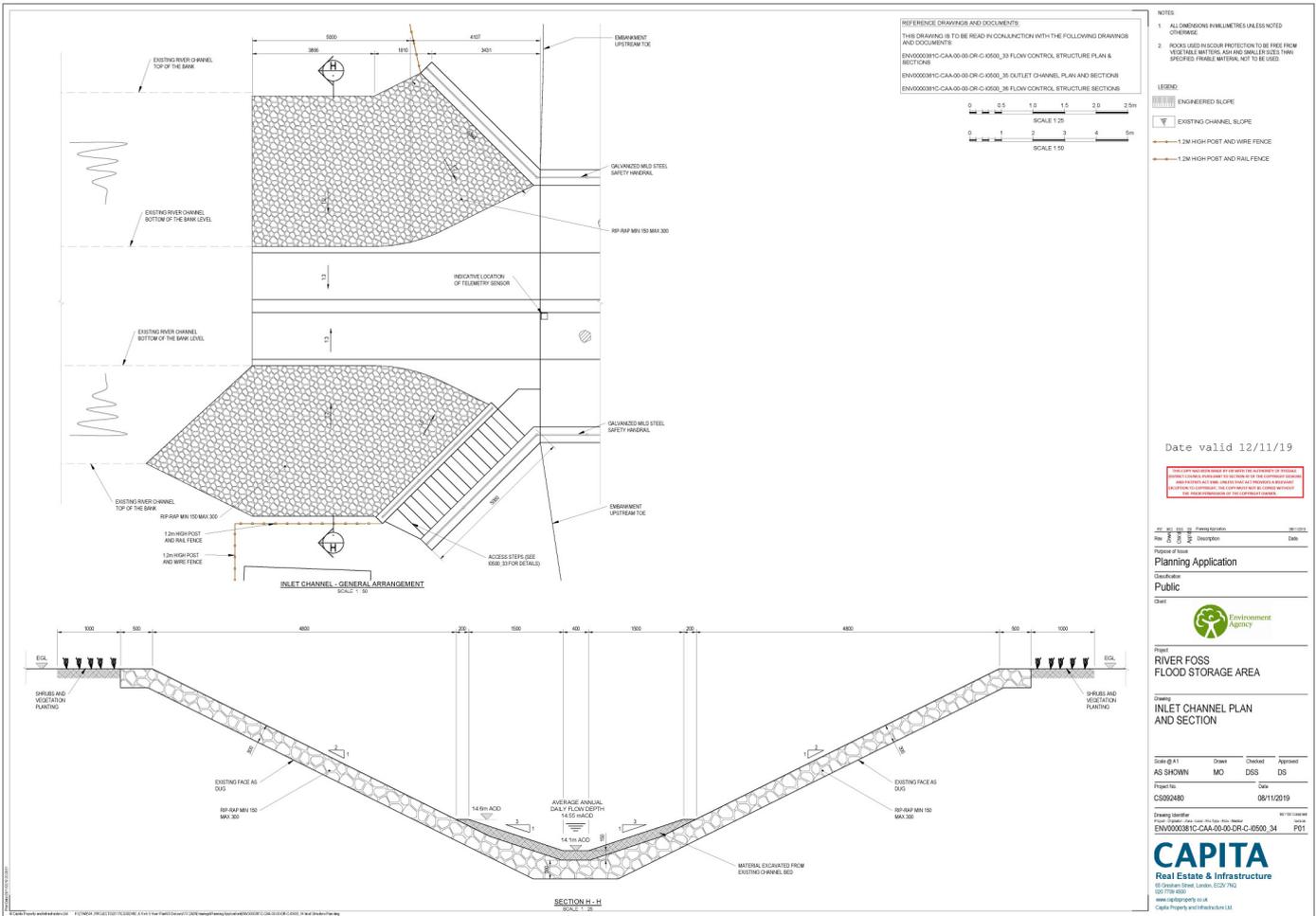
Drawing identifier
Project Reference-Author Volume-Location Type-Rev File Number Revision
ENV00003810-CAA-00-00-MP-EN-CD400-9 P06

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REFERENCE DRAWINGS AND DOCUMENTS
 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWINGS AND DOCUMENTS:
 EN/0000011C-CAA-00-00-DR-C-4550_30 FLOW CONTROL STRUCTURE PLAN & SECTIONS
 EN/0000011C-CAA-00-00-DR-C-4550_30 OUTLET CHANNEL PLAN AND SECTIONS
 EN/0000011C-CAA-00-00-DR-C-4550_30 FLOW CONTROL STRUCTURE SECTIONS

SCALE 1:25
 SCALE 1:50

NOTES
 1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
 2. ROADS USED IN SCHOOL PROTECTION TO BE FREE FROM SPECIFIED MATERIALS AND UNLESS SPECIFIED OTHERWISE, FINISH MATERIAL NOT TO BE USED.

LEGEND
 [Symbol] ENGINEERED SLOPE
 [Symbol] EXISTING CHANNEL SLOPE
 [Symbol] 1.2M HIGH POST AND WIRE FENCE
 [Symbol] 1.2M HIGH POST AND RAIL FENCE

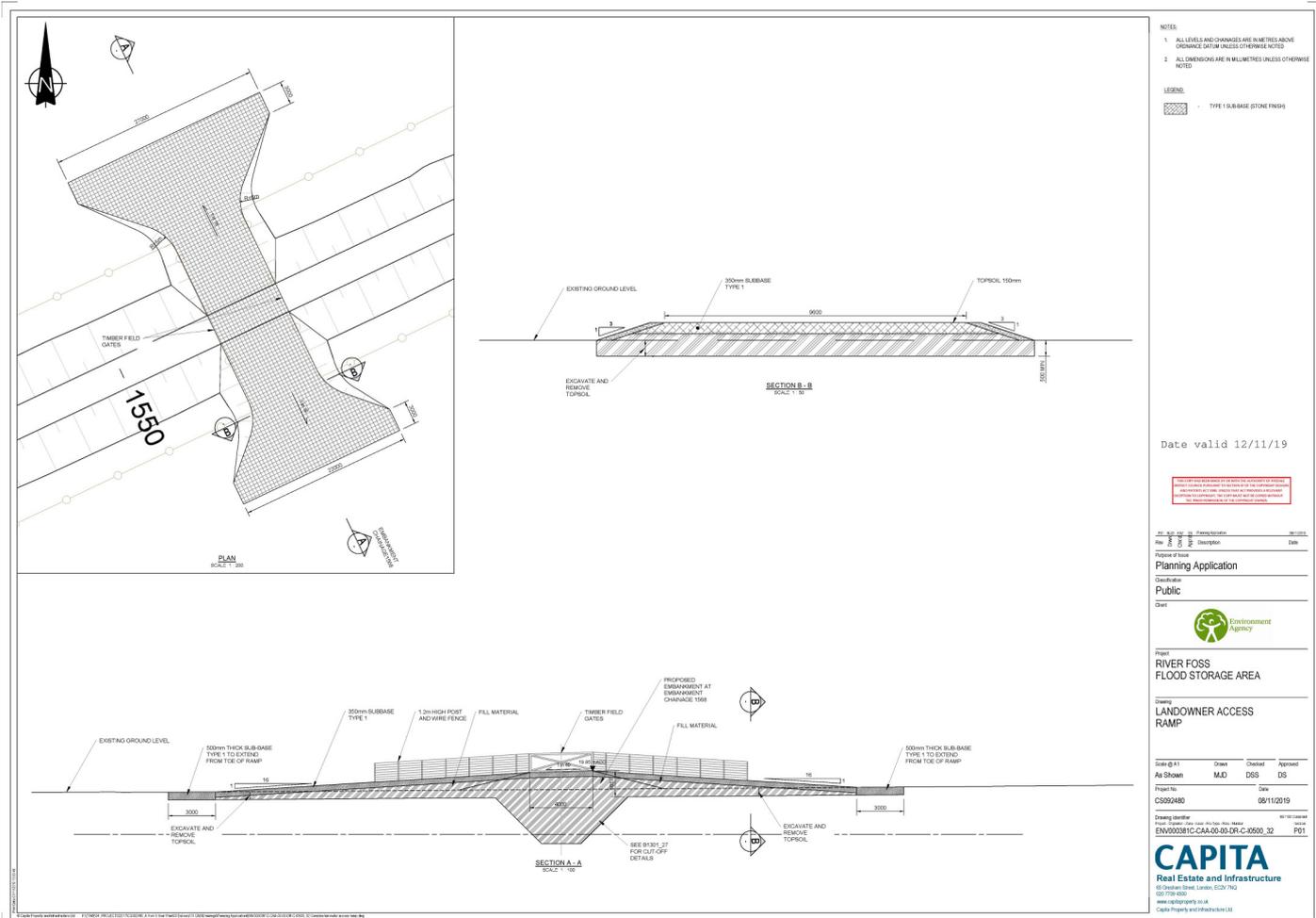
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Project: RIVER FOSS FLOOD STORAGE AREA
 Drawing: INLET CHANNEL PLAN AND SECTION
 Date: 08/11/2019

Scale @ A1	Drawn	Checked	Approved
AS SHOWN	MO	DSS	DS
Project No:	CS020480		
Project Name:	RIVER FOSS FLOOD STORAGE AREA		
Project Location:	EN/0000011C-CAA-00-00-DR-C-4550_34		
Project Status:	P01		

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LEGEND:
 [Hatched pattern] TYPE 1 SUB-BASE (STONE FINISH)

Date valid 12/11/19

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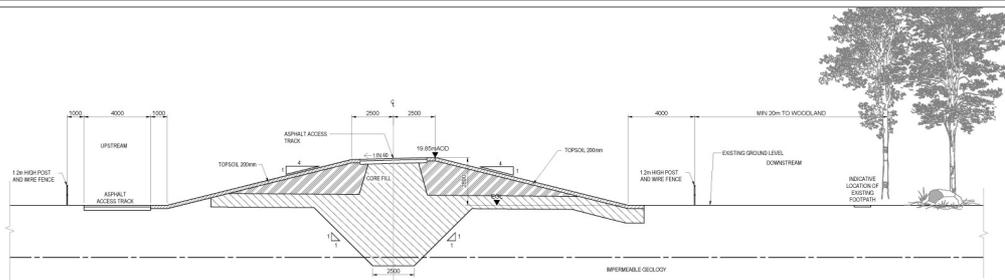
Job No: 08/11/2019
 Date: 08/11/2019
 Project: Planning Application
 Client: Public

Capita Environment Agency
 Project: RIVER FOSS FLOOD STORAGE AREA
 Drawing: LANDOWNER ACCESS RAMP

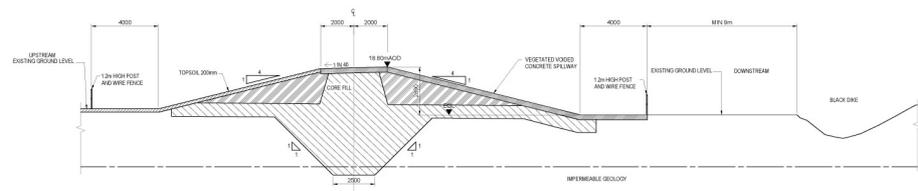
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As Shown	MJD	DSS	DS

Project No: CS202480 Date: 08/11/2019
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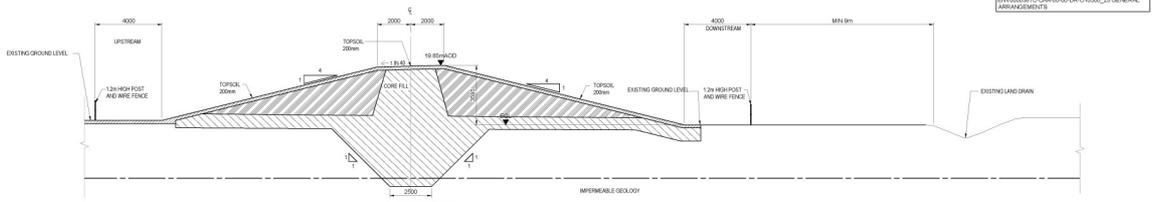
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SECTION A-A
SCALE 1:100



SECTION B-B
SCALE 1:100



SECTION C-C
SCALE 1:100

REFERENCE DRAWINGS AND DOCUMENTS:
EN10000M10-CA1-K0-00-DR-0-10000_29 GENERAL ARRANGEMENTS



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Job No.	19000000000000000000	Project No.	19000000000000000000
Rev.	0	Description	Issue

Purpose of Issue
Planning Application

Classification
Public

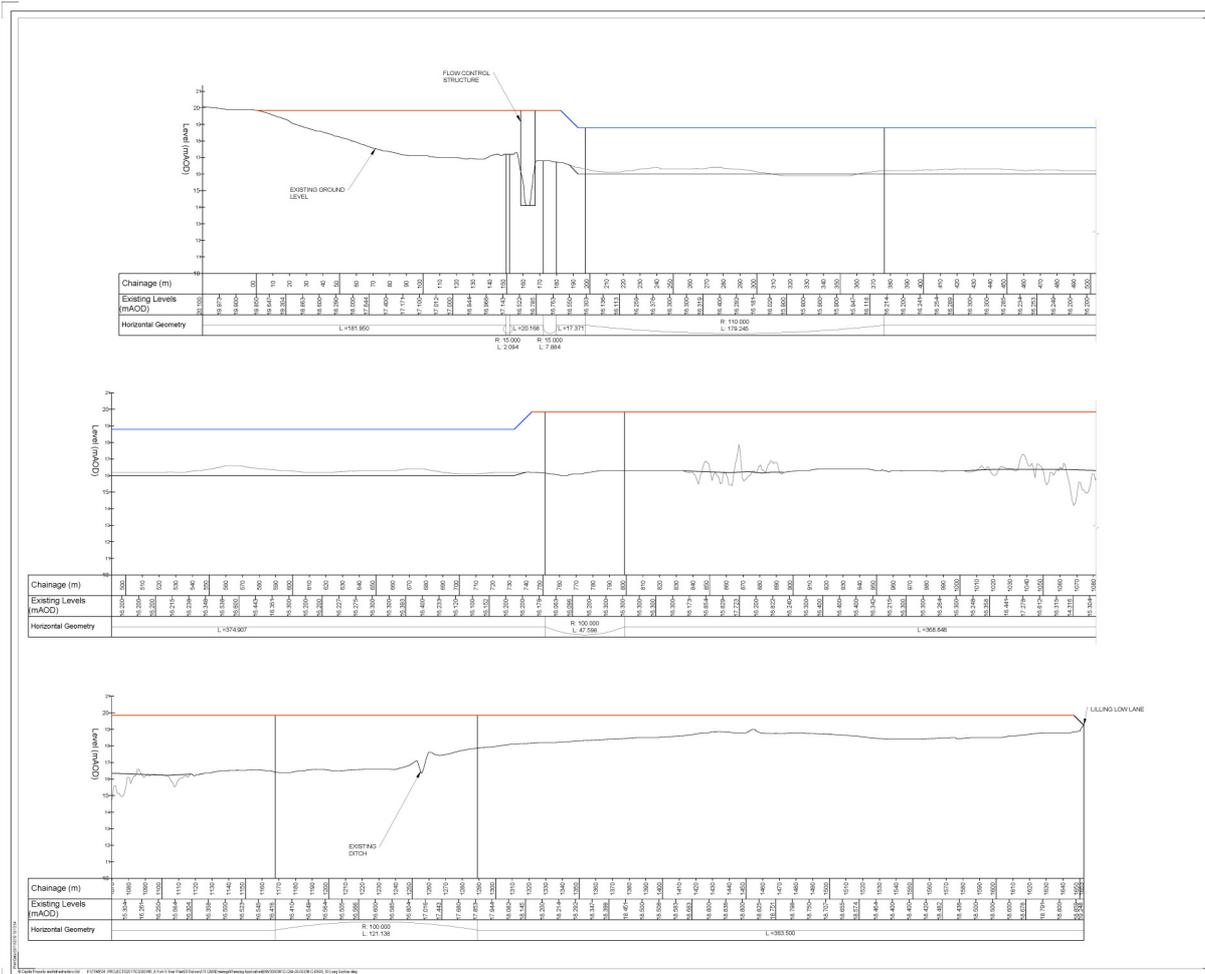


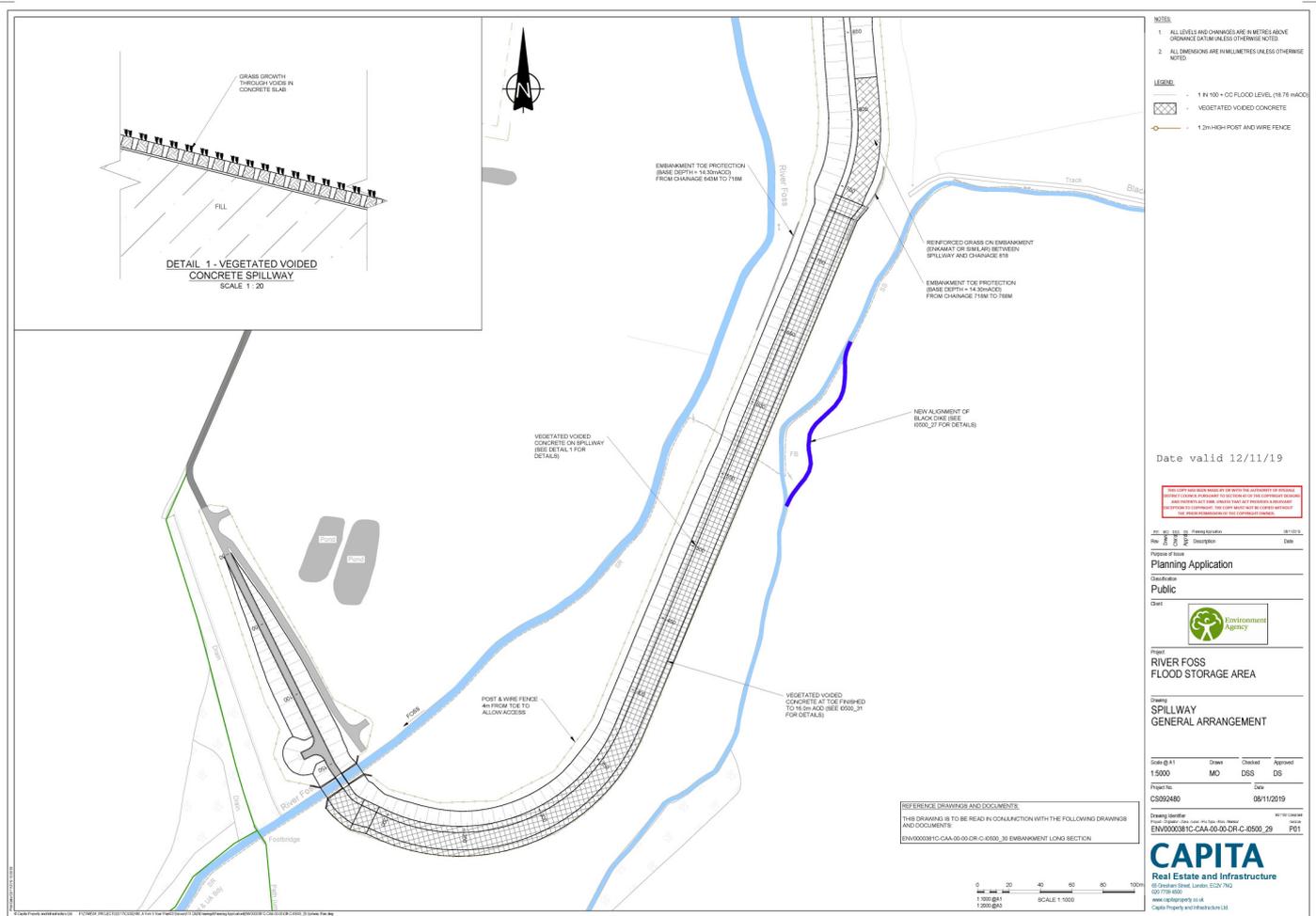
Project
RIVER FOSS
FLOOD STORAGE AREA

Drawing
EMBANKMENT CROSS SECTIONS

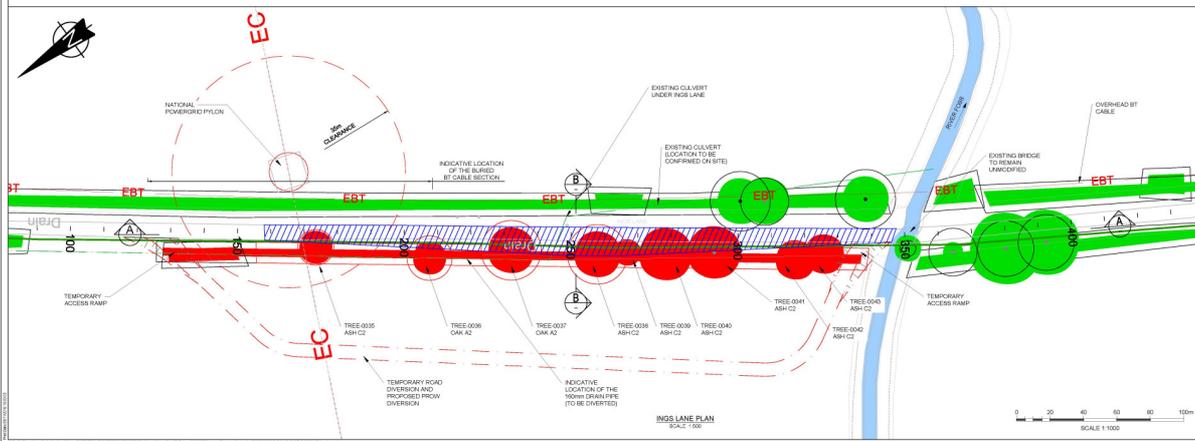
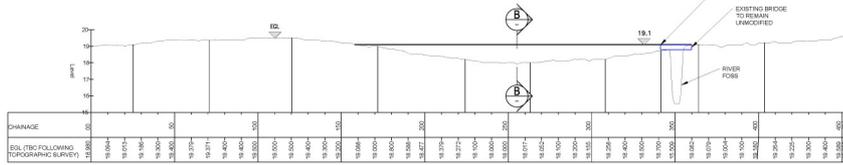
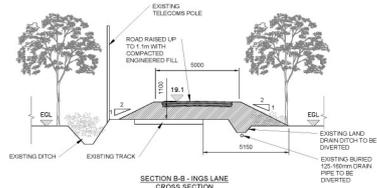
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Project No.	Date		
CS002480	08/11/2019		
Drawing Control	Information		
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TREE REFERENCE	TREE DESCRIPTION
0006	ASH C2
0008	OSM C2
0007	OSM C2
0008	ASH C2
0009	ASH C2
0040	ASH C2
0041	ASH C2
0042	ASH C2
0043	ASH C2



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 3. FOR FURTHER DETAILS FOR TREES AND HEDGEROWS REFER TO DOCUMENT EMBS0001C-CAM-00-00-DR-C-4550_04



Date valid 12/11/19

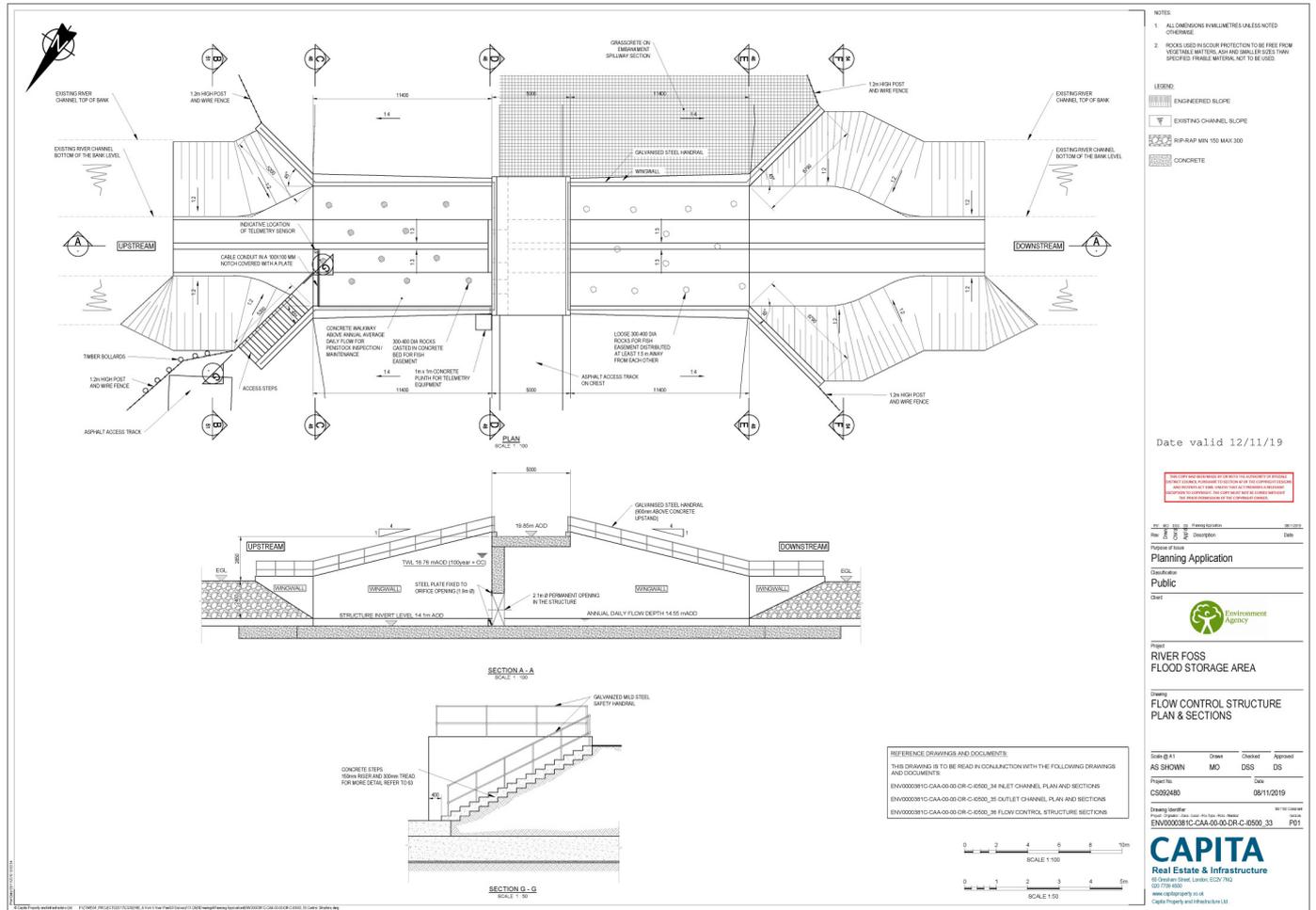
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Job No: **EMBS0001C-CAM-00-00-DR-C-4550_04** 18/11/19
 Rev: **0** Description: **Final**
 Purpose of Issue: **Planning Application**
 Classification: **Public**
 Client: **Environment Agency**

RIVER FOSS FLOOD STORAGE AREA
INGS LANE RAISING PLAN & SECTIONS

Scale @ A1	Drawn	Checked	Approved
AS SHOWN	MO	DSS	DS
Project No:	Date: 08/11/2019		
CS002480	<small>ENR0000001C-CAM-00-00-DR-C-4550_04</small> <small>ENR0000001C-CAM-00-00-DR-C-4550_04</small>		

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- LEGEND
- ENGINEERED SLOPE
 - EXISTING CHANNEL SLOPE
 - RIP-RAP MIN 100 MAX 300
 - CONCRETE

Date valid 12/11/19

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Job No.	EN00000010	Project Name	RIVER FOSS FLOOD STORAGE AREA
Rev.	1	Discipline	Structural
Prepared by	MO	Client	Public
Checked by	DS	Drawn by	MO
Approved by	DS	Date	08/11/2019

Project: RIVER FOSS FLOOD STORAGE AREA

Client: Environment Agency

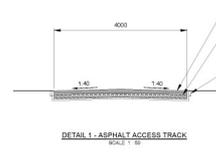
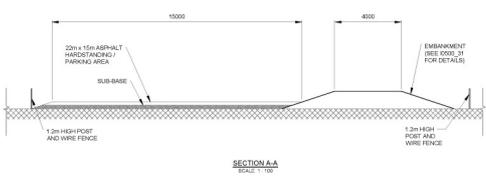
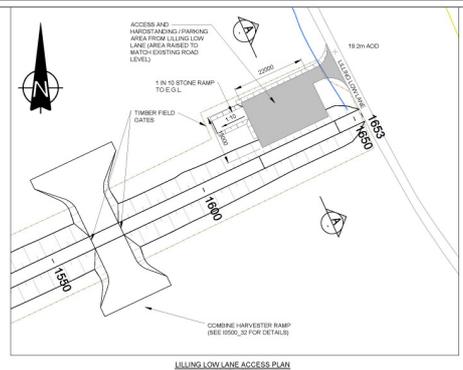
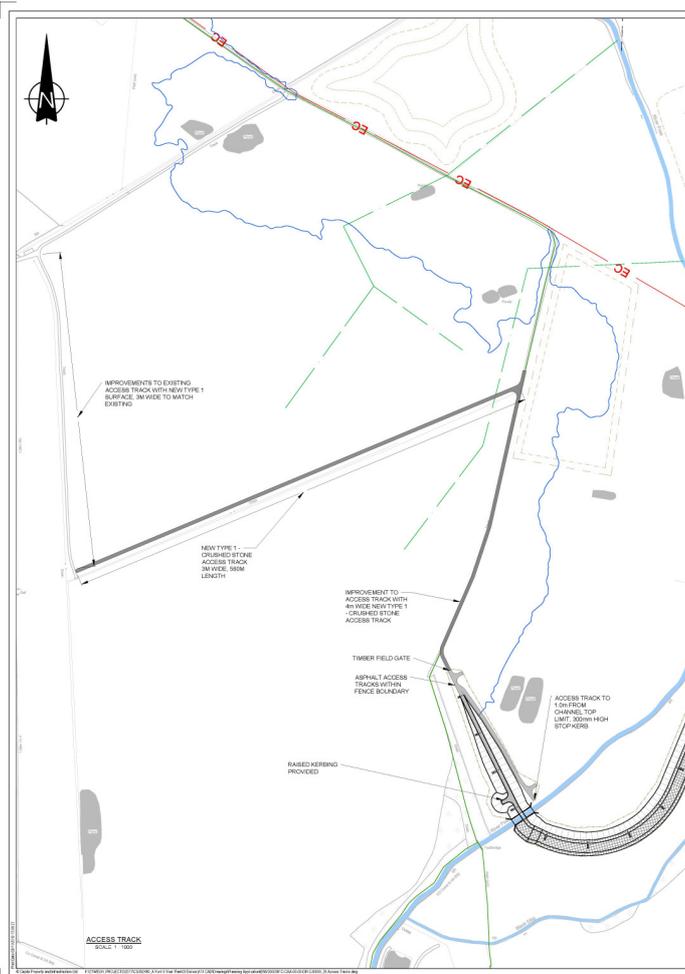
Drawing: FLOW CONTROL STRUCTURE PLAN & SECTIONS

REFERENCE DRAWINGS AND DOCUMENTS:

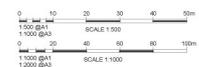
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWINGS AND DOCUMENTS:

- EN00000010 CAA-00-00-DR-C-6500_34 INLET CHANNEL PLAN AND SECTIONS
- EN00000010 CAA-00-00-DR-C-6500_35 OUTLET CHANNEL PLAN AND SECTIONS
- EN00000010 CAA-00-00-DR-C-6500_36 FLOW CONTROL STRUCTURE SECTIONS





REFERENCE DRAWINGS AND DOCUMENTS
 EN0000084C-CAL-00-00-DR-C-0006_24 SITE
 ACCESS: COMPOUND AND TEMPORARY WORKS
 EN0000084C-CAL-00-00-DR-C-0002_31
 EMBANKMENT CROSS SECTIONS



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- LEGEND
- 1.2m HIGH POST AND WIRE FENCE
 - PERMANENT BORROW PIT
 - TEMPORARY BORROW PIT

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Job No.	EN0000084C	Project Name	RIVER FOSS FLOOD STORAGE AREA
Rev.	01	Description	Access Tracks

Purpose of Issue
 Planning Application

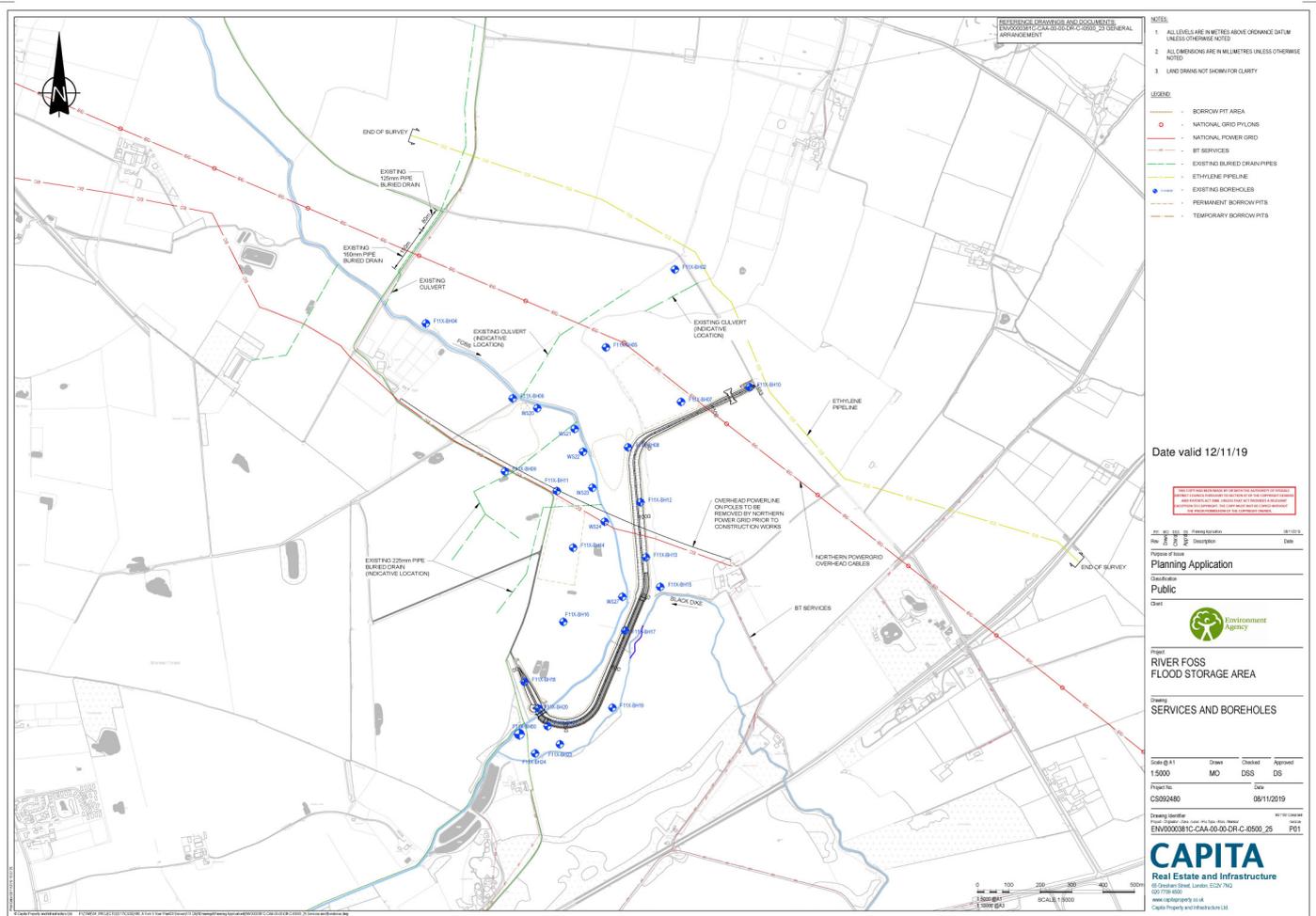
Client
 Public

Project
 RIVER FOSS FLOOD STORAGE AREA

Drawing
 ACCESS TRACKS

Scale	@A1	Drawn	MO	Checked	DSS	Approved	DS
AS SHOWN							
Project No.	CS020480		Date	08/11/2019			
Drawing Number	EN0000084C-CAL-00-00-DR-C-0550_26		Scale	P01			

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REFERENCE DRAWING AND DOCUMENTS:
 1. ENVIRONMENTAL STATEMENT (2009)
 2. GENERAL ARRANGEMENT

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 3. LAND DRAINS NOT SHOWN FOR CLARITY

- LEGEND:
- BORROW PIT AREA
 - NATIONAL GRID PYLONS
 - NATIONAL POWER GRID
 - BT SERVICES
 - EXISTING BURIED DRAINPIPES
 - ETHYLENE PIPELINE
 - EXISTING BOREHOLES
 - PERMANENT BORROW PITS
 - TEMPORARY BORROW PITS

Date valid 12/11/19

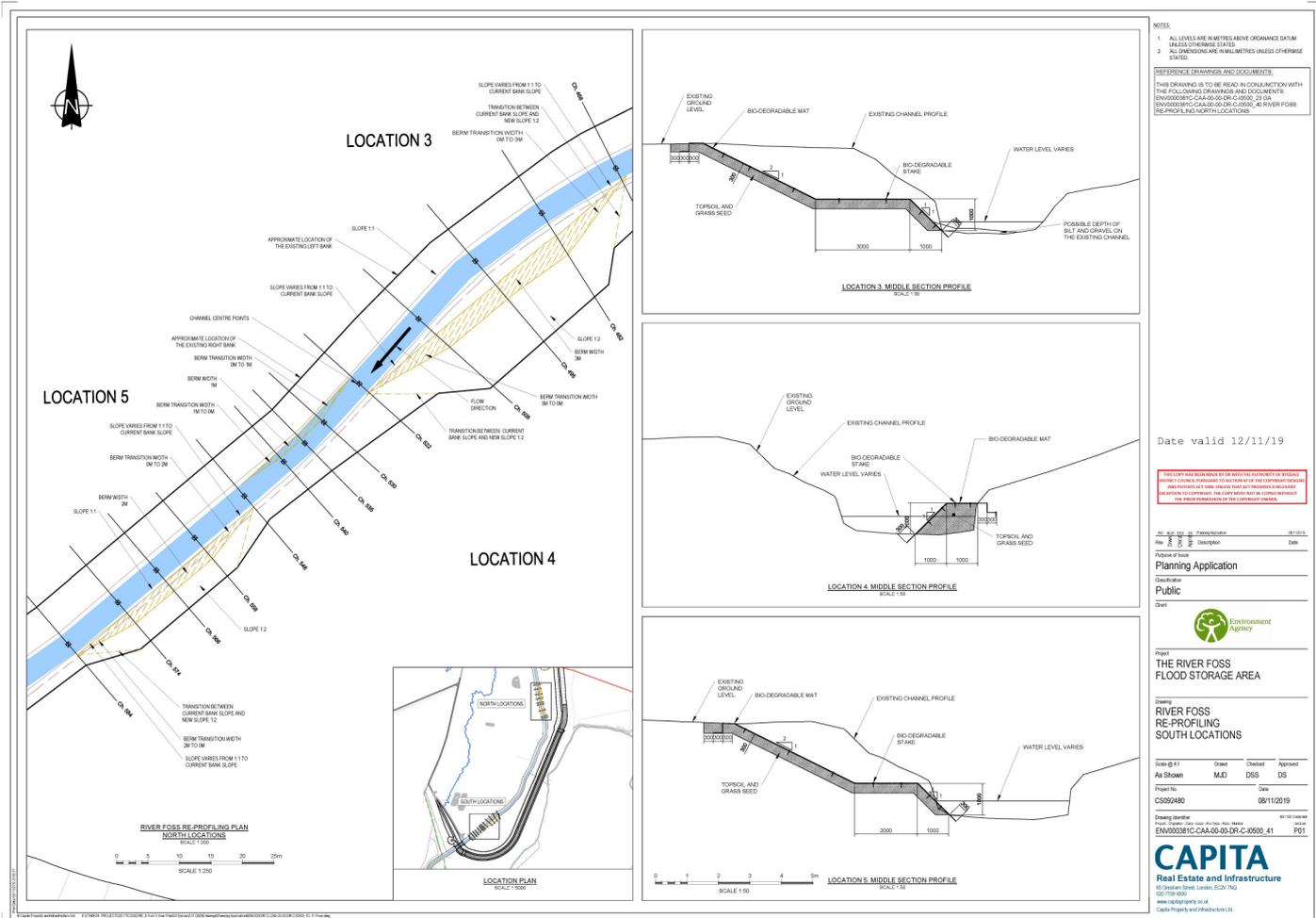
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Project: RIVER FOSS FLOOD STORAGE AREA
 Drawing: SERVICES AND BOREHOLES

Client: Public
 Planning Application
 Date: 08/11/2019

Drawn	Checked	Approved
MO	DSS	DS

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REFERENCE DRAWINGS AND DOCUMENTS:
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 ENV000301C-CAL-00-00-DR-C-0500_41 RIVER FOSS RE-PROFILING NORTH LOCATIONS

Date valid 12/11/19

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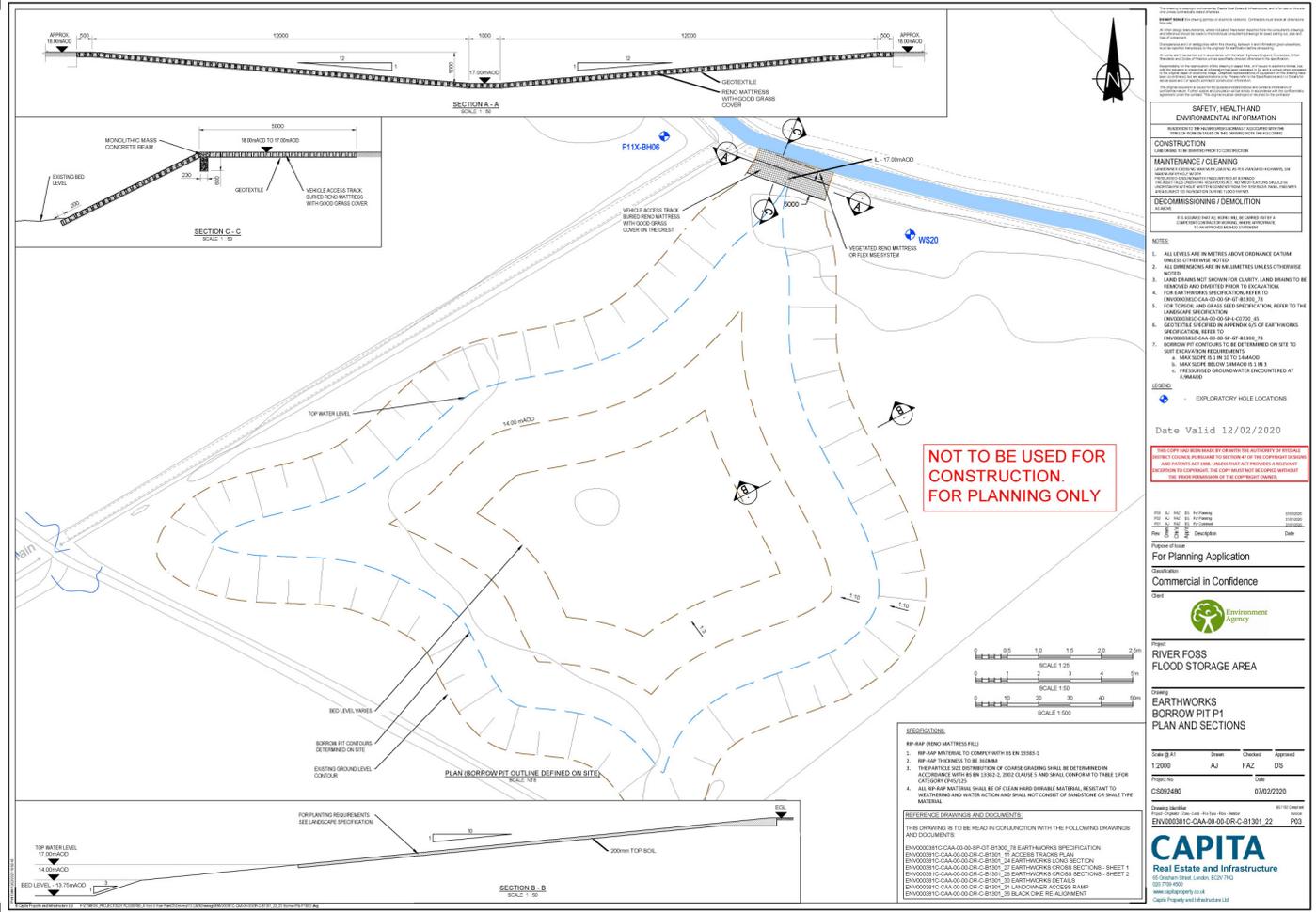
JOB NO.	ENV000301C	PROJECT NO.	ENV000301C
REV.	0	DATE	
Purpose of Issue			
Planning Application			
Client			
Public			

Drawn:  Environment Agency
 Project: THE RIVER FOSS FLOOD STORAGE AREA

Drawn: RIVER FOSS RE-PROFILING SOUTH LOCATIONS

Drawn @ A1	Drawn	Checked	Approved
As Shown	MJD	DSS	DS
Project No:		Date:	
CS002480		08/11/2019	
Drawing Standard:		BSI Standard:	
EN000301C-CAL-00-00-DR-C-0500_41		P01	

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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
CONSTRUCTION	
DECOMMISSIONING / DEMOLITION	

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 2. ALL EXCAVATIONS ARE TO BE LIMITED TO THE SPECIFIED DEPTHS.
 3. LAND GRABING NOT SUITABLE FOR CLARITY, LAND GRABING TO BE REMOVED AND EXPEDITED PRIOR TO EXCAVATION.
 4. FOR EARTHWORKS SPECIFICATION REFER TO: ENVO000818-CIA-00-00-DR-01-01-01-01, ENVO000818-CIA-00-00-DR-01-01-01-02, ENVO000818-CIA-00-00-DR-01-01-01-03, ENVO000818-CIA-00-00-DR-01-01-01-04, ENVO000818-CIA-00-00-DR-01-01-01-05, ENVO000818-CIA-00-00-DR-01-01-01-06, ENVO000818-CIA-00-00-DR-01-01-01-07, ENVO000818-CIA-00-00-DR-01-01-01-08, ENVO000818-CIA-00-00-DR-01-01-01-09, ENVO000818-CIA-00-00-DR-01-01-01-10, ENVO000818-CIA-00-00-DR-01-01-01-11, ENVO000818-CIA-00-00-DR-01-01-01-12, ENVO000818-CIA-00-00-DR-01-01-01-13, ENVO000818-CIA-00-00-DR-01-01-01-14, ENVO000818-CIA-00-00-DR-01-01-01-15, ENVO000818-CIA-00-00-DR-01-01-01-16, ENVO000818-CIA-00-00-DR-01-01-01-17, ENVO000818-CIA-00-00-DR-01-01-01-18, ENVO000818-CIA-00-00-DR-01-01-01-19, ENVO000818-CIA-00-00-DR-01-01-01-20, ENVO000818-CIA-00-00-DR-01-01-01-21, ENVO000818-CIA-00-00-DR-01-01-01-22, ENVO000818-CIA-00-00-DR-01-01-01-23, ENVO000818-CIA-00-00-DR-01-01-01-24, ENVO000818-CIA-00-00-DR-01-01-01-25, ENVO000818-CIA-00-00-DR-01-01-01-26, ENVO000818-CIA-00-00-DR-01-01-01-27, ENVO000818-CIA-00-00-DR-01-01-01-28, ENVO000818-CIA-00-00-DR-01-01-01-29, ENVO000818-CIA-00-00-DR-01-01-01-30, ENVO000818-CIA-00-00-DR-01-01-01-31, ENVO000818-CIA-00-00-DR-01-01-01-32, ENVO000818-CIA-00-00-DR-01-01-01-33, ENVO000818-CIA-00-00-DR-01-01-01-34, ENVO000818-CIA-00-00-DR-01-01-01-35, ENVO000818-CIA-00-00-DR-01-01-01-36, ENVO000818-CIA-00-00-DR-01-01-01-37, ENVO000818-CIA-00-00-DR-01-01-01-38, ENVO000818-CIA-00-00-DR-01-01-01-39, ENVO000818-CIA-00-00-DR-01-01-01-40, ENVO000818-CIA-00-00-DR-01-01-01-41, ENVO000818-CIA-00-00-DR-01-01-01-42, ENVO000818-CIA-00-00-DR-01-01-01-43, ENVO000818-CIA-00-00-DR-01-01-01-44, ENVO000818-CIA-00-00-DR-01-01-01-45, ENVO000818-CIA-00-00-DR-01-01-01-46, ENVO000818-CIA-00-00-DR-01-01-01-47, ENVO000818-CIA-00-00-DR-01-01-01-48, ENVO000818-CIA-00-00-DR-01-01-01-49, ENVO000818-CIA-00-00-DR-01-01-01-50, ENVO000818-CIA-00-00-DR-01-01-01-51, ENVO000818-CIA-00-00-DR-01-01-01-52, ENVO000818-CIA-00-00-DR-01-01-01-53, ENVO000818-CIA-00-00-DR-01-01-01-54, ENVO000818-CIA-00-00-DR-01-01-01-55, ENVO000818-CIA-00-00-DR-01-01-01-56, ENVO000818-CIA-00-00-DR-01-01-01-57, ENVO000818-CIA-00-00-DR-01-01-01-58, ENVO000818-CIA-00-00-DR-01-01-01-59, ENVO000818-CIA-00-00-DR-01-01-01-60, ENVO000818-CIA-00-00-DR-01-01-01-61, ENVO000818-CIA-00-00-DR-01-01-01-62, ENVO000818-CIA-00-00-DR-01-01-01-63, ENVO000818-CIA-00-00-DR-01-01-01-64, ENVO000818-CIA-00-00-DR-01-01-01-65, ENVO000818-CIA-00-00-DR-01-01-01-66, ENVO000818-CIA-00-00-DR-01-01-01-67, ENVO000818-CIA-00-00-DR-01-01-01-68, ENVO000818-CIA-00-00-DR-01-01-01-69, ENVO000818-CIA-00-00-DR-01-01-01-70, ENVO000818-CIA-00-00-DR-01-01-01-71, ENVO000818-CIA-00-00-DR-01-01-01-72, ENVO000818-CIA-00-00-DR-01-01-01-73, ENVO000818-CIA-00-00-DR-01-01-01-74, ENVO000818-CIA-00-00-DR-01-01-01-75, ENVO000818-CIA-00-00-DR-01-01-01-76, ENVO000818-CIA-00-00-DR-01-01-01-77, ENVO000818-CIA-00-00-DR-01-01-01-78, ENVO000818-CIA-00-00-DR-01-01-01-79, ENVO000818-CIA-00-00-DR-01-01-01-80, ENVO000818-CIA-00-00-DR-01-01-01-81, ENVO000818-CIA-00-00-DR-01-01-01-82, ENVO000818-CIA-00-00-DR-01-01-01-83, ENVO000818-CIA-00-00-DR-01-01-01-84, ENVO000818-CIA-00-00-DR-01-01-01-85, ENVO000818-CIA-00-00-DR-01-01-01-86, ENVO000818-CIA-00-00-DR-01-01-01-87, ENVO000818-CIA-00-00-DR-01-01-01-88, ENVO000818-CIA-00-00-DR-01-01-01-89, ENVO000818-CIA-00-00-DR-01-01-01-90, ENVO000818-CIA-00-00-DR-01-01-01-91, ENVO000818-CIA-00-00-DR-01-01-01-92, ENVO000818-CIA-00-00-DR-01-01-01-93, ENVO000818-CIA-00-00-DR-01-01-01-94, ENVO000818-CIA-00-00-DR-01-01-01-95, ENVO000818-CIA-00-00-DR-01-01-01-96, ENVO000818-CIA-00-00-DR-01-01-01-97, ENVO000818-CIA-00-00-DR-01-01-01-98, ENVO000818-CIA-00-00-DR-01-01-01-99, ENVO000818-CIA-00-00-DR-01-01-01-100.

LEGEND

EXPLORATORY HOLE LOCATIONS

Date Valid 12/02/2020

NOT TO BE USED FOR CONSTRUCTION FOR PLANNING ONLY

DR	NO	BY	DATE	DESCRIPTION	STATUS
1	1	1	1	1	1

For Planning Application

Commercial in Confidence



RIVER FOSS FLOOD STORAGE AREA

EARTHWORKS BORROW PIT P1 PLAN AND SECTIONS

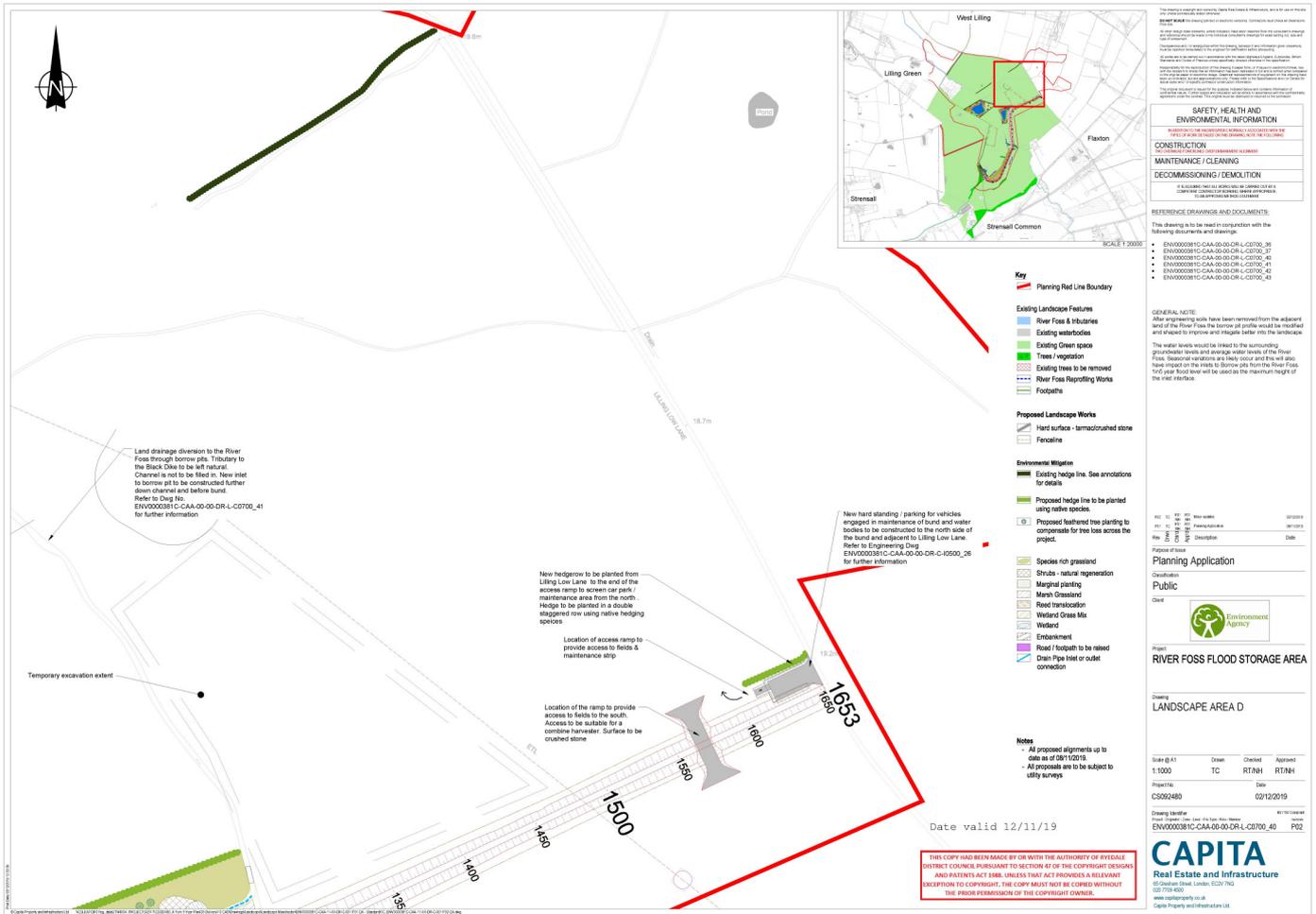
Sheet No.	Drawn	Checked	Approved
1/2000	AM	FAZ	DS

Project No: C2952480 Date: 07/02/2020

Client: CAPITA Real Estate and Infrastructure

Capita Property and Infrastructure Ltd

- REGISTRATION**
1. RRP RMP MATERIAL TO COMPLY WITH BS EN 13383-1
 2. RRP RMP THICKNESS TO BE 100MM
 3. THE PARTICLE SIZE DISTRIBUTION OF CORNER GRADING SHALL BE DETERMINED IN ACCORDANCE WITH BS EN 12853-2:2003 CLAUSE 3 AND SHALL CONFORM TO TABLE 1 FOR CATEGORY 1 PROFILES
 4. ALL RRP RMP MATERIAL SHALL BE OF CLEAN HARD DURABLE MATERIAL RESISTANT TO WEATHERING AND WATER ACTION AND SHALL NOT CONSIST OF SANDSTONE OR SHALE TYPE MATERIAL
- REFERENCE DRAWINGS AND DOCUMENTS**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWINGS AND DOCUMENTS:
- ENVO000818-CIA-00-00-DR-01-01-01-01, ENVI EARTHWORKS SPECIFICATION
 - ENVO000818-CIA-00-00-DR-01-01-01-02, BORROW TRACKS PLAN
 - ENVO000818-CIA-00-00-DR-01-01-01-03, ENVI EARTHWORKS LONG SECTION
 - ENVO000818-CIA-00-00-DR-01-01-01-04, ENVI EARTHWORKS CROSS SECTIONS - SHEET 1
 - ENVO000818-CIA-00-00-DR-01-01-01-05, ENVI EARTHWORKS CROSS SECTIONS - SHEET 2
 - ENVO000818-CIA-00-00-DR-01-01-01-06, ENVI EARTHWORKS DETAILS
 - ENVO000818-CIA-00-00-DR-01-01-01-07, LANDWORKER ACCESS RAMP
 - ENVO000818-CIA-00-00-DR-01-01-01-08, BS 8000:2008 BLACK CURE RE ALLOWMENT



- NOTES:
1. ALL LEVELS AND DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

Date Valid 12/02/2020

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REVISED PLAN

FIG. NO.	REV. NO.	DESCRIPTION	DATE

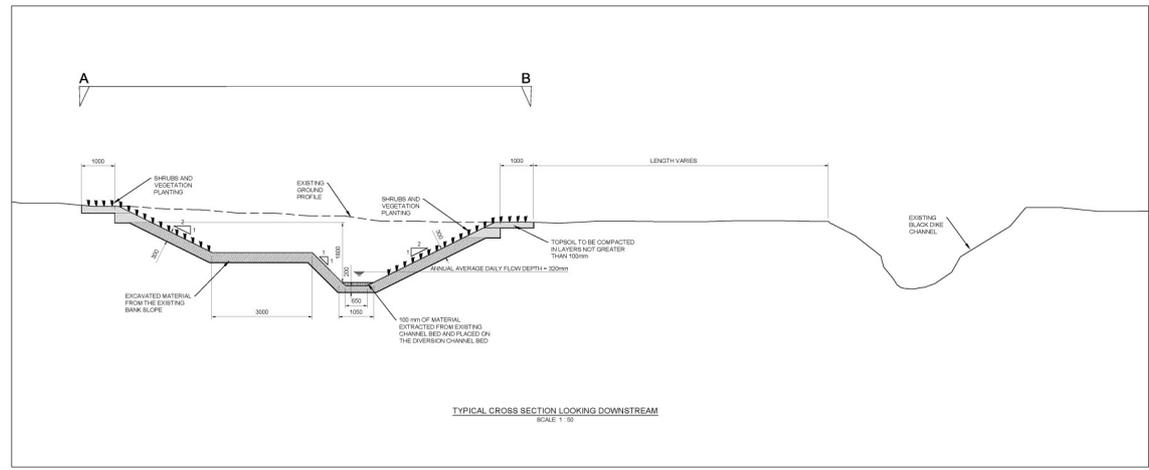
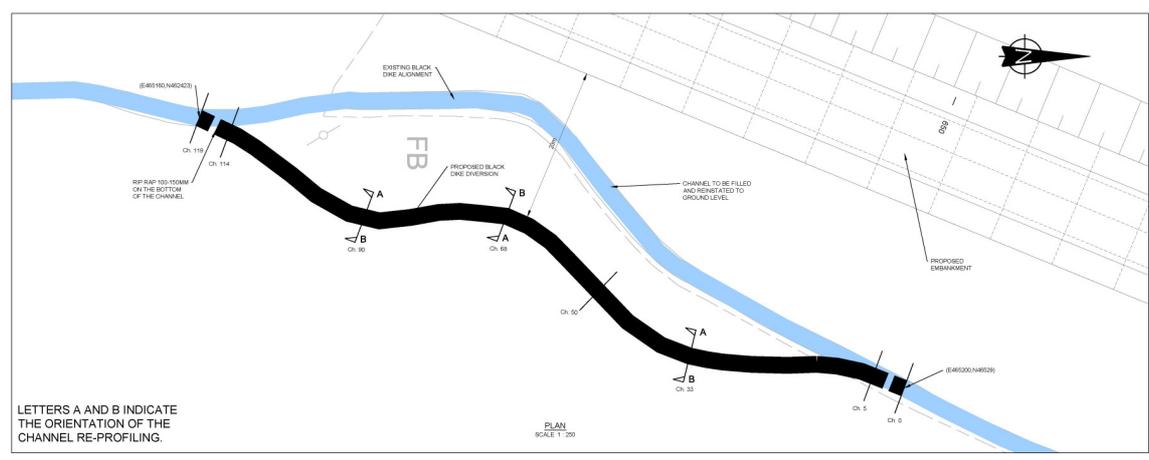
Project: RIVER FOSS FLOOD STORAGE AREA
 Distribution: Public

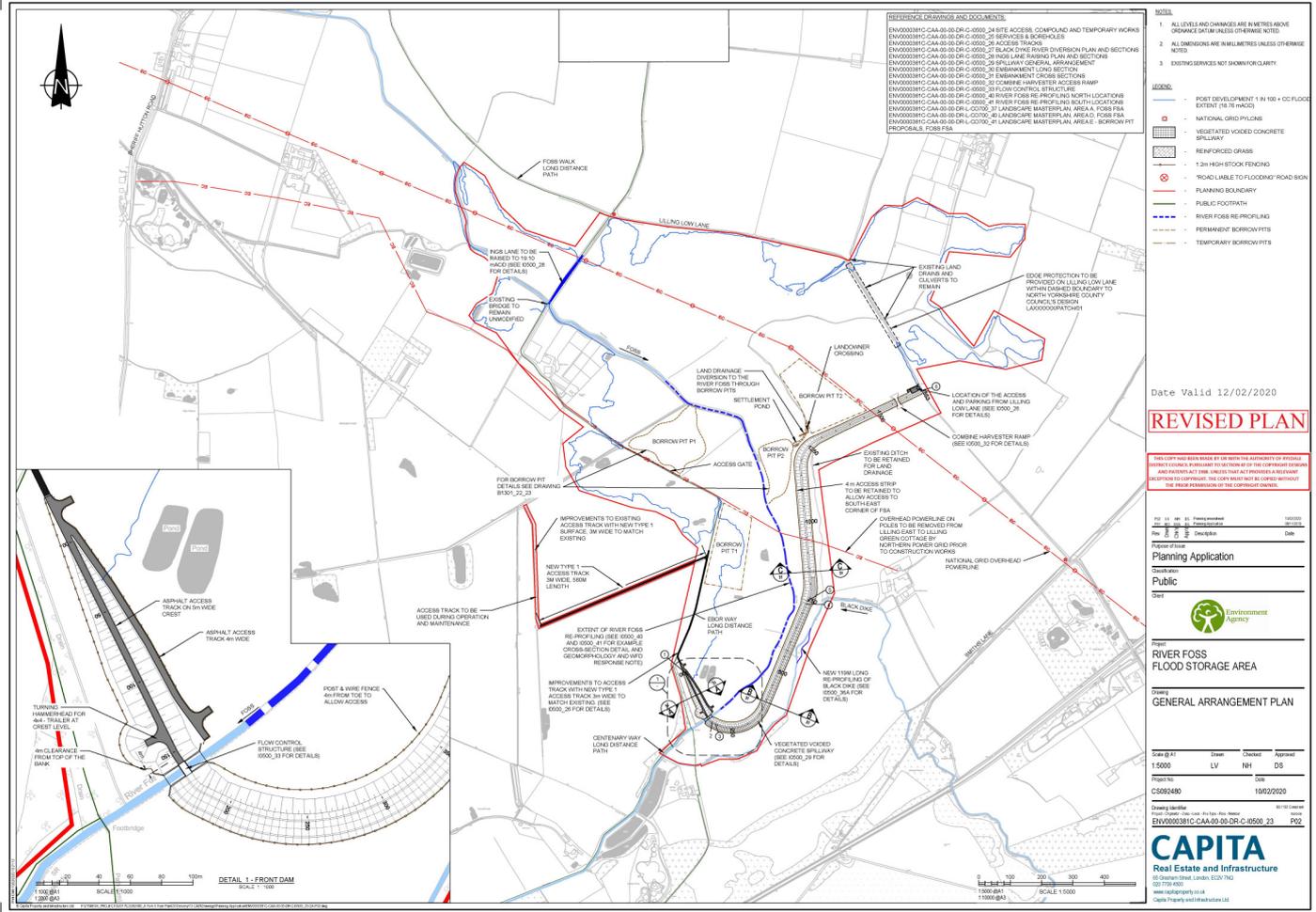


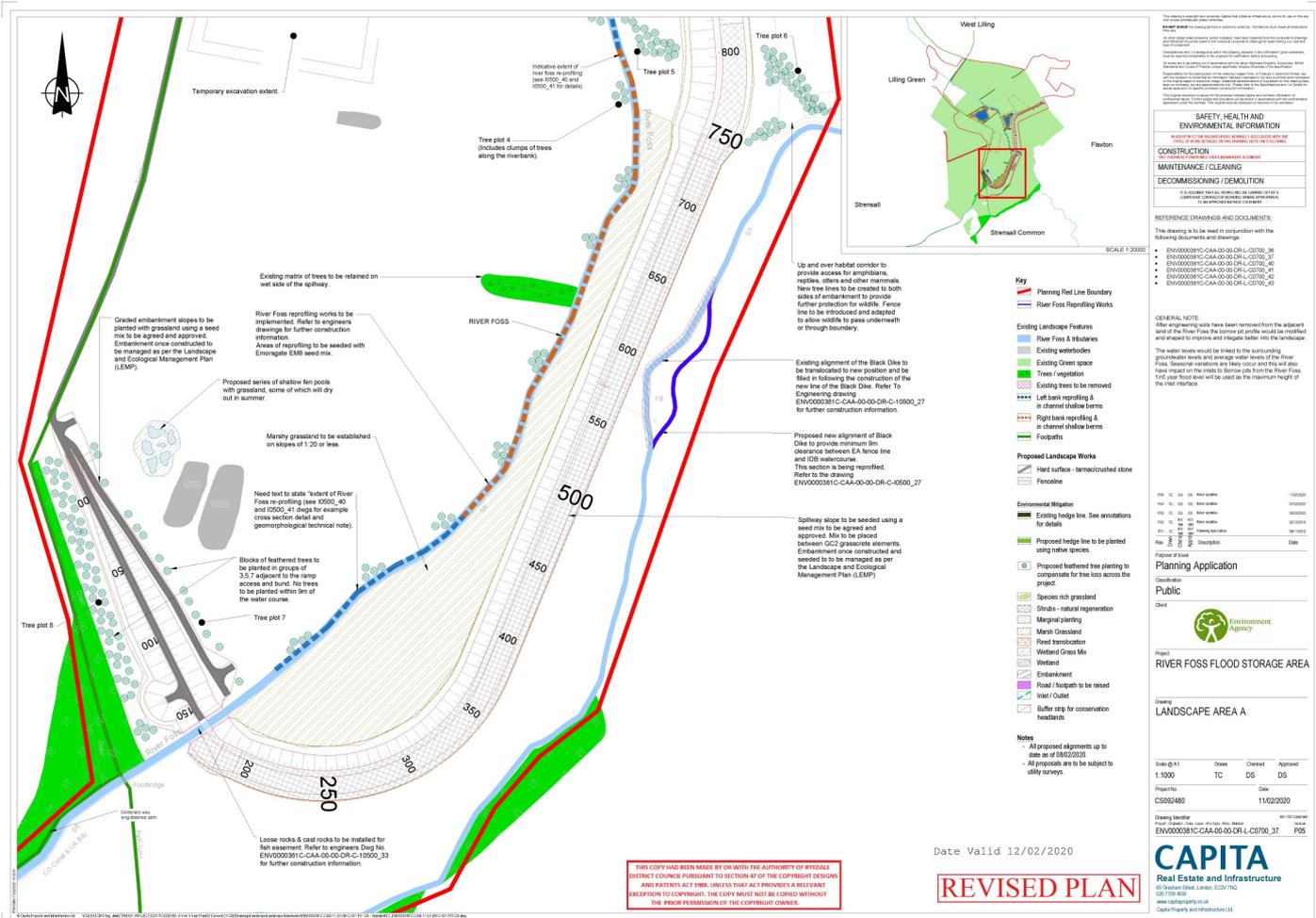
BLACK DIKE RE-ALIGNMENT PLAN AND SECTION

Drawn By	Checked	Approved
As Shown	LV	NH
Project No.	Site	DS
C2952480	27/01/2020	

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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

CONSTRUCTION

MAINTENANCE / CLEANING

DECOMMISSIONING / DEMOLITION

REFERENCE DRAWINGS AND DOCUMENTS:

- EN/0000381C-CAA-00-00-DR-C-10500_36
- EN/0000381C-CAA-00-00-DR-C-10500_37
- EN/0000381C-CAA-00-00-DR-C-10500_40
- EN/0000381C-CAA-00-00-DR-C-10500_41
- EN/0000381C-CAA-00-00-DR-C-10500_42
- EN/0000381C-CAA-00-00-DR-C-10500_43

GENERAL NOTE:
 After engineering works have been removed from the adjacent bank of the River Foss the bottom of profile should be modified and shaped to improve and reshape water into the landscape.

The water levels should be checked by the authority, groundwater levels and average water levels of the River Foss. Should the water levels be significantly higher than the levels shown on the plans to Borena side from the River Foss 150mm flood level will be used as the maximum height of the river flood.

Proposed of Issue

Planning Application

Public

RIVER FOSS FLOOD STORAGE AREA

LANDSCAPE AREA A

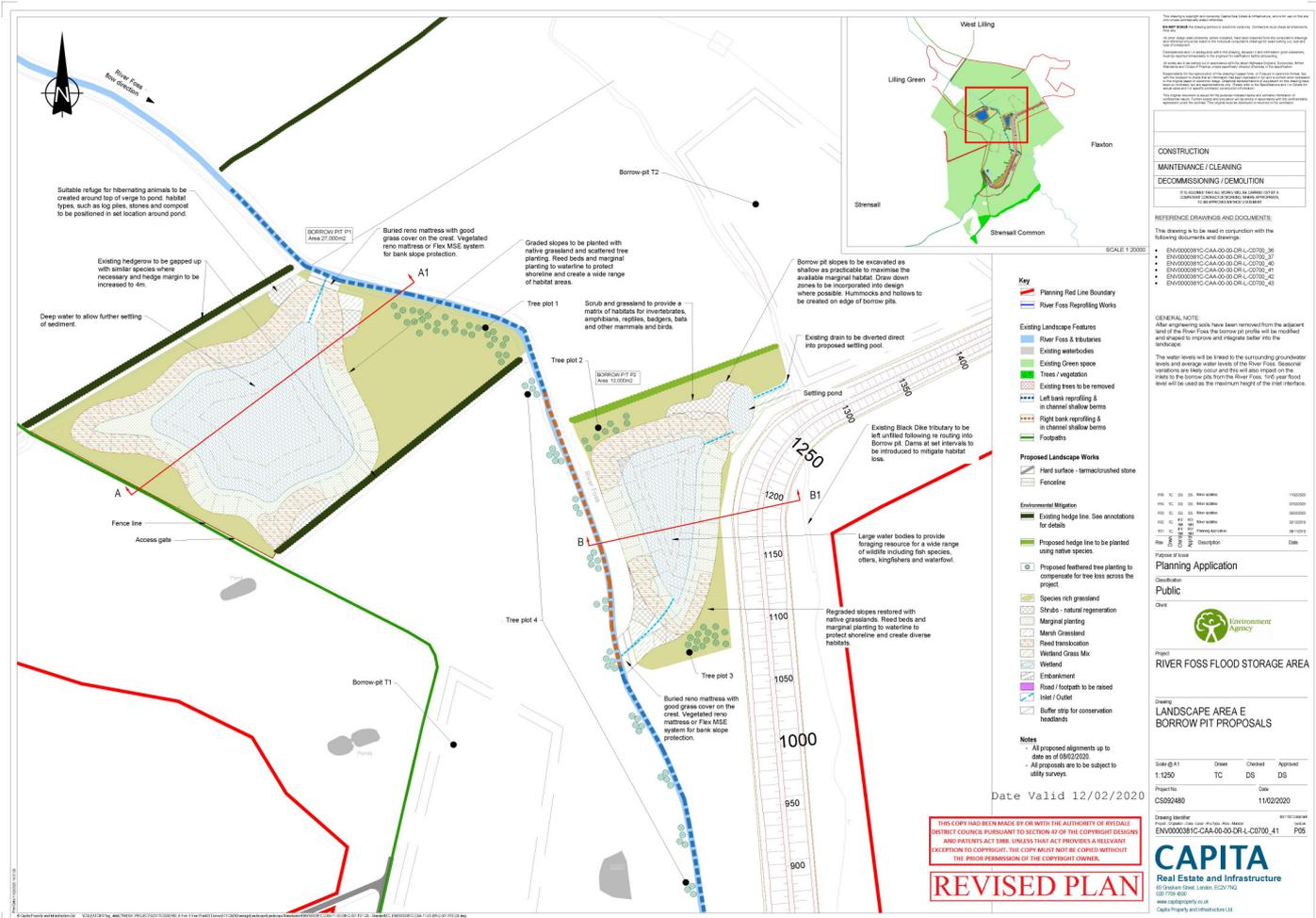
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Project No: CS202480 Date: 11/02/2020

Drawn: DS
 Checked: DS
 Approved: DS

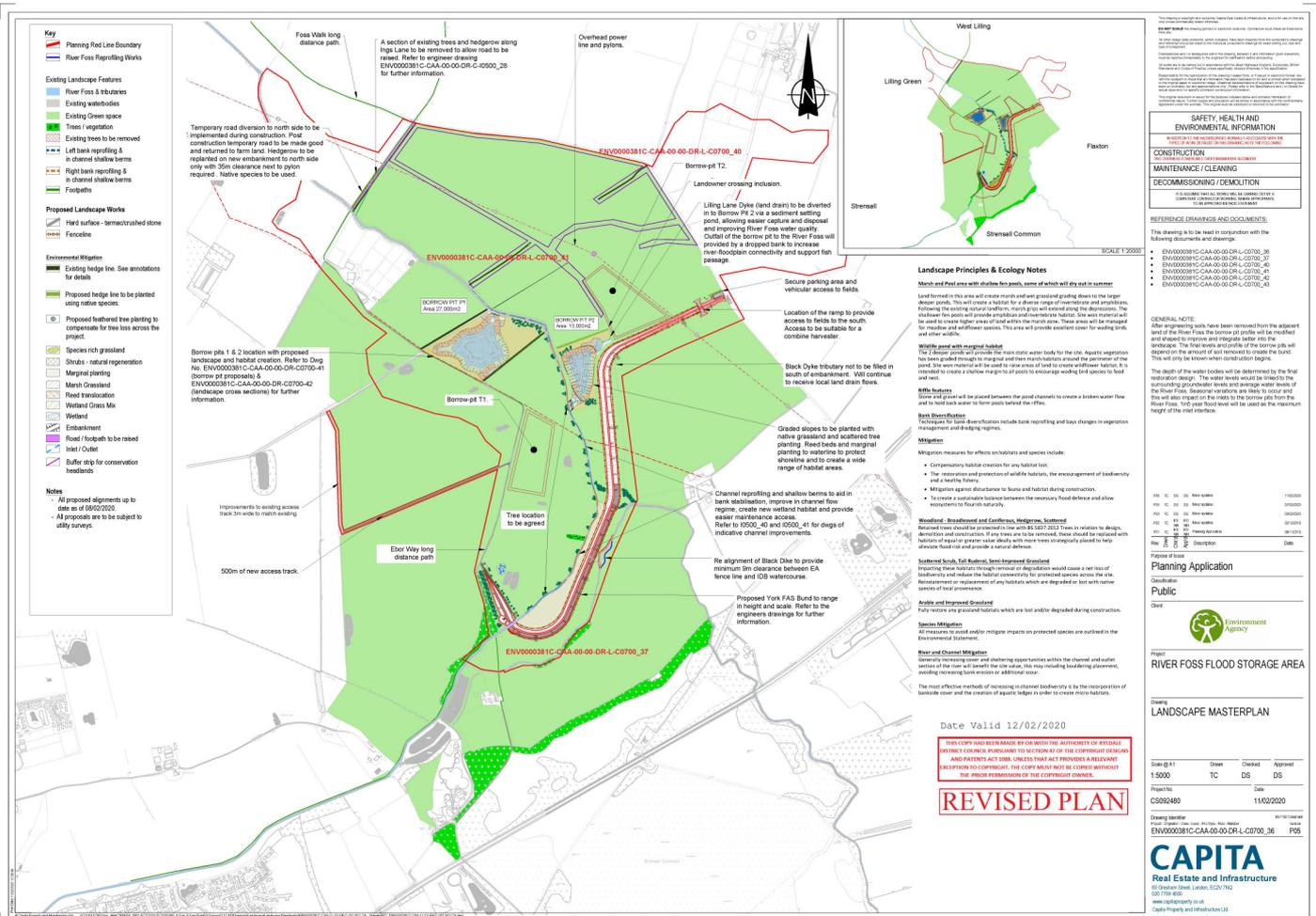
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Water and Environment Management Framework
Lot 3 – Engineering and Related Services

York Flood Alleviation Scheme
River Foss Flood Storage Area
Landscape and Ecological
Management Plan
November 2019



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	River Foss Flood Storage Area Landscape and Ecological Management Plan		
Document Ref	ENV0000381C-CAA-00-00- RP-L-C0700:44	Issue / Revision	P01.2
File reference	F:\ZTWE\04_PROJECTS\2017\CS092480_A York 5 Year Plan\03 Delivery\02 Environment\03 Reports & Deliverables\09 - F8_F10_F11 Reports\39 LEMP		
Date	08 November 2019		
Prepared by 1	Sinead Fletcher	Signature (for file)	
Prepared by 2	Tabatha Boniface	Signature (for file)	
Checked by 1	Pete Coe / Mike Steer	Signature (for file)	
Checked by 2	Rachel Taylor	Signature (for file)	
Authorised by	Daniel Stansfield	Signature (for file)	

Revision Status / History

Rev	Date	Issue / Purpose / Comment	Prepared	Checked	Authorised
P01	August 2019	Draft for Client Comments	SF		
P01.1	September 2019	Draft for Client / Ecology Comment	PC/MS		
P01.2	September 2019	FINAL Draft for Client Comments	NH/MS		

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1. Introduction

Capita Real Estate and Infrastructure has been commissioned to produce this Landscape and Ecological Management Plan (LEMP) for the River Foss Flood Storage Area (FSA) scheme, on behalf of the Environment Agency.

This is a working document and will be updated at relevant stages of the project. It has been provided to Ryedale District Council and City of York Council in support of the planning application for the River Foss Flood Storage Area and will be updated during detailed design, if deemed to be required as a planning condition by the Local planning authorities.

Upon detailed design and construction, this LEMP should be reviewed and amended where and when it is deemed necessary to account for any changes in suitability. All changes are to be approved by the Environment Agency and any other key stakeholders as stipulated by the Environment Agency.

1.1 Scope/ purpose of LEMP

The purpose of this LEMP is to outline appropriate landscape and ecological management measures to ensure the successful establishment of proposed habitat creation and landscaping on site, thereby contributing towards the delivery of ecological and landscape mitigation measures as well as the achievement of net enhancement to biodiversity in accordance with the NPPF.

The LEMP shall therefore:

- Be submitted to the Local Planning Authorities as part of the planning application and approved in writing by the Local Planning Authorities prior to the commencement of the works;
- be carried out as approved and any subsequent variations shall first be agreed in writing by the Local Planning Authority.
- set out the management and maintenance of the proposed mitigation and enhancement measures, as recommended in the submitted Ecology Report.

Maintenance prescriptions have been formulated to maximise the ecological and landscape value of the proposed development. This Plan covers the management and maintenance of the following features on site:

- Existing trees within the flood storage area
- Newly planted trees
- Areas of created habitat
- Management of invasive species
- Silt accumulation in the created wetlands and siltation ponds

Details of maintenance regimes and management responsibilities that are not provided in at this time will be added to subsequent versions of the document, following any requirements or conditions imposed by the Local Planning Authorities.

The plan covers the first 5 years of maintenance, after which, the plan should be revised and updated, if required with new objectives and adjusted methods or action, following monitoring of the success of the measures proposed in this iteration of the LEMP. This should be undertaken in consultation with any relevant stakeholders, including any emerging residents groups.

The LEMP addresses landscape and ecological mitigation issues only. Note that there may be other conditions related to environmental matters, such as transport and others.

The mitigation and management of construction activities are not extensively covered in this document and have been captured in the Environmental Action Plan (EAP) produced for the scheme. This details specific requirements to be followed in order to protect identified receptors and manage the implementation of all identified mitigation measures prior to and during construction.

This LEMP should be read in conjunction with the Landscape Masterplan and the Landscape Specification for EA Landscape Works Implementation and Maintenance Works which will be completed with detailed design proposals.

1.2 Existing site conditions

The area is characterised by extensive flat and open arable fields along both banks of the River Foss, intersected by a network of drainage ditches and hedgerows delineating field boundaries. The open landscape of the site is also interrupted by occasional farmsteads and patches of woodland. The River Foss and the Black Dike are the two principal watercourses running across the site. Both of these are slow flowing with steep riverbanks showing visible signs of modification and straightening. The banks of both watercourses are covered with swards of species poor grassland and tall ruderal vegetation.

Scattered trees are also located along linear features across the site, such as hedgerows, Lilling Low Lane and Ings Lane. The large majority of these consist of mature ash and oak.

1.3 Proposed development/scheme

The proposed storage area which has been designed to store up to 1,000,000 m³ of excess flood water would occupy a total area of approximately 130 ha. This amount of excess water would result from a 1-in-100 year flood event including the effects of climate change up to the year 2080. Water will be retained by a 1.65 km long embankment incorporating a passive control structure as it crosses the River Foss restricting the river's maximum flow by means of a 1900 mm diameter orifice/opening. The embankment will incorporate an impermeable clay core along its entire length and will be built in two sections either side of the flow control structure. Starting 160m west of the River Foss the first section of embankment will begin at ground level and rise to meet the top of the flow control structure. From the east bank of the River Foss and flow control structure, the second section will run 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.

In order to prevent overtopping or failure of the control structure during extreme events, a 560 m long spillway (protected by voided concrete blocks) set at 18.80 m Above Ordnance Datum (AOD) has been included in the design of the embankment, allowing excess water to flow into the Black Dike. The crest level of the embankment will be 19.85 m AOD, allowing for 1050 mm freeboard above the spillway, and tie in to higher ground adjacent to Lilling Low Lane and on the right bank of the River Foss.

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 and other habitat to provide environmental mitigation:

- Two temporary borrow pits (T1 to the west of the Foss and T2 to the east) will be excavated, with the voids subsequently being backfilled with material that does not meet the required safety standards for use in the embankment. The land will then be fully reinstated to its previous level and land use;

- Borrow pit P1 on the west bank of the Foss 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 on the east bank of the Foss will be excavated, with some of this material used for fill material within the shoulders of the embankment and some material 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.

In addition, 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, introducing lower and higher berms to the channel profile;
- 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;
- A small area of hardstanding with access from Lilling Low Lane will be created at the eastern end of the embankment in order to provide a loading/unloading and parking area for grass cutting and other maintenance vehicles;
- 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 a trench filled with concrete inserted below the road edge;
- An asphalt access track will run along the crest and base 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 the farmer convenient access to land on both sides of the embankment;
- Lilling Lane Dike, a drainage ditch currently feeding into 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 west bank of the River Foss. Borrow pit P2 will be reconnected to the River Foss via a culvert covered with a flapped outfall;
- Both permanent borrow pits will be accompanied by silt ponds to capture excess silt before it feeds into the River Foss. The silt pond on borrow pit P1 will be located at the inlet of the drainage ditch into the borrow pit whereas the silt pond on borrow pit 2 will be located at the inlet/outlet to the River Foss;

- A new permanent access route to the control structure will be created to the west of the embankment avoiding any areas that would be flooded during a 1-in-100 year event. In order to achieve this, an existing access track running north to south will be improved with a new surface using crushed stone. Improvements will also be made to the existing track running northwards from the western edge of the embankment, on the west bank of the River Foss. A new 560 m track running east to west will be constructed, connecting the two aforementioned sections of track.

1.4 Summary of landscape and ecological proposals

The following landscaping and habitat creation measures have been integrated into the design of the scheme and shall be implemented during construction:

- Creation of large ponds/lakes in the location of the borrow pits
- Diversion of a land drain to feed into the wetland area
- Creation of a siltation pond at the inlet of the land drain
- Creation of marginal habitat consisting of reed beds and marshy grassland
- Creation of further habitats around the wetland areas, such as species-rich grassland and shrubs.
- Creation of species-rich grassland and marshy grassland along the left bank of the River Foss, between the wetland and the control structure.
- Tree planting in multiple locations throughout the site to compensate for loss of trees and shrubs and create landscape connectivity. Namely:
 - around the proposed wetlands
 - along either side of the embankment, on the right bank of the River Foss
 - Along the north of Ings Lane.
- Creation of marginal habitat in the Black Dyke diversion
- Creation of marginal habitat along the re-profiled River Foss

1.5 Proposed Management Plan

Tables 2.1, 2.2 and 2.3 on the following pages present the LEMP.

- detail extent and type of new planting and seed mixes. This should be appropriate native species of UK provenance.
- Control of non-native invasive species throughout the site at the earliest stage and maintain an ongoing programme of removal and control.
- General establishment in the early years, maintain weed/brush free zones for all the planting stations.
- Management of bankside vegetation,
- retaining a buffer zone that reaches the water's edge, and free from disturbance.
- Management of the areas are as follows, all areas of planting in Year 1 are to be managed by the Environment Agency, unless agreed otherwise. From Years 2-4 the site adjacent to the introduced waterbodies will be managed by the EA Ops Team, while the remaining land will be returned to the landowners. Two 9 m strips on one of the banks of the River Foss and the Black Dike are to be managed by the Internal Drainage Board (IDB), in

order to maintain their access for desilting of the River Foss and the Black Dike.

Table 1.1 York Flood Alleviation Scheme – Scheme Summary

Scheme Description	See description in section 1.3 above.
Site Description	<p>The proposed site of the development is located along the River Foss, approximately 2 km north of the village of Strensall and 10 km north of the centre of York.</p> <p>The area is characterised by extensive flat and open arable fields along both banks of the River Foss, intersected by a network of drainage ditches and hedgerows. The open landscape of the site is also interrupted by occasional farmsteads and fragments of woodland. The land is open, flat and predominantly arable. There are limited hedgerow trees and shrub vegetation to the large field boundaries. Numerous water features intersect the area, including the Foss and Black Dike, small streams and ephemeral ponds. There are few buildings within the area, mostly consisting of farm buildings and outhouses. Large scale pylons cross the area from east to west</p> <p>The site falls between two administrative authorities with most of the site falling within the jurisdiction of Ryedale District Council and the southern section of the site falls under the City of York Council</p>
Landscape and Visual Potential Issues	<ul style="list-style-type: none"> • Integration into the surrounding landscape • Provide interest for the user: local identity • Provide interest: planting along paths • Screening: long views • Screening: close views • Screen from adjacent residential properties • Enhancement/enrichment planting

<p>Designated Areas Adjacent to the Scheme</p>	<p>Strensall Common Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC), a European Protected Site, is located over 200 m to the south of the development. YWT Nature Reserve (Strensall Common Nature Reserve) located to the south.</p> <p>There are no listed buildings, conservation areas or designated areas within or adjacent to the flood storage area.</p> <p>A Public Right of Way (PRoW) runs along the north western boundary of the proposed burrow pits (North Yorkshire County Council, Centenary Way Route No 25.57/2/1 and City of York Council PRoW to the southern section of the site, route code 3/16/10. The presence (or potential presence) of the following protected and/or notable species: bird species (e.g. Red Listed species, farmland birds) bats, hedgehog, water vole, otter, brown hare, amphibians, depressed river mussel, fish (such as salmon) lampreys and eel.</p>
<p>Existing Habitat</p>	<p>The majority of the site consists of large expanses of arable land. Some field boundaries are marked by hedgerows and a network of ephemeral drainage ditches that contain standing or slow flowing water during wet months but remain dry during periods of lower precipitation.</p> <p>Blocks of deciduous woodland are located on the right bank of the River Foss and along the left bank of the Black Dike with larger areas of woodland associated with Strensall Common also present to the south of the site boundary. This is dominated by oak <i>Quercus spp.</i> and birch <i>Betula spp.</i></p> <p>Scattered trees are also located along the boundary features are early mature ash and oak.</p> <p>Numerous ponds are scattered across the landscape, within the arable fields, the majority of which remain wet throughout the year as they are groundwater fed. These ponds are surrounded by areas of scattered scrub tall ruderal vegetation. the north-west corner of the site is an area of improved pasture. This is heavily grazed by horses. Across the site there is a series of wet and dry ditches. These form a network between the agricultural fields and are prone to drying out.</p> <p>The River Foss and the Black Dike are two slow flowing watercourses on site with steep riverbanks. and visible signs of modification and straightening. The watercourses on site are lined with swards of species-poor grassland and tall ruderal vegetation.</p> <p>Other grassland areas on the site, including field margins are also dominated by species poor grassland. Some of these are also accompanied by dense areas of non-native invasive weeds such as Himalayan</p>

	<p>Balsam and Giant Hogweed, particularly along the bank of the River Foss. The hedgerows within the site are species-poor with associated trees and are dominated by elder and hawthorn.</p> <p>On site Habitats of Principal Importance within the survey areas include, hedgerows, ponds, ditches and dikes and mixed deciduous woodland.</p>
<p>Existing Habitat Summary</p>	<ul style="list-style-type: none"> • Extensive areas of arable land • Species-poor hedgerows along field boundaries • Small patches of broadleaved semi-natural woodland • Occasional scattered broadleaved and coniferous trees and scrub • Improved grassland • Species-Poor Semi-Improved grassland • Ponds surrounded by tall ruderals • Running Water • Species-poor hedgerows • Structures – occasional bridges crossing the River Foss and culverted section along the Black Dike • Structures- occasional farm buildings
<p>Summary of Scheme Works Operations Required</p>	<ul style="list-style-type: none"> • Cutting Grass: wildflower and conservation area • Native Woodland Belt mix to tree and shrub areas • Grassland management • Tree works • Hedgerow maintenance • Treatment of arisings • Rabbit protection • Irrigation • Firming in plants • Infill /gapping up • Irrigation of trees • Pruning of dead/diseased and cleaning through plots

- Formative pruning of shrubs
- Removing and replacement of poorly performing/ dead specimens
- Repair post and rail fence
- Rabbit spiral guard: Installation and inspection
- Tree/shrub shelter installation and inspection
- Rabbit guard removal
- Vegetation control- grass plots-brambles, gorse, broom by herbicide
- Vegetation control – noxious pernicious weeds (Injurious Weeds Act, Wildlife and Countryside Act)
- Vegetation control – planting plot, by strimming cutting or by herbicide
- Vegetation control: along a hedge
- Vegetation control: areas around trees
- Grub out tree or shrub stumps
- Formative pruning of trees
- Tree felling
- Plant feathered trees
- Plant shrubs
- Plant hedge plants
- Plant transplants (tree and shrub whips)
- Plant marginal aquatics
- Plant wildflowers – seeding
- Management of silt build-up and disposal

Table 1.2: Ecological Management Measures

No.	Objective	Action	Timing	Notes/further action	Completed? (initial/date)	Signed off (as applicable) <ul style="list-style-type: none"> • Council officer • Qualified ecologist • Other?
E1: Vegetation						
E1.1	Ensure successful establishment of reedbed habitat	Plant in appropriate season	May-June	<p>Establishment of new sites must be carefully considered in order to accommodate effective management methods.</p> <p>Rotational management will be required to sustain healthy habitat. Management should adopt methods in accordance with guidance such as: RSPB Bringing Reedbeds to Life; Wetland Restoration Manual (Wildlife Trusts, 2001), Wet grassland guide (RSPB, 1997).</p>		
E1.2	Ensure successful establishment of trees on site	Plant in appropriate season	Oct-March	Watering programme should be monitored to ensure that at times of water shortage (e.g. drought) sufficient water is applied to meet the conditions.		

No.	Objective	Action	Timing	Notes/further action	Completed? (initial/date)	Signed off (as applicable) • Council officer • Qualified ecologist • Other?
				<p>Inspect stakes and ties to trees, twice yearly or after severe weather.</p> <p>Remove stakes and ties as soon as trees are self-supporting.</p> <p>Monitor and replace failed planting with new plants between October and March.</p>		
E1.3	Ensure successful establishment of meadows/grasslands	Plant in appropriate season	May-June	<p>In the first year, long grass meadow areas should be managed more intensively to prevent the intrusion of invasive ground flora and allow a diverse flora to develop.</p> <p>The first cut should occur when the grass reaches approximately 100mm, down 30mm, followed by subsequent cuts every 6 weeks down to 50mm</p>		

No.	Objective	Action	Timing	Notes/further action	Completed? (initial/date)	Signed off (as applicable) • Council officer • Qualified ecologist • Other?
				<p>throughout the first growing season.</p> <p>Meadow areas from year 2 onwards will be maintained with a biannual cut in May/June and in September.</p> <p>After the cut from year 2 the arisings should be left for one week then raked off. This will allow seeds to fall and maintain species diversity.</p>		
	Ensure successful establishment wetlands	Plant in appropriate season	Planting new stock- August/ September	<p>Visually inspect inlet and outlets monthly for blockages & damage and remove blockages and repair as required. Visually inspect water levels monthly within each bed.</p> <p>Strim around the edges of the wetland cells but leave a 1 m margin to</p>		

No.	Objective	Action	Timing	Notes/further action	Completed? (initial/date)	Signed off (as applicable) <ul style="list-style-type: none"> • Council officer • Qualified ecologist • Other?
				<p>provide edge wildlife habitat, since these areas can support a wide range of species.</p> <p>Remove sediment every 1-5 years from settling pool and main wetland area</p> <p>Cut back vegetation around inflow and outflow pipes twice yearly.</p>		
E2: Water Voles						
E2.1	Ensure that water vole mitigation measures are successfully delivered.	<p>Pre-commencement survey to establish location of active water voles and habitats and the most appropriate mitigation strategy.</p> <p>Required mitigation measures and management regime.</p>	<p>Prior to site clearance and commencement of construction works</p> <p>Apr-Jun and Jun-Sept surveys</p>	<p>Water voles may be required to be displaced or translocation which require specific timings and licences and mitigation/enhancement of habitats prior to these exercises.</p> <p>River banks and ditches should be managed in line with the Water Vole</p>		

No.	Objective	Action	Timing	Notes/further action	Completed? (initial/date)	Signed off (as applicable) <ul style="list-style-type: none"> • Council officer • Qualified ecologist • Other?
				Conservation Handbook (currently 3 rd edition), The Mammal Society Guidance Series: The Water Vole Mitigation Handbook: (Dean, Gow, et al. 2016)		
E3: Bats						
E3.1	Ensure that trees and shrubs are maintained to provide foraging resources for bats	Plant trees in appropriate season	Oct-March	<p>Watering programme should be monitored to ensure that at times of water shortage (e.g. drought) sufficient water is applied to meet the conditions.</p> <p>Inspect stakes and ties to trees, twice yearly or after severe weather.</p> <p>Remove stakes and ties as soon as trees are self-supporting.</p> <p>Monitor and replace failed planting with new plants between October and March.</p>		

No.	Objective	Action	Timing	Notes/further action	Completed? (initial/date)	Signed off (as applicable) <ul style="list-style-type: none"> • Council officer • Qualified ecologist • Other?
E4: Otters						
E4.1	Ensure that otter mitigation measures are successfully delivered	<p>Pre-commencement survey to establish location of active signs of otters or holts</p> <p>If otter holts are active and likely to be damaged as a result of the scheme a EPS Licence may be required</p> <p>Install otter holts for breeding and lying-up/resting sites – this will be necessary mitigation if pre-commencement surveys find active breeding holts</p>	<p>Prior to site clearance and commencement of construction works.</p> <p>Prior to disturbance or damage to existing holts</p>	River banks and ditches should be managed in line with the Otter Breeding Sites Conservation and Management Conserving Natura 2000 Rivers Conservation Techniques Series No.5; 2003. The measures for managing water vole will also benefit foraging otters.		
E5: Wintering and Breeding / Nesting						
E5.1	Avoid disturbance to nesting birds and Schedule 1 birds	Undertake site clearance outside of bird nesting period Mar-Aug inclusive.	Sept-Feb			

No.	Objective	Action	Timing	Notes/further action	Completed? (initial/date)	Signed off (as applicable) <ul style="list-style-type: none"> • Council officer • Qualified ecologist • Other?
		Pre-commencement checks for active nests if works undertaken in Mar-Aug period or if Schedule 1 birds likely to be present	Mar-Aug			
E6: Reptiles						
E6.1	Avoid intentional harm or killing of reptile species	Undertake precautionary methods of working to avoid intentional injury to reptiles – i.e. phased height cutting of grassland and scrub to avoid harm if reptiles sheltering in habitats	All year round			
		Avoid disturbing vegetation and sheltering places during Oct-Mar when reptiles will be dormant and at more risk of harm	Oct-Mar			
E7: Non-native Invasive species						
E7.1	Prevent establishment and spread of non-native invasive species on site.	Treat areas of non-native invasive species prior to commencement of site clearance.	Prior to site clearance and earthworks	Where species are not widespread spot treatment with appropriate chemicals may be sufficient.		

No.	Objective	Action	Timing	Notes/further action	Completed? (initial/date)	Signed off (as applicable) • Council officer • Qualified ecologist • Other?
				Specialist sub-contractors and methods may be required.		

Table 1.3 Landscape Management Measures

	Location / Element	Works Description	YR1	YR2	YR3	YR4	YR5	Further Detail	Comments
General Activities									
	Entire site	Through visual inspection, assess the health of all the planting	✓	✓	✓	✓	✓		To include disease check
	Entire site	Litter pick and remove woody debris	✓	✓	✓	✓	✓	Focus attention on access tracks and other areas of hard standing such as the parking area.	
	Flood Storage Area	Undertake arboricultural survey					✓	Survey to be undertaken at the end of the plan period and to focus particularly on assessing the impact of the flooding on the existing and newly planted tree species in the flood storage area.	
	Entire site	Landscape Architects Inspection and Report (Revise LEMP)					✓	Site inspection and report to assess the planting plot conditions and to see if there are any further management recommendations required	To be carried out by Landscape Architect and an ecologist/EA biodiversity officer. To access the planting plot conditions and to see if there are any further management recommendations required.
River Channel Management- the River Foss and Black Dike currently under the management of the Foss Internal Drainage Board									
	Channel of the River Foss and the Black Dike	No management required by the EA as this is under IDB management – it is anticipated that the frequency of desilting					✓		

	Location / Element	Works Description	YR1	YR2	YR3	YR4	YR5	Further Detail	Comments
		activities will be reduced by the scheme. It is recommended that the IDB monitor and review the situation at the end of the maintenance period and adapt their internal management plans accordingly.							
Bankside Maintenance- River Foss and Black Dike currently under the management of the Foss Internal Drainage Board									
	Channel of the River Foss and the Black Dike	No management required by the EA as this is under IDB management – It is recommended that the IDB monitor vegetation growth in the channel and review their management practices accordingly.	✓	✓	✓	✓	✓		
Existing Trees									
	All existing trees within storage area	Inspect and report condition of existing trees on site as part of the aforementioned arboricultural survey.					✓	End of maintenance period	Check trees for dead wood and disease. Evaluate response of the trees to flooding
	All existing trees along Ings Lane	Inspect and report condition of any retained trees interacting with the raised section of Ings lane to		✓			✓	To be checked part way through and at the end of the maintenance period.	

	Location / Element	Works Description	YR1	YR2	YR3	YR4	YR5	Further Detail	Comments
		monitor their response to the development.							
Planted Trees									
	All trees planted within the scheme area	Pruning: Cut back any damaged plant material and remove from site					✓	End of maintenance period	To be pruned to remove dead or dying and diseased material to promote healthy growth and natural shape
	All trees planted within the scheme area	Inspect and report condition of planted trees on site as part of the aforementioned arboricultural survey.					✓	End of maintenance period	Check trees for dead wood and disease. Evaluate response of the trees to flooding
Existing Hedgerows									
	All existing hedgerows within site area	Inspect and report condition of any retained section of hedgerow interacting with the raised section of Ings lane to monitor their response to t development.					✓	End of maintenance period	
	All existing hedgerows within site area and as indicated on drawing	Manage a 3 year rotation on hedges within field margins fencing			✓			Cut in February to allow over wintering birds to feed on berries	

	Location / Element	Works Description	YR1	YR2	YR3	YR4	YR5	Further Detail	Comments
New Hedgerow Maintenance									
		Hedge Trim: two sides and top following 2 years of growth		✓		✓		cut in February to allow over wintering birds to feed on berries	Plot to be maintained as a hedge.
Marginal and Emergent Aquatics + Invasive Species									
	Along the channels of the River Foss and the Black Dike	Remove invasive non-native species (e.g. Himalayan Balsam or Giant Hogweed) using appropriate disposal methods	✓	✓	✓	✓	✓	First check: Early June – before it sets seed. Second check: September.	Deposit arisings in situ for 24hrs to allow invertebrates to return to water before relocating to areas of low conservation value as instructed by the CA.
Species Rich Grassland									
	Across the site	Mow newly sown meadows regularly throughout the first year of establishment to a nominal height of 40-60mm, removing cuttings if dense. Timing to be determined by ecologist.	✓						
	Across the site	Management once established:		✓	✓	✓	✓		Monitor to see if maintenance required of unwanted perennial weeds.

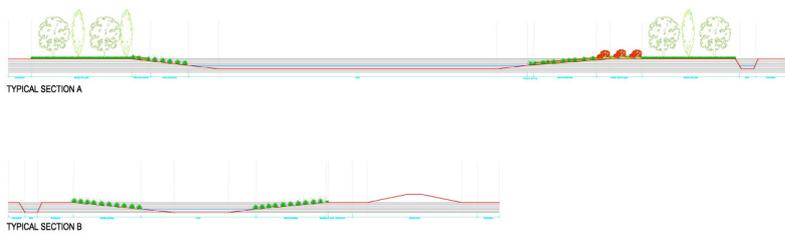
Location / Element	Works Description	YR1	YR2	YR3	YR4	YR5	Further Detail	Comments
	<p>Once established tussocky grassland requires minimal maintenance.</p> <p>Unwanted perennial weeds (docks, thistles) may need control by occasional spot treatment with a herbicide. To control scrub and bramble development, tussocky areas may need cutting every 2-3 years between October and February. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.</p>							
Marsh Grassland								
	It is recommended that this is cut a little each year between October – February (to avoid the bird breeding season)subject to ecologist confirmation.	✓	✓	✓	✓	✓		
Embankment								
Embankment	Grass on the embankments will be cut to maintain a	✓	✓	✓	✓	✓	During the growing season to be cut as and when	

	Location / Element	Works Description	YR1	YR2	YR3	YR4	YR5	Further Detail	Comments
		dense sward typical between 75 -150mm.						required to maintain height of between 75-150mm	
	Embankment	Grass on the embankment shall be inspected to identify whether any INNS have established. If identified, these shall be removed.	✓	✓	✓	✓	✓		It is recommended that this action is carried out during grass cutting on the embankment.
Natural Regeneration Shrubs - Rewilding									
		Areas that have been allowed to regenerate naturally, will be allowed to regenerate naturally and will require minimum maintenance apart from the removal of noxious weeds.	✓	✓	✓	✓	✓		
Hard Landscape Features									
	Across the site	Inspect and repair post and rail fencing	✓	✓	✓	✓	✓		
	Across the site	Inspect and repair of bat/bird boxes where possible. Replacements might be a better option if boxes are not been used.	✓	✓	✓	✓	✓	Have regard for protected species (i.e. avoid bird nesting season). Bat boxes to be inspected/repared/replaced only by bat-licensed Ecologist in accordance with NE bat license	

Location / Element	Works Description	YR1	YR2	YR3	YR4	YR5	Further Detail	Comments
							requirements and with the landowner agreement.	
Soil Management Plan and Soil Testing								
	An element of the flood bund in the creation of several areas of wetland. The soil management plan will describe the result obtained from a targeted soil investigation undertaken in order to identify how the nutrient substrate material can be used during the scheme construction.	✓	✓	✓	✓	✓		soil testing will be undertaken pre construction as part of detailed design to ensure conditions are appropriate for the species to be sown or planted.
Environmentally Friendly Farming Practices								
	Extending grass margin strips at arable field edges results in farming operations, particularly pesticide and fertilizer applications. This will provide some protections from drift	✓	✓	✓	✓	✓		Improved habitat enhancement and management.
	Large grass margins can also act as buffer strips near the watercourses. Marginal vegetation will act as a physical buffer to drift and to	✓	✓	✓	✓	✓		Improved habitat enhancement and management.

	Location / Element	Works Description	YR1	YR2	YR3	YR4	YR5	Further Detail	Comments
		surface movement of water from the fields. This will help to reduce the movement of nitrogen, phosphorous, pesticide and silt into the surface water.							
Agroecology – Hedgerow cutting regimes									
		Reduce the frequency of hedgerow cutting: <ul style="list-style-type: none"> Hedgerow species only fruit and flower on wood that is two years old. This can also lead to an increased production of flowers and therefore more insect and pollinators. 			✓				Improved habitat enhancement and management
Borrow Pits / Pond Maintenance									
	Inlets to the created pond and silting pond	Inlets and outlets to be inspected and maintained on a regular basis to identify and prevent blockages.	✓	✓	✓	✓	✓		After a large flood event, the borrow pits and secondary channels (tributary) to be inspected as soon as possible to identify and remove blockages

Location / Element	Works Description	YR1	YR2	YR3	YR4	YR5	Further Detail	Comments
Created ponds and associated inlets	The reed beds lining the edges of the created wetlands should be de-silted after 5 years or straight after a large-scale flood events.					✓		It is recommended that the created wetland areas and associated ditch be inspected as soon as possible after large flood events to assess the extent of sediment deposition and any requirement for removal.
Silting pond	The reed beds in the silting ponds should be desilted after 5 years or straight after a large-scale flood events.					✓		It is recommended that the silting pond be inspected as soon as possible after large flood events to assess the extent of sediment deposition and any requirement for removal.
Created ponds and associated silting ponds inlets	Monitoring and evaluation of deposition rates in the ponds and silting ponds					✓	Monitoring and evaluation of deposition rates in the ponds and silting ponds will ensure that management and maintenance measures are altered, if necessary.	
Control of invasive non-native species		✓	✓	✓	✓	✓	Monitor for occurrence and instigate appropriate control strategy if found.	Regular annual monitoring is required and control strategies may need to be coordinated as part of a wider catchment strategy programme.



- Key**
- Planning Red Line Boundary
- Existing Landscape Features**
- River Foss & Tributaries
 - Existing waterbodies
 - Existing Open spaces
 - Trees / vegetation
 - Existing trees to be removed
 - River Foss Reprofitting Works
 - Footpaths
- Proposed Landscape Works**
- Hard surface - tarmac/crushed stone
 - Fence/ho
- Environmental Mitigation**
- Existing hedge line. See annotations for details
 - Proposed hedge line to be planted using native species.
 - Proposed feathered tree planting to compensate for tree loss across the project.
- Species rich grassland**
- Shrub - natural regeneration
 - Meadow planting
 - Marsh Grassland
 - Reed terraced
 - Wetland Grass Mix
 - Wetland
 - Enbankment
 - Road / footpath to be raised
 - Drain Pipe Inlet or outlet connection
- Notes**
- All proposed alignments up to date as of 08/12/2019.
 - All proposals are to be subject to utility surveys

The drawings are prepared in accordance with the British Standards Institution (BSI) standards and are intended to be used as a guide only. The client is responsible for ensuring that the drawings are used in accordance with the relevant standards and regulations.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

CONSTRUCTION

MAINTENANCE / CLEANING

DECOMMISSIONING / DEMOLITION

REFERENCE DRAWINGS AND DOCUMENTS:

This drawing is to be read in conjunction with the following documents and drawings:

- EN/00000001/C-CAA-00-00-OR-L-C3700_38
- EN/00000001/C-CAA-00-00-OR-L-C3700_37
- EN/00000001/C-CAA-00-00-OR-L-C3700_40
- EN/00000001/C-CAA-00-00-OR-L-C3700_41
- EN/00000001/C-CAA-00-00-OR-L-C3700_42
- EN/00000001/C-CAA-00-00-OR-L-C3700_43

GENERAL NOTE:

After engineering soils have been removed from the adjacent bank of the River Foss the borrow of soil will be modified and shaped to improve and integrate better into the landscape. The final levels and profile of the borrow pits will depend on the amount of soil removed to create the bank. This will only be known after construction begins.

The depth of the water bodies would be determined by the final construction design. The water levels would be linked to the surrounding groundwater levels and average water levels of the River Foss. Seasonal variations are likely occur and this will also have impact on the levels to Borrow pits from the River Foss. All water levels will be used as the maximum height of the river restriction.

NO.	TC	RT	RT/IN	RT/IN/H	Date
1					08/12/19
2					08/12/19
3					08/12/19

Purpose of Issue
Planning Application

Classification
Public

Client

Project
RIVER FOSS FLOOD STORAGE AREA

Drawing
LANDSCAPE CROSS SECTIONS

Scale	Drawn	Checked	Approved
1:500	TC	RT/IN	RT/IN/H

Project No.
CS202480

Date
02/12/2019

Drawing Issued By
 EN/00000001/C-CAA-00-00-OR-L-C3700_42

Project No.
EN/00000001/C-CAA-00-00-OR-L-C3700_42

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Date valid 12/11/19

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Non-Technical Summary of the Environmental Statement

River Foss Flood Storage Area

York Flood Alleviation Scheme

November 2019

We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

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Quality Assurance

Non-Technical Summary. Foss Flood Storage Area

Approvals

Name	Signature	Title	Date	Version
Matt Chapman	M.Chapman	Senior Environmental Project Manager	07/11/2019	

EIA Quality Mark



This Environmental Statement, and the Environmental Impact Assessment (EIA) carried out to identify the significant environmental effects of the proposed development, was undertaken in line with the EIA Quality Mark Commitments.

The EIA Quality Mark is a voluntary scheme, operated by the Institute of Environmental Management and Assessment (IEMA), through which EIA activity is independently reviewed, on an annual basis, to ensure it delivers excellence in the following areas:

- EIA Management
- EIA Team Capabilities
- EIA Regulatory Compliance
- EIA Context & Influence
- EIA Content
- EIA Presentation
- Improving EIA practice

To find out more about the EIA Quality Mark please visit:
www.iema.net/qmark

Non-Technical Summary

This document is the Non-Technical Summary (NTS) of the Environmental Statement for the York Flood Alleviation Scheme, Foss Upstream Storage Area.

This document includes:

- An overview of the EIA process, its objectives and the scope of the assessment
- A description of the Scheme, including details of site location, why the project is needed and what is proposed
- A summary of the residual effects identified through the EIA process and reported under topic headings covering different aspects of the environment.

1. INTRODUCTION

1.1. Overview

The Foss Flood Storage Area is part of the Environment Agency's York Flood Alleviation Scheme (FAS). We are applying for permission to build a new flood storage area on the River Foss north of Strensall. We will build a reservoir to store water in the event of a flood. The reservoir will not store water under normal weather conditions, but will retain water in high flows to reduce the risk of flooding downstream in Strensall and York.

The land is currently in agricultural use, and most will continue to be farmed following construction.

We have completed an Environmental Impact Assessment (EIA) for these proposals. The EIA helps us to understand the potential environmental impacts on the surrounding environment and local residents. Impacts are considered during construction and during operation when the flood storage area is completed.

1.2. What is an Environmental Impact Assessment?

The Environmental Impact Assessment (EIA) process identifies the key environmental impacts of a development and suggests ways that these impacts can be reduced or avoided. It is required by law for large developments or those with the potential to cause large, combined or multiple impacts. Ryedale District Council and York City Council have considered the draft proposals and decided that an EIA was required. This is primarily because of the potential impacts of the scheme on the protected habitats of the nature reserve at Strensall Common.

The findings from this assessment are reported in a document called an Environmental Statement (ES), which will be made public and available for anyone to review.

1.3. What are the objectives of the EIA?

The Environmental Impact Assessment aims to:

- Identify all the potential impacts of the proposed development
- To assess the significance of those impacts
- To challenge the developer to identify alternative and better ways of constructing or operating the development to avoid or reduce impacts
- To find opportunities to fix (remediate) or compensate for any remaining impacts

1.4. How is the significance of any impact assessed?

All of the potential impacts are given a rating on a 5 point scale from not-significant through from slight to moderate or substantial up to very substantial. The rating depends upon the receptor (the thing that is impacted), and the nature of the effect.

The significance of an impact is illustrated in in figure 1 below:

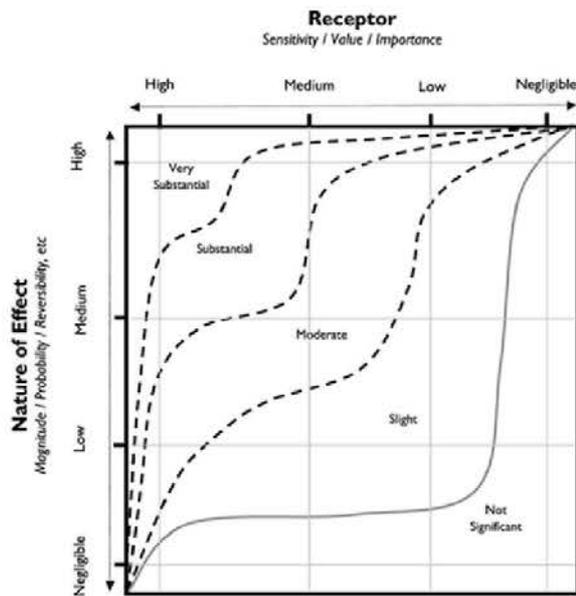


Figure 1 is a graph showing the significance of an effect depending upon the sensitivity of the receptor (the thing that is affected) and the nature of the effect (its magnitude, probability and whether it is permanent or reversible).

1.5. What is a Non-Technical Summary?

The full results of the EIA (baseline information, survey information and technical assessments) are available in the Environmental Statement (ES).

The findings of the ES are then summarised and presented in this Non-Technical Summary. This document is presented as a series of questions and answers about the construction and operation of the proposed flood storage area. Where potential problems are identified, we will explain how we will address them.

2. THE PROPOSED DEVELOPMENT

2.1. What is being built and how will it work?

The Environment Agency is proposing to construct a reservoir to store flood water if water levels in the river Foss become high enough to potentially cause damage downstream in Strensall and York. The reservoir will only fill with water in storm events. It is estimated that this will occur approximately once every 2 years.

The reservoir will have no active moving parts. When flowing normally, water in the Foss will pass without obstruction through an "orifice plate" which is a metal plate with a specific sized hole. During high flows, the river will fill the orifice and water will be held back in the reservoir. As flood waters recede after the storm passes, the stored water will discharge harmlessly back into the Foss through the orifice plate.

The reservoir embankment will be constructed from clay. The majority of the clay will come from pits within the flood storage area. After construction these pits will be developed into ponds, connected to the River Foss to provide valuable wetland habitats to support wildlife.

In addition to constructing the reservoir, some road works will be required. In order to maintain access to all the houses surrounding the flood storage area in the event of a flood, we will raise Ings Lane by around 1 meter along a 200 meter stretch.

Also, a stretch of Lilling Low Lane could be covered with water in the event of a very large flood. This road would become impassable in such an event, but there are alternative routes available. The Environment Agency will reinforce the edges of the road to ensure its structure is not damaged by water in the event of a flood.

Figure 2 attached to the back of this document is a diagram showing all the construction work that will be done, including some cross-sections through the embankment.

2.2. Why is this needed and what benefits will it bring?

During the December 2015 floods, the City of York saw some of the highest river levels on record, and significant impacts were experienced by the local community. York has an extensive history of flooding, dating back to 1263. Recent significant flood events in York have occurred in 1947, 1978, 1982, 2000 and 2015. The overall strategic aims of the Foss FSA are:

- to reduce the risk of flooding to properties and people
- to strengthen the city's ability to cope with flooding by reducing the risk of flooding to infrastructure, transport links, utilities and businesses
- to work collaboratively with other organisations to make an effective contribution to sustainable development and, where possible, create opportunities for economic growth.

The flood storage area will provide a better level of flood protection to approximately 490 properties downstream in Strensall and York.

2.3. Where will it be built?

The storage area will be built north-west of Strensall and north of the Haxby-Walbutt's Water Treatment facility. It will be west of Flaxton and south of West Lilling.

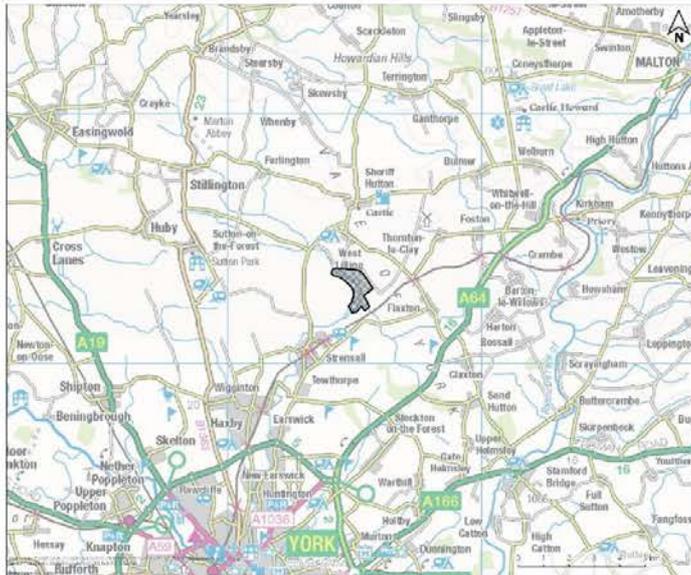


Figure 3. A map showing the location of the proposed flood storage area.

2.4. Why is it being built here?

The Environment Agency developed a long-list of options for reducing the risk of flooding for properties in York. One of the options considered included the construction of flood walls, in the northern parts of the city neighbouring the Foss. In such a densely settled urban area, the construction would have caused a huge amount of disruption for a significant period of time and the walls would have separated the river from people who enjoy it and wildlife that depends upon it.

The flood storage area was considered to be a less disruptive and less intrusive option, offering better value for money. It is also better for the environment by helping to connect the wildlife to the river on which it depends.

We selected this location because it offers the opportunity to store the required amount of water on open farmland.

2.5. When will it be built?

We will start preparing the site for construction after we get planning permission. If all goes well, we hope this will be in early 2020. The main construction phase will be completed in 2021 but additional landscaping work will be required afterwards. Landscaping will make sure that the grass has established correctly along the embankment and that trees, shrubs and other planted material has become established.

2.6. What will it look like?

The reservoir will consist of an embankment 1.65 kilometres long and 3.85 metres high at its highest point. It will be adjacent to the river and have a concrete control structure containing the orifice which controls the flows. The embankment will reduce in height as it tapers into higher ground in the landscape surrounding the river. The average height of the embankment will be 2.5 metres.

The embankment will be covered with grass and will be fenced off so it will not be accessible to the public. It will be visible from Lilling Low Lane to the east of the Foss and

from the Foss Walk, Centenary Way and Ebor Way footpaths, and a small number of houses and farms nearby. Figure 2 shows the main features of the proposals.

Part of the southern section of the embankment has been designed to act as an emergency spillway, to allow water to spill out from the reservoir if it becomes full following extreme rainstorm. This section is made from reinforced concrete, but constructed with regular holes that will allow grass to grow through. This means that from a distance, it will just look like grass

2.7. Will other water courses be affected?

The embankment starts 174 metres upstream of the point where the Foss joins with Black Dike. Flows from Black Dike will not be captured in the storage area. Land drains in the storage area will be diverted into ponds and will flow into the Foss.

Some land drains immediately outside of the flood storage area may be fuller for longer, but only in extreme flood events in which they would be overwhelmed anyway. Watercourses above the flood storage area will not be affected by the storage area.

2.8. Who has been told about this development?

The Environment Agency has consulted with a wide range of stakeholders in developing these plans.

Ryedale District Council, City of York Council and North Yorkshire County Council all responded to an initial consultation on the proposals in 2018.

The River Foss in the area where the reservoir will be built is classified as an "Ordinary Watercourse" and is the responsibility of the Foss Internal Drainage Board (IDB), a member of York Consortium of Drainage Boards. The IDB responded to the consultation with specific requirements to incorporate into the final design.

We have organised public drop-in events in Strensall, Sheriff Hutton and Huntington Road in York. A first round of public drop-ins were held in December 2018 to get feedback on early designs for the scheme. A second round of drop-ins were held in October and November 2019 to present a more developed design.

Information about the project has also been available from the Environment Agency's drop-in centre at The York Flood Hub on Wellington Row in the centre of York.

We have held meetings with Parish Councils at Lillings Ambo, Strensall, Towthorpe and Flaxton to explain the aims of the scheme and how it will work, and to address concerns and incorporate changes where possible into the design.

Natural England, Strensall Camp, and Yorkshire Wildlife Trust have all been consulted on the proposals and the potential impacts of the scheme on the protected habitats of the nature reserve at Strensall Common.

A Statement of Community Involvement has been included with the planning application. This gives details of all the responses from stakeholders and how we have responded to these or addressed the issues raised in the design of the scheme.

3. ENVIRONMENTAL IMPACTS

3.1. What is the existing environment like in and around the site?

The proposed development crosses the river Foss, with embankments and the flood storage area extending up both banks into neighbouring fields where they link into higher ground. The area is predominantly agricultural but contains the river Foss and the drainage channel of Black Dike which offer river and bank-side habitats. There are small areas of woodland and a number of small ponds nearby and Strensall Common is located approximately 180 metres to the south east of the proposed development.

3.2. What are the main issues examined in the Environmental Statement?

The Environmental Statement has been prepared to focus on the main aspects of the environment that could be affected by these proposals. These impacts are described in the following environmental topics:

- Biodiversity and Nature Conservation
- Minerals and material resources
- Water Environment and Flood Risk
- Cumulative effects

3.3. How could the proposals affect biodiversity and nature conservation?

We have tried to avoid or reduce impacts to wildlife wherever possible. Where impacts are unavoidable we have planned the development to enable wildlife to recover and thrive in future.

Strensall Common is designated as a Site of Special Scientific Interest (SSSI) and internationally recognised as a Special Area of Conservation (SAC) for its ecological value. It provides a mosaic of wet and dry heathland which supports wildlife including several rare moths and bugs.

Recent surveys and historic records have shown that otter and water vole have populations living in Black Dike and the River Foss. Both species are protected by law and it is an offence to knowingly disturb them or key parts of their habitat.

The populations can fluctuate dramatically so further surveys will be conducted before construction starts and measures will be put in place to protect them, including:

- Moving any resident populations. If required, this would require a licence from Natural England to ensure it is done correctly.
- Cutting back vegetation to prevent voles from settling in working areas.

Bats have been considered but surveys have not found resident populations, although a single tree in the construction area has potential to provide a suitable site for roosting but this will not be affected by the construction.

Surveys have been carried out for reptiles and amphibians including Great Crested Newts. There are no Great Crested Newts currently living in the construction area but additional checks will be carried out before construction starts.

The site supports a thriving population of skylarks and other birds. We will do pre-construction checks to ensure that no existing nests will be disturbed and we will manage vegetation throughout the construction period to discourage birds from nesting in areas where they could be harmed.

A length of hedgerow and a number of trees will need to be removed in order to carry out the necessary road raising. This work will be done outside of the nesting season. We will replace any hedgerows lost during construction and position new hedgerows to improve the connections between important areas of habitat on the site and in the surrounding landscape

The line of the embankment has been designed to minimise the loss of woodland and ponds in the area.

We will dig the clay out of pits called "borrow pits." Any clay or soil that we can't use will be put back in to partly fill the pits but they will still be deep enough to become ponds. The ponds will be shaped and planted to support wildlife including wading birds. Reeds will be planted around the ponds to help improve the quality of the water entering the river Foss.

Once we start digging for clay, the pits will probably fill with water which we will need to be pump out. We won't pump this water straight into the river, because it will contain a lot of sediment. We will create some additional ponds to allow sediment to fall out of the water before it enters the Foss.

3.4. Are there any general precautions you will take to protect or support wildlife?

We will use the following precautions in order to protect wildlife:

- Scattered trees will be planted to create a network for bats and provide nesting habitats for birds.
- We will develop a plan to manage the site to support existing habitats and to offer a home to other rare species of wildlife.
- We have found some invasive non-native species. These can be harmful to the natural wildlife from the UK so we will work to kill and clear these from the site during the first 5 years following construction.
- We will use of pollution prevention and control measures during construction to prevent spills of fuel and oil from machines or other chemicals into the environment.

3.5. In general will this development be good for wildlife?

We believe that the answer to this question is yes.

The River Foss has been changed by humans over centuries, straightening it and narrowing it in order to improve drainage for agriculture. The river is also polluted with fertilisers and other chemicals used in farming, and some farming methods allow rainwater to wash soil into the river. All this soil and fertiliser means that a lot of wildlife that you might expect to find in this river is either not there, or is struggling to survive.

As land has been cleared and fields made bigger for modern farming machines, the space and habitats available to support wildlife has been reduced and separated.

This project will not fix these problems completely but it is an important step towards improving them to help wildlife in the Foss and the surrounding area.

3.6. What impact will these proposals have on local mineral reserves?

We need approximately 115,000 cubic meters of clay to construct the embankment of the flood storage area. In order to ensure the reservoir meets current safety standards for reservoirs, it is important that the clay used is structurally sound, and free from contaminants such as sand and will provide a barrier to the water that could be held.

We are fortunate that clay of the correct standard is available from within the storage area. The particular clay that we need arrived on the site during a previous Ice Age. It is buried below layers of soil and clay that have been brought to the site by rivers and through centuries of vegetation growth following the Ice Ages.

We have selected places on the site where we know that the clay is of good quality and relatively close to the surface so we can extract it more easily. Once the good clay has been dug out, it will be checked and stored, before being built into the embankment. Soil is also required to make a top layer to cover the clay core of the embankment, in order to grow a layer of grass. This will help to bind the surface together and prevent the embankment from being washed away by falling rain or drying out and cracking in the summer sun.

The clay that we want to use has been used historically for brick production, and has been surveyed and protected for that use. We now use many fewer bricks for construction but the protections over the clay still remain. North Yorkshire County Council is the local authority which manages the protection of clay and other important minerals. They will assess this application and how we plan to repair the site after we have removed the clay we need.

The clay we need for this development is only a small proportion of the clay resource available in the surrounding land, so we do not consider that removal and use of this clay is a significant negative impact.

Other important minerals including sand and gravel are also present, buried in the ground across the site. Some of these will become unavailable for future extraction if they are under the embankment areas dedicated to supporting wildlife.

The clay pits are called "borrow pits" because we will take out the clay we need but will partially re-fill the pits with any unsuitable material. The remaining pits will become ponds, connected to the river Foss. These will create new habitat for fish and other species that live in water, and for wading birds. These ponds will stay wet all year round but the depth of water will change.

We may need to use some clay from a nearby quarry in order to start the construction work early as it may take some time to prepare the borrow pits.

3.7. How will these proposals affect the water environment and the risk of flooding?

Rivers in the UK are protected by the Water Environment legislation and also receive international protection. The River Foss and Black Dike both receive this protection. They have specific objectives to improve the river ecology.

By installing the concrete control structure and changing the way the river behaves in flood conditions we could be making the river ecology worse. We will also be diverting a section of Black Dike and installing hard surfaces to ensure the river does not undermine the reservoir embankment. This could also harm the river ecology.

However, the two rivers are not currently in a healthy condition so there are other things we can do to improve them through this scheme. Every few years, machines are used to dig out the soft, silty bed of the river. This has removed the gravel that normally provides good habitat for fish, it has made the river banks very steep so they can collapse into the river, and it slows down flows in the river causing more silt to build up so more digging is required every few years.

We will change the profile of the rivers in and close to the Flood Storage Area to be more like a natural river, eroding in some areas and depositing in others and it will continue to change and improve naturally over time.

In order to comply with the legislation and to improve the condition of the river overall, we will do the following:

- We will create ponds to capture and reduce the amount of soil and sediment entering the river after it rains.
- We will plant reed-beds in the ponds that reduce the amount of fertiliser and other chemicals that can run off farm-land and into the river.
- We will change the banks of the rivers and how they are managed, making the banks less steep but the bed of the river narrower and more varied.
- Rivers naturally flood over into their flood-plain after a large storm. The storage area will allow the river to behave in a natural way but safely and without risk to people and houses, which will help to support wildlife that has evolved to live along river banks
- The agricultural land that remains in the flood storage area may have to be farmed differently to ensure soil and agricultural chemicals such as fertiliser or animal slurry cannot get washed into the river in a flood. There are separate farming rules to protect the river environment and prevent this source of pollution.

By doing all these, we believe that this scheme will improve the ecology of these rivers.

3.8. What are cumulative effects and how have they been assessed?

Cumulative effects have to be considered in an Environmental Impact Assessment. These can happen when a receptor such as a person, animal or plant is affected by 2 or more impacts. In this case, only one cumulative effect has been identified with 2 potential effects that could affect ground nesting birds.

Firstly, we could affect birds by restricting their potential nesting sites. This is important to ensure we don't disturb birds or their nests during the construction work.

Secondly, ground nesting birds could be affected in a flood event as flood water spreads across the storage area. These effects were considered to be a slight negative but the new habitat will be created for birds and other species, including ground-nesting birds so the long term situation on the site should provide better habitat.

3.9. Are there any other environmental issues not considered in the Environmental Statement?

It is important that the full range of impacts are considered in our application for planning consent. We have assessed a few topics and included them in the planning application, even though they are not included in the Environmental Statement.

These additional topics include:

- Landscape effects

Non-Technical Summary. Foss Flood Storage Area

- Visual Impacts
- Archaeology
- Traffic and transport

Detail on each of these topics is available in each of the specialist reports. The planning application also contains results from all of the surveys that we have conducted. The surveys have uncovered a lot of detailed information on subjects like the ecology, archaeology and ground conditions across the site.

4. What happens next?

The Environmental Statement has been submitted to City of York Council and Ryedale District Council along with the other documents that make up the planning application.

The two councils will publicise the application through their respective planning portals. Each council will send the application to statutory consultees and other specific interest groups. These groups have been identified as having particular importance, expertise or interest in reviewing this type of application

These groups would include North Yorkshire County Council as Local Highways Authority and Highways Agency and Natural England for their expertise regarding farming and wildlife.

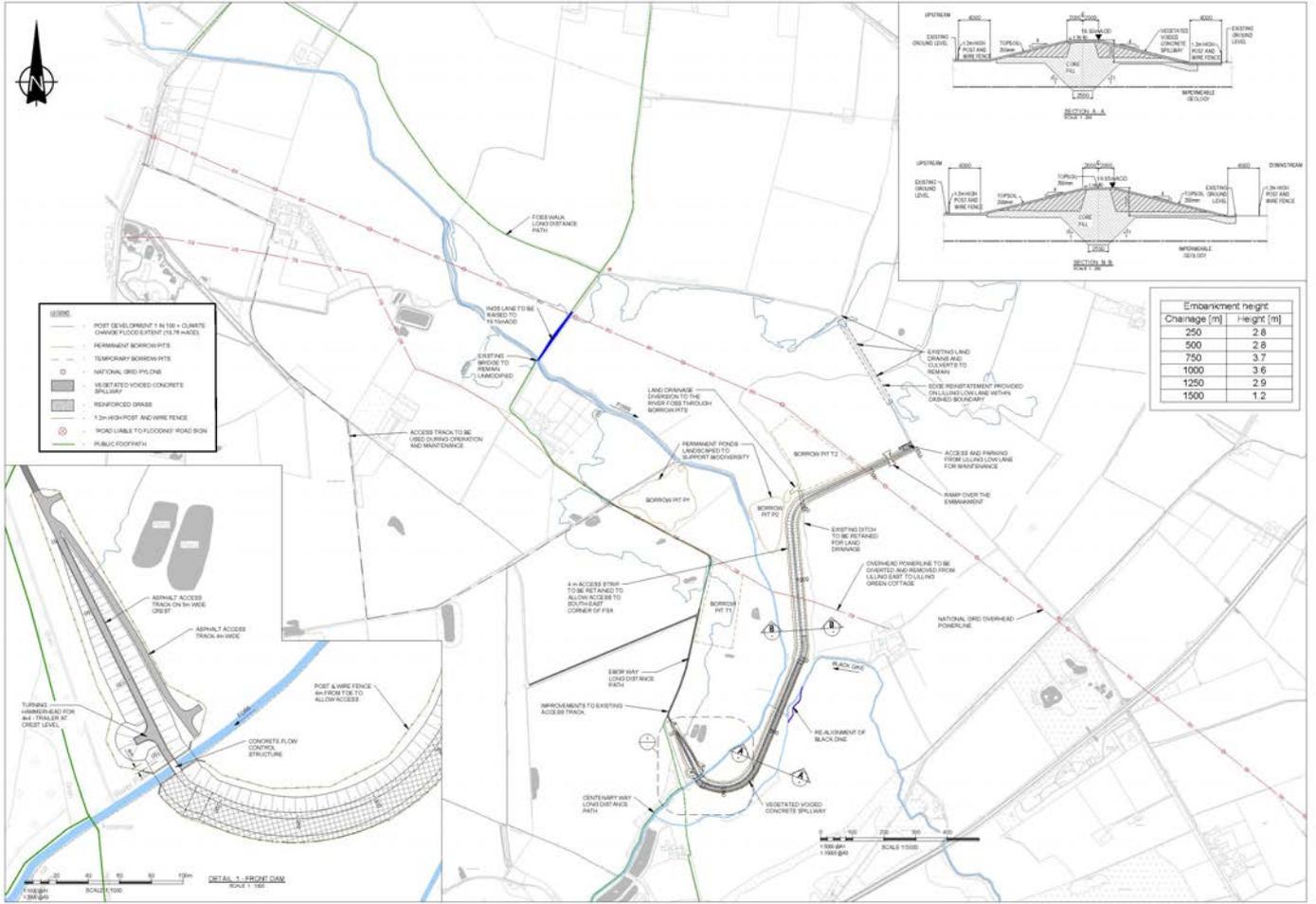
Specialists from the councils will comment on the chapters of the Environmental Statement and the additional topics such as archaeology.

Members of the public can make comments on the application through the planning portals.

The Planning Officers from each council will collect all the responses to the application and will present these in a report to their Planning Committee. The report will also present the Officer's recommendation stating whether the application is acceptable within planning policy and guidance.

The Planning Committee is made up from elected councillors, and they will decide whether the application is acceptable. This process should be completed within 16 weeks.

If we get the planning permission that we are seeking in time, we will start constructing the Flood Storage Area in Spring 2020.



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River Foss Flood Storage Area

Heritage Statement

November 2019



Quality Management

Job No	CS/079290		
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		
Document Ref	ENV0000381C-CAA-00-00-RP-HE-10500:21	Issue / Revision	P02.2
File reference	F:\ZTWE\04_PROJECTS\2017\CS092480_A York 5 Year Plan\03 Delivery\02 Environment\03 Reports & Deliverables\09 - F8_F10_F11 Reports\38 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		
Document Ref	ENV0000381C-CAA-00-00- RP-EN-C0400:116	Issue / Revision	01
File reference	F:\ZTWE\04_PROJECTS\2017\CS092480_A York 5 Year Plan\03 Delivery\02 Environment\03 Reports & Deliverables\09 - F8_F10_F11 Reports\07 DBA\York FAS Strensall storage - DBA Rev01 for client comment.docx		
Date	October 2019		
Prepared by	Jenny Young	Signature (for file)	p.p. 
Checked by	Scott Johnson	Signature (for file)	
Authorised by	Dan Stansfield	Signature (for file)	

Revision Status / History

Rev	Date	Issue / Purpose/ Comment	Prepared	Checked	Authorised
01	18/10/2019	Draft for client comment	JY	SJ	DS

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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

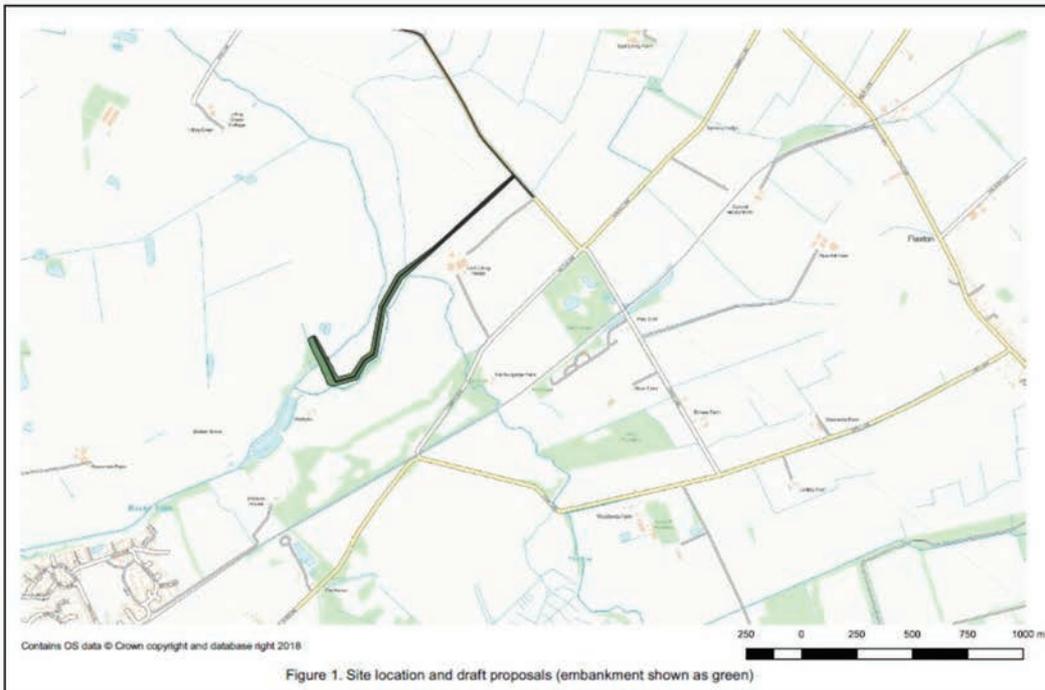
HER No.	NGR	Description	Period/Activity
North Yorkshire HER			
MNY17993	SE 6403 6334	Roman British Settlement, and associated field system and enclosures, west of Lilling Green Farm	Roman
MNY17994	SE 6385 6215	Enclosure	Undated
MNY17995	SE 6427 6200	Ditch	Undated
MNY17996	SE 6356 6313	Trackway	Undated
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 648 633	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



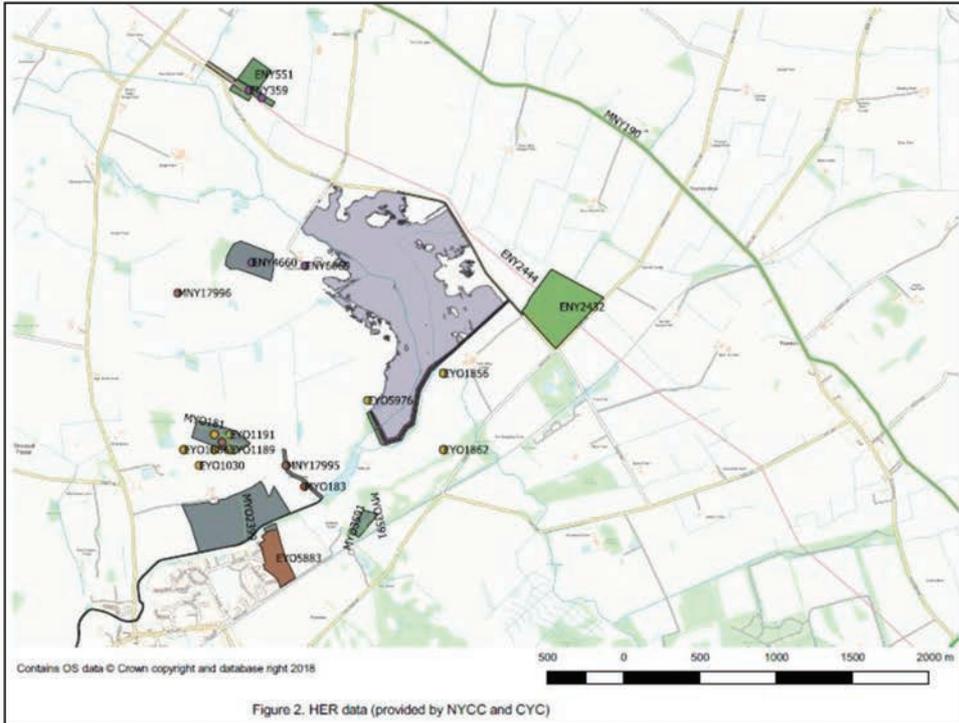
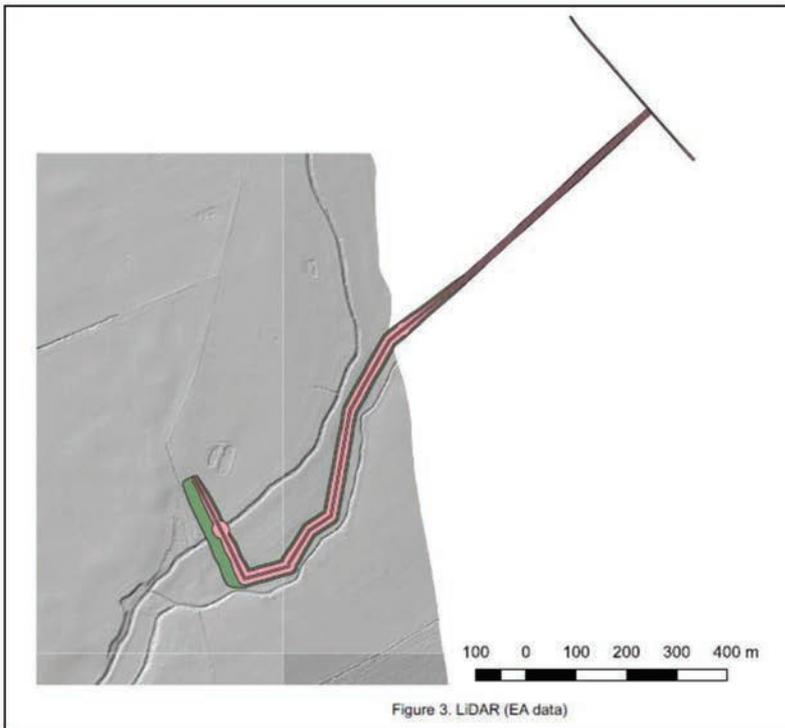


Figure 2. HER data (provided by NYCC and CYC)



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



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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

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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

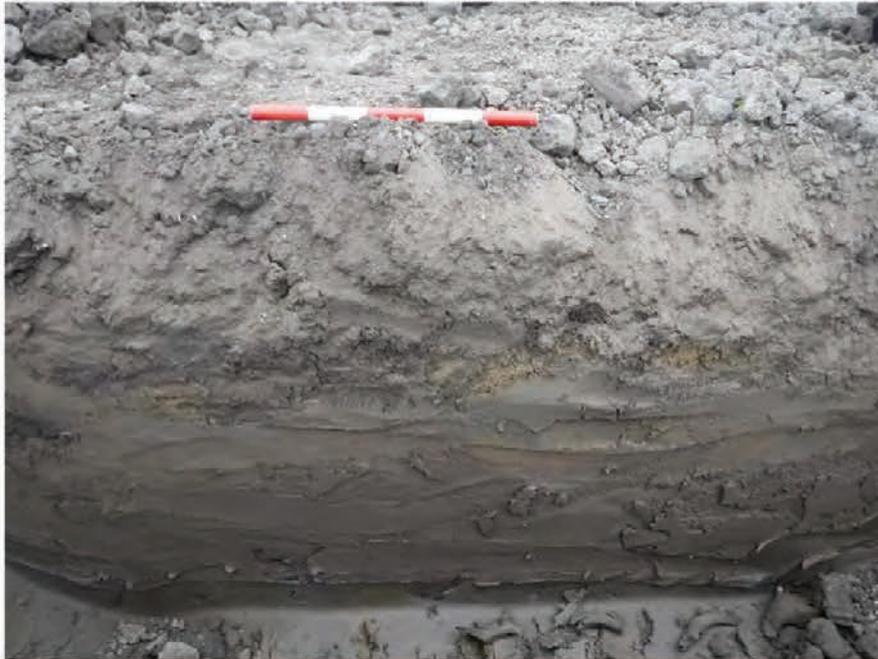


Plate 1 TP01, looking north



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

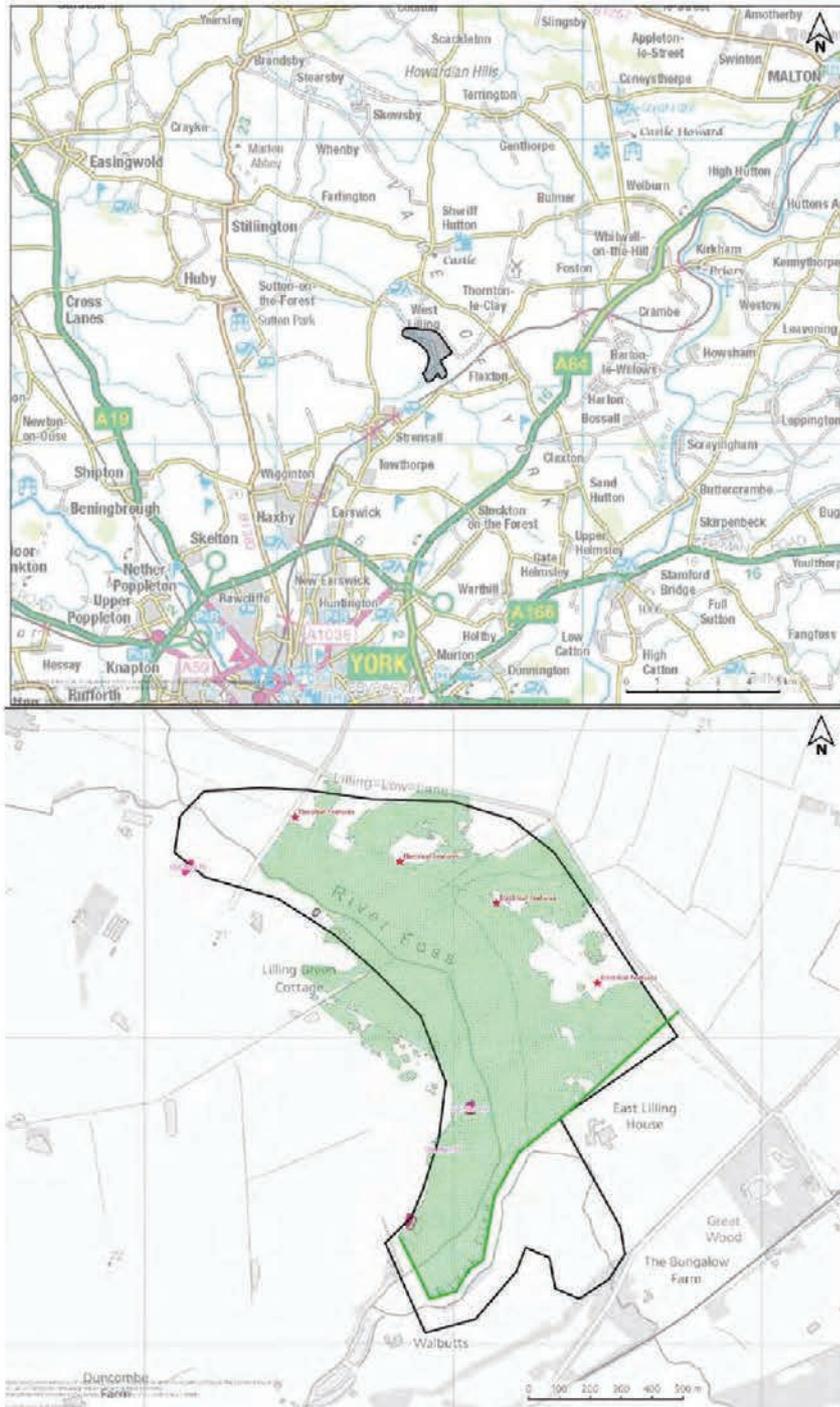


Figure 1 Site location

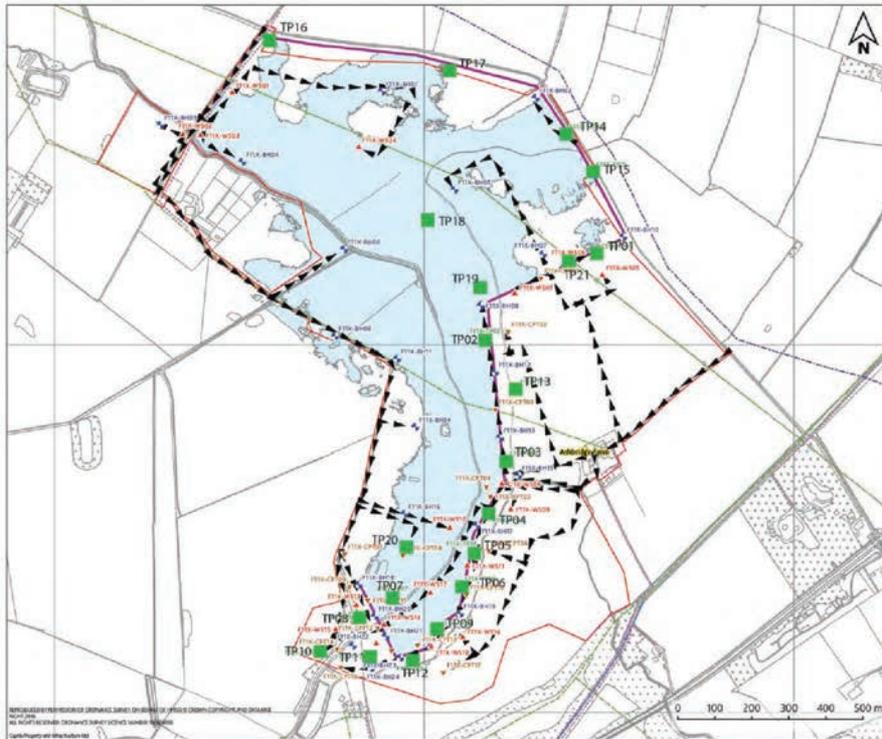


Figure 2 Trial pit locations

Geoarchaeological Trial Pit Monitoring at Lilling Green, Strensall, North Yorkshire
 York Archaeological Trust Evaluation Report

Report No 2018/**



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.

13 KEY REFERENCES

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For the latest Historic England guidance documents see:

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



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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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River Foss – Flood Storage Area

Heritage Statement

Appendix C – Geophysical Survey Report and Interpretative Note



**magnitude
surveys**

**Geophysical Survey Report
of
FAS Works on the River Foss, York**

**For
York Archaeological Trust**

**On Behalf of
Capita**

Magnitude Surveys Ref: MSSE463

HER Event Number: ENY8596

May 2019



**magnitude
surveys**

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Version	Purpose/Revision	Author	Interpretation/Figures	Checked By	Date Issued
Draft 1.0	Initial Draft to line manager	Marta Fortuny BA MA Kayt Armstrong BA MSc PhD MCIFA	Marta Fortuny BA MA	Julia Cantarano Ingénieur	05 April 2019
1.1	First draft to client	Marta Fortuny BA MA	Marta Fortuny BA MA	Finnegan Pope-Carter BSc (Hons) MSc FGS	05 April 2019
Final 2.0	Final to client	NA	NA	Marta Fortuny BA MA	20 May 2019

Abstract

Magnitude Surveys was commissioned to assess the subsurface archaeological potential of a c.73ha area of land by the River Foss, north of York. A fluxgate magnetometer survey was successfully completed, and no anomalies suggestive of significant archaeological features were identified. The geophysical data has primarily recorded the former course of the River Foss running north-south across the centre of the survey area; features associated with fluvial morphology have also been identified, such as meanders and ox-bows. The survey area is generally characterised by extensive drainage features, suggestive of longstanding and intense landscape management of the survey area. Agricultural activity has been identified in the form of known and unknown former field boundaries and modern ploughing trends. Modern interference is limited to the survey edges, underground services, pylons and overhead cables.

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1. Introduction

- 1.1. Magnitude Surveys Ltd (MS) was commissioned by York Archaeological Trust on behalf of Capita to undertake a geophysical survey on a c.73ha area of land bordering the River Foss, north of York. (NGR SE650627).
- 1.2. The geophysical survey comprised hand-pulled, cart-mounted and hand-carried GNSS-positioned fluxgate magnetometer survey.
- 1.3. The survey was conducted in line with the current best practice guidelines produced by Historic England (David et al., 2008), the Chartered Institute for Archaeologists (CIfA, 2014) and the European Archaeological Council (Schmidt et al., 2015).
- 1.4. The survey followed the Written Scheme of Investigation (WSI) issued by MS and approved by the client in March 2019 (MS 2019).
- 1.5. The survey commenced on 18/03/2019 and took seven days to complete.

2. Quality Assurance

- 2.1. Magnitude Surveys is a Registered Organisation of the Chartered Institute for Archaeologists (CIfA), the chartered UK body for archaeologists, and a corporate member of ISAP (International Society of Archaeological Prospection).
- 2.2. Director Dr. Chrys Harris is a Member of CIfA, has a PhD in archaeological geophysics from the University of Bradford and is the Vice-Chair of ISAP. Director Finnegan Pope-Carter is a Fellow of the London Geological Society, the chartered UK body for geophysicists and geologists, as well as a member of GeoSIG, the CIfA Geophysics Special Interest Group. Reporting Analyst Dr. Kayt Armstrong has a PhD in archaeological geophysics from Bournemouth University, is the Vice Conference Secretary and Editor of ISAP News for ISAP, and is the UK Management Committee representative for the COST Action SAGA.
- 2.3. All MS managers have relevant degree qualifications to archaeology or geophysics. All MS field and office staff have relevant archaeology or geophysics degrees and/or field experience.

3. Objectives

- 3.1. The geophysical survey aimed to assess the subsurface archaeological potential of the survey area.

4. Geographic Background

4.1. The site is located on either side of the floodplain of a canalised section of the River Foss approximately 11km north of the city of York (Figure 1). Survey was undertaken over multiple arable fields, bounded on the west by a trackway, bisected by the River Foss (running NS through the survey area), and bounded on the north eastern side by Lilling Low Lane. South of this point the survey area boundary crosses two fields, before being constrained by drainage ditches to the southern tip of the area. At the very north eastern boundary, there are thin strips of land on the eastern side of Lilling Low Lane. The survey area is flat and low-lying, with gentle slopes towards the river on both sides. (Figure 2). An area east of Lilling Low Lane (see below and Figure 2) could not be surveyed due to an oilseed rape crop that prevented access.

4.2. Survey considerations:

Survey Area	Ground Conditions	Further Notes
1	Mostly flat with short vegetation, patches of more recent ploughing in north and on eastern side of area.	Bounded on the east by the river, on the west by a farm track and to the north by a hedge, separating this area from Area 2. Bisected at its narrowest part by a line of telegraph poles. Ponds bordered by trees interrupt the survey in various places. There are also boreholes and wetter patches within the area.
2	Flat with short stubble.	Bounded to the northwest and southeast by hedges, to the northeast by the river and to the southwest by a farm track.
3	Flat with a young cereal crop, 10-20cm.	Area north and east of Area 2. Bounded to the south west by the River Foss, to the northwest the survey boundary crosses the open field. Bounded to the northeast by a drainage ditch, and to the southeast the area boundary crosses the field at the same point as a change in ploughing direction. A power line on large pylons runs outside along the eastern boundary. There is a raised manhole within the survey area, and there is a short row of trees in the southeast.
4	Flat with a young cereal crop, 10-20cm	Long narrow survey area with the long axis running north-south, western boundary is the River Foss. The eastern boundary is a drainage ditch. The northern boundary of the area is flush with Area 3: the change in Area / walking orientation is due to a change in the ploughing orientation at this point. The area is crossed by a run of telegraph poles. There are also boreholes and a short trench.
5	Flat, no crop.	Bisected by footpath running north-south; multiple small obstacles to survey in the form of ponds, reed beds, wet ground and wood piles.
6	Flat, mostly covered by young cereal crop c10-20cm tall. In the middle of the southern	The survey area excludes (at the northern part) an area under and around overhead powerlines carried on metal pylons. To the east/south, a

	edge there is a patch of grassland due to various different plantings across an un-bounded area.	pylon is included within the survey boundary. The area is bounded on the east by Lilling Low Lane, to the west by a drainage ditch (that borders Areas 3-5). To the south east the survey area boundary crosses open fields. The northern boundary is a ditch with a trackway running alongside it. The very southern tip of the area is bounded by a farm track, however this area also contains farm machinery and soil dumps, and so was not surveyable. There is a pond / wet area in the northern part of the block. There are also boreholes.
7	Flat with short cereal crop, c15-25cm.	Thin strip along the western boundary of Lilling Low Lane. Open field to the west, bounded by a treeline with a wire fence to the north, a hedge and tree line along the road edge and to the south by a drainage ditch and trackway.
8	Flat grass gallop.	Thin strip along the eastern border of Lilling Low Lane, opposite the southern half of Area 7. Bounded to the west along the road by hedging and a fence, to the south by a drainage ditch, to the east by open field, and to the north by a small unsurveyable patch of cleared and burned wood.
9	Flat stubble.	Thin strip along the eastern border of Lilling Low Lane, opposite the northern half of Area 7. Bounded to the west along the road by hedging, to the south hedging and a fence, to the east by open field, and to the north by a drainage ditch. There is a metal gate in the NW corner.
10	Flat with a young cereal crop of c30-40cm.	Thin strip to the north of Lilling Low Lane, bounded by a hedge along the road and open field to the west and north, and a drainage ditch (bordering Area 9) to the south/east. There is a metal gate in the SE corner.
11	Flat with a young cereal crop of c20-30cm.	Thin strip to the south of Lilling Low Lane, no boundary on the road and open fields to the west and south. Bounded by a tree line with a wire fence on the south (bordering Area 7).

4.3. The underlying geology comprises Mercian Mudstone. Superficial deposit in Area 1 is underlain by the Sutton Sand Formation to the west, transitioning to Alluvium along the eastern edge following the river. This alluvium also underlies Areas 2-5, apart from the eastern edge of Area 3. Here, there is a transition to the Alne glaciolacustrine formation of silty clay, which also underlies Areas 6-11. (British Geological Survey, 2019).

4.4. The soils consist of naturally wet and very acid sandy and loamy soils to the west of Areas 1 and 2, the east of Area 6 and all of Areas 7-77. Loamy and clayey floodplain soils with naturally high groundwater lie across the east of Areas 1 and 2, all of Areas 3, 4 and 5 and the west of Area 6. (Soilscapes, 2019).

5. Archaeological Background

- 5.1. This information is taken from a report on previous geoarchaeological test pitting within the survey area provided to MS by the client (YAT, 2018).
- 5.2. The Vale of York was 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.
- 5.3. 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.
- 5.4. Geo-technical investigation has revealed potential earlier courses of the River Foss. If these are present, they could retain good environmental evidence of previous land use and human activity.
- 5.5. The site lies c.2.5km north-east of the village of Strensall. A settlement is recorded in Domesday and thought by some to be associated with a 9th century reference to a place called 'Streonaeshalch'. It is 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.
- 5.6. The deserted medieval settlement of East Lilling lies 2km to the north-east of the site.
- 5.7. 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.
- 5.8. 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.

6. Methodology

6.1. Data Collection

6.1.1. Geophysical prospection comprised the magnetic method as described in the following table.

6.1.2. Table of survey strategies:

Method	Instrument	Traverse Interval	Sample Interval
Magnetic	Bartington Instruments Grad-13 Digital Three-Axis Gradiometer	1m	200Hz reprojected to 0.125m

6.1.3. The magnetic data were collected using MS' bespoke hand-pulled cart system and hand-carried GNSS-positioned system.

6.1.3.1. MS' cart and hand-carried system was comprised of Bartington Instruments Grad 13 Digital Three-Axis Gradiometers. Positional referencing was through a multi-channel, multi-constellation GNSS Smart Antenna RTK GPS outputting in NMEA mode to ensure high positional accuracy of collected measurements. The RTK GPS is accurate to 0.008m + 1ppm in the horizontal and 0.015m + 1ppm in the vertical.

6.1.3.2. Magnetic and GPS data were stored on an SD card within MS' bespoke datalogger. The datalogger was continuously synced, via an in-field Wi-Fi unit, to servers within MS' offices. This allowed for data collection, processing and visualisation to be monitored in real-time as fieldwork was ongoing.

6.1.3.3. A navigation system was integrated with the RTK GPS, which was used to guide the surveyor. Data were collected by traversing the survey area along the longest possible lines, ensuring efficient collection and processing.

6.2. Data Processing

6.2.1. Magnetic data were processed in bespoke in-house software produced by MS. Processing steps conform to Historic England's standards for "raw or minimally processed data" (see sect 4.2 in David et al., 2008: 11).

Sensor Calibration – The sensors were calibrated using a bespoke in-house algorithm, which conforms to Olsen et al. (2003).

Zero Median Traverse – The median of each sensor traverse is calculated within a specified range and subtracted from the collected data. This removes striping effects caused by small variations in sensor electronics.

Projection to a Regular Grid – Data collected using RTK GPS positioning requires a uniform grid projection to visualise data. Data are rotated to best fit an orthogonal grid projection and are resampled onto the grid using an inverse distance-weighting algorithm.

Interpolation to Square Pixels – Data are interpolated using a bicubic algorithm to increase the pixel density between sensor traverses. This produces images with square pixels for ease of visualisation.

6.3.Data Visualisation and Interpretation

- 6.3.1. This report presents the gradient of the sensors' total field data as greyscale images, as well as the total field data from the upper and/or lower sensors. The gradient of the sensors minimises external interferences and reduces the blown-out responses from ferrous and other high contrast material. However, the contrast of weak or ephemeral anomalies can be reduced through the process of calculating the gradient. Consequently, some features can be clearer in the respective gradient or total field datasets. Multiple greyscale images at different plotting ranges have been used for data interpretation. Greyscale images should be viewed alongside the XY trace plot (FIGURES 8, 11, 14, 17, 20, 23, 26 and 29). XY trace plots visualise the magnitude and form of the geophysical response, aiding in anomaly interpretation.
- 6.3.2. Geophysical results have been interpreted using greyscale images and XY traces in a layered environment, overlaid against open street maps, satellite imagery, historic maps, LiDAR data, and soil and geology maps. Google Earth (2019) was consulted as well, to compare the results with recent land usages.
- 6.3.3. Geodetic position of results - All vector and raster data have been projected into OSGB36 (ESPG27700) and can be provided upon request in ESRI Shapefile (.SHP) and Geotiff (.TIF) respectively. Figures will be provided with raster and vector data projected against OS Open Data.

7. Results

7.1. Qualification

7.1.1. Geophysical results are not a map of the ground and are instead a direct measurement of subsurface properties. Detecting and mapping features requires that said features have properties that can be measured by the chosen technique(s) and that these properties have sufficient contrast with the background to be identifiable. The interpretation of any identified anomalies is inherently subjective. While the scrutiny of the results is undertaken by qualified, experienced individuals and rigorously checked for quality and consistency, it is often not possible to classify all anomaly sources. Where possible an anomaly source will be identified along with the certainty of the interpretation. The only way to improve the interpretation of results is through a process of comparing excavated results with the geophysical reports. MS actively seek feedback on their reports as well as reports of further work in order to constantly improve our knowledge and service.

7.2. Discussion

7.2.1. The geophysical results are presented in consideration with historic maps (Figure 5).

7.2.2. The fluxgate magnetometer survey has responded well to the environment of the survey area, with magnetic interference of modern origin being limited to the edges of the fields, underground services recorded in the east and pylons and overhead cables identified in the north-east. The magnetic data is characterised by a relatively quiet magnetic background, allowing for the identification of weaker, more ephemeral anomalies, such as the former course of the River Foss. This broad anomaly has been categorised as 'Palaeochannel / Natural (Spread)' in the interpretation drawings (Figure 4) as it exhibits the typical morphology of these fluvial features, such as braiding, meanders and evidence of former ox-bows.

7.2.3. The general survey area is characterised by extensive drainage features. These are recorded in multiple orientations and patterns. In the north and east of the survey area, this multi-orientation occurs in the same place. This is suggestive of an intensive and prolonged regime of land management of the area.

7.2.4. Further anomalies of agricultural origin have been recorded throughout the survey area. These consist of known and unknown former field boundaries, some of which have been interpreted as being filled with mixed highly magnetic debris.

7.3. Interpretation

7.3.1. General Statements

- 7.3.1.1. Geophysical anomalies will be discussed broadly as classification types across the survey area. Only anomalies that are distinctive or unusual will be discussed individually.
- 7.3.1.2. **Magnetic Disturbance** – The strong anomalies produced by extant metallic structures along the edges of the field and by services that cross the survey area have been classified as ‘Magnetic Disturbance’. These magnetic ‘haloes’ will obscure the response of any weaker underlying features, should they be present, often over a greater footprint than the structure they are being caused by.
- 7.3.1.3. **Ferrous (Spike)** – Discrete ferrous-like, dipolar anomalies are likely to be the result of isolated modern metallic debris on or near the ground surface.
- 7.3.1.4. **Ferrous/Debris (Spread)** – A ferrous/debris spread refers to a concentrated deposition of discrete, dipolar ferrous anomalies and other highly magnetic material.
- 7.3.1.5. **Undetermined** – Anomalies are classified as Undetermined when the anomaly origin is ambiguous through the geophysical results and there is no supporting or correlative evidence to warrant a more certain classification. These anomalies are likely to be the result of geological, pedological or agricultural processes, although an archaeological origin cannot be entirely ruled out. Undetermined anomalies are generally not ferrous in nature.

7.3.2. Magnetic Results - Specific Anomalies

- 7.3.2.1. **Agricultural (Strong) / Drainage Feature** – In the north-east of Area 4, two groups of parallel linear anomalies [4a] have been recorded. These stand out as positive strong anomalies in comparison to the quiet magnetic surroundings. They have been interpreted as drainage features, possibly associated with the canalisation of the River Foss, which appears to have been straightened along parts of its course in this area. Further anomalies of similar magnetic signal have been recorded in the west of Area 3 [3a] (Figure 10) and across Area 10 [10a] (Figure 7).
- 7.3.2.2. **Drainage Feature** – In the north-west of Area 6, a contained zone [6a] has been identified as being crossed by numerous drainage features, in multiple directions. This is suggestive of prolonged and/or more aggressive draining management of this zone.
- 7.3.2.3. **Industrial/Modern (Spread)** – Adjacent to the eastern boundary of Area 1, a distinct sub-rectangular anomaly [1a] has been identified. It exhibits a spread of ferrous-type dipolar material in the XY traces (Figure 23), with two further spreads of debris recorded to the north-west and south-west of [1a]. This anomaly is well correlated with an area of marsh or bog, possibly enclosed, depicted in the 2nd ed OS map (Figure 5). Considering the numerous ‘Old Marl

Pits' recorded within the immediate proximity to [1a] on the same historic maps, an industrial origin related to the extraction of marl or clay has been considered likely.

8. Conclusions

- 8.1. A fluxgate magnetometer survey has successfully been completed across the site. The survey results present a quiet magnetic background, allowing for the identification of weaker anomalies related to the former course of the River Foss. This palaeochannel has been recorded running north-south across the centre of the survey area, characterised by anomalies typical of fluvial features such as meanders and ox-bows.
- 8.2. Extensive drainage features have been recorded throughout the survey area, suggesting intense and prolonged landscape management of the site. Further agricultural activity has been identified in the form of known and unknown former field boundaries and weak modern ploughing trends.

9. Archiving

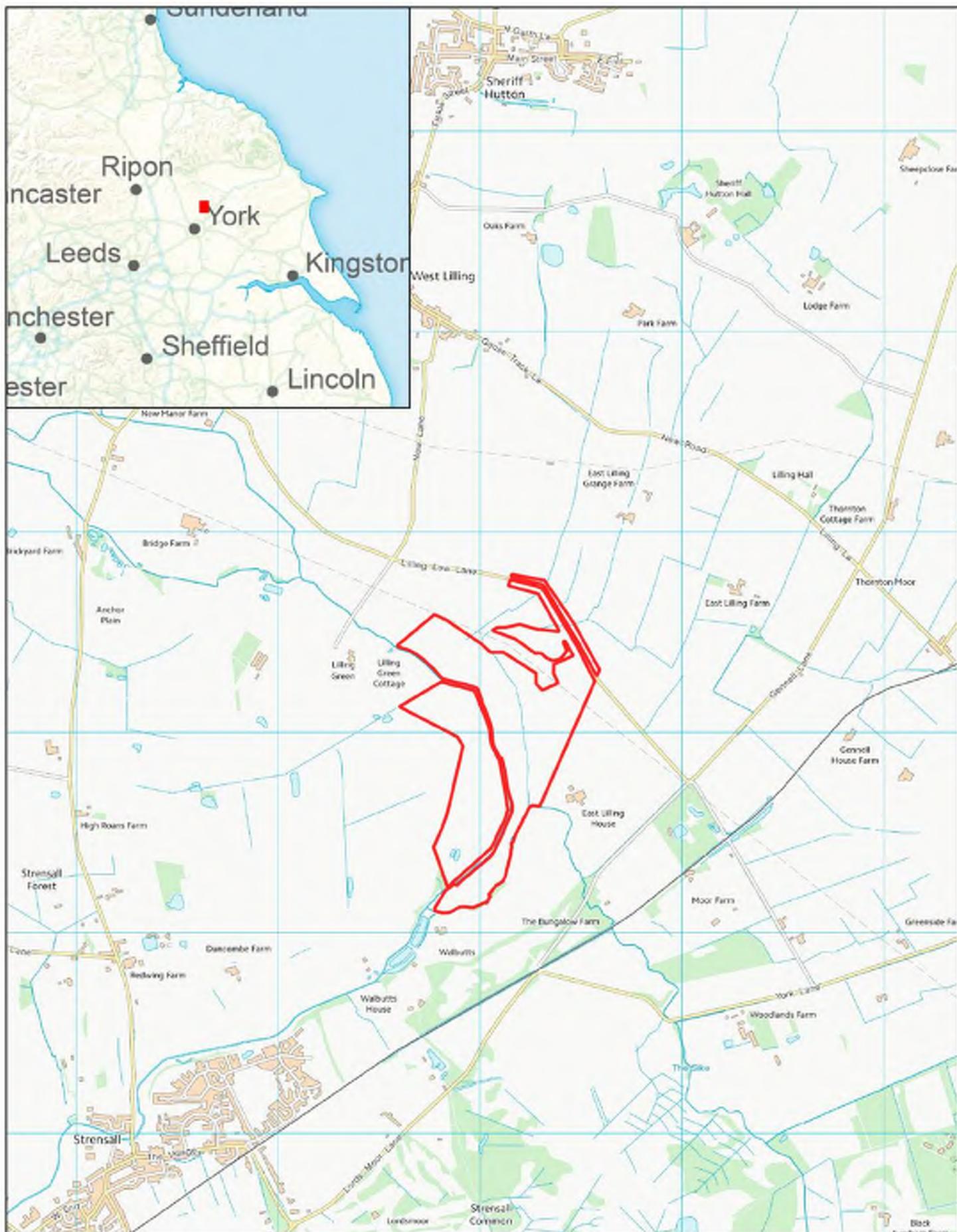
- 9.1. MS maintains an in-house digital archive, which is based on Schmidt and Ernenwein (2013). This stores the collected measurements, minimally processed data, georeferenced and un-georeferenced images, XY traces and a copy of the final report.
- 9.2. MS contributes reports to the ADS Grey Literature Library upon permission from the client, subject to the any dictated time embargoes.

10. Copyright

- 10.1. Copyright and the intellectual property pertaining to all reports, figures, and datasets produced by Magnitude Services Ltd. is retained by MS. The client is given full licence to use such material for their own purposes. Permission must be sought by any third party wishing to use or reproduce any IP owned by MS.

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MSSE463 - York EA Flood Cell 11

Figure 1 - Site Location

1:25,000 @ A4

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OS (100056946)

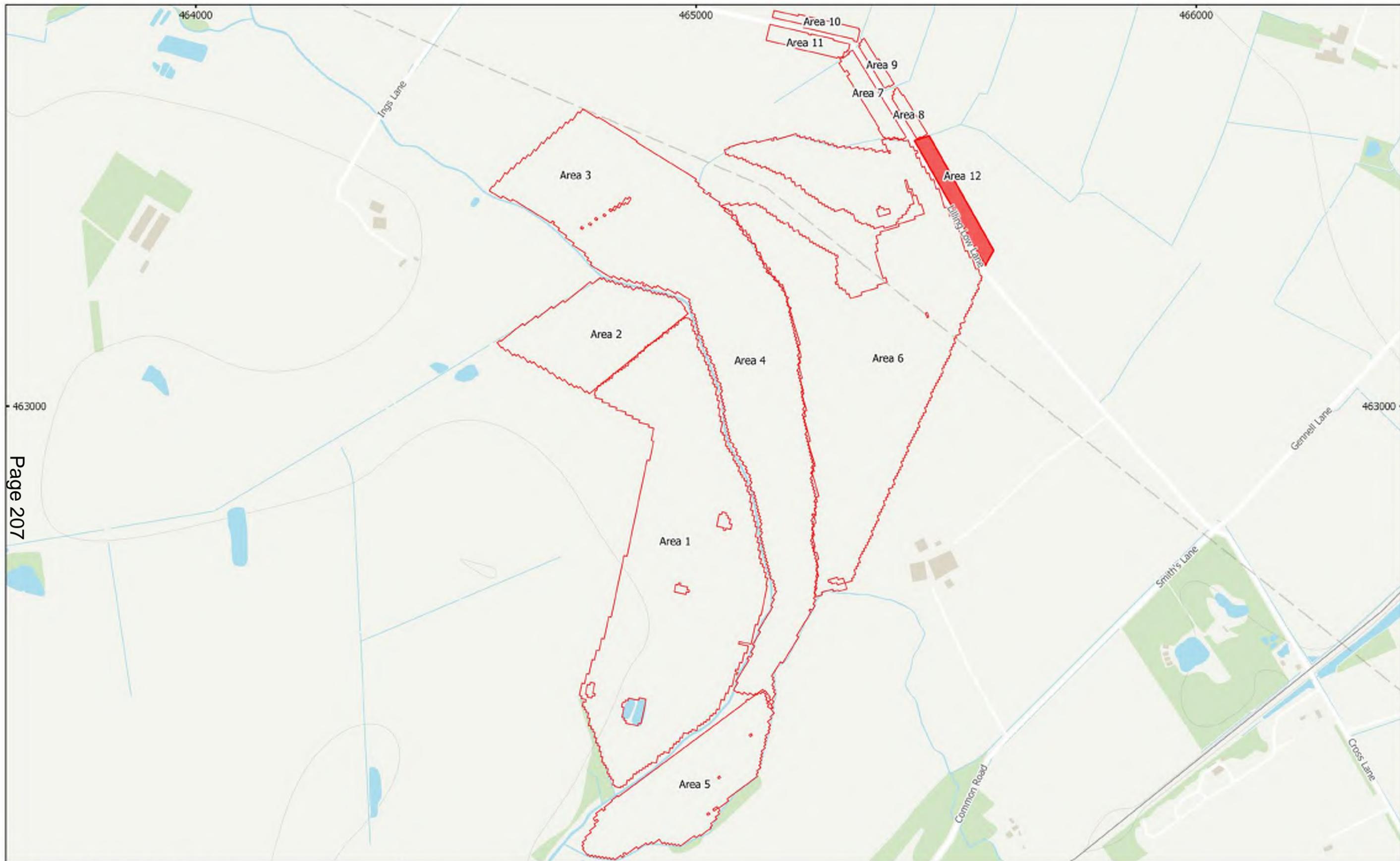
 Site Boundary

Page 206

0 0.5 1 km

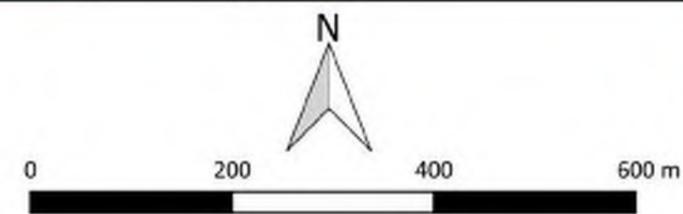


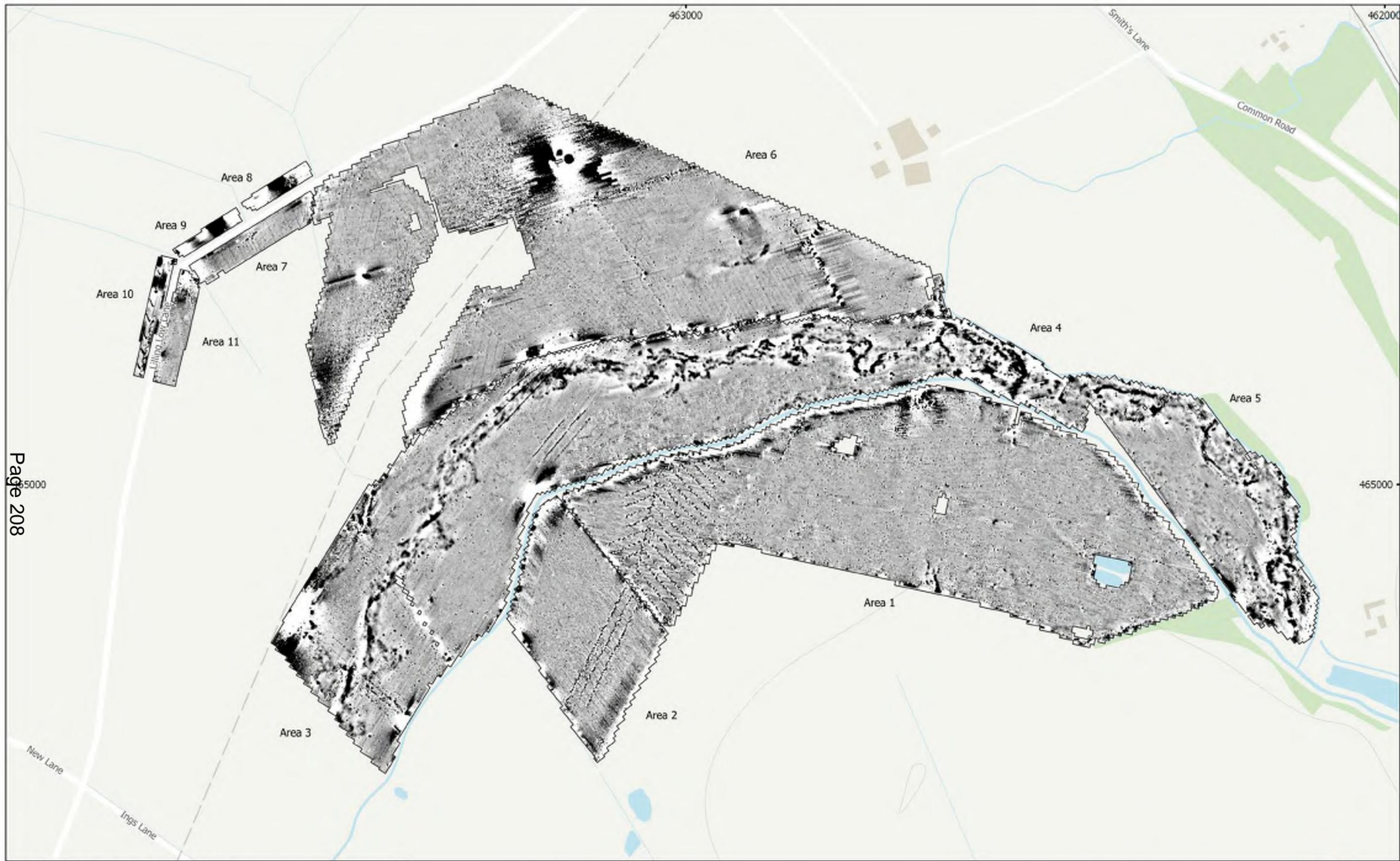

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surveys

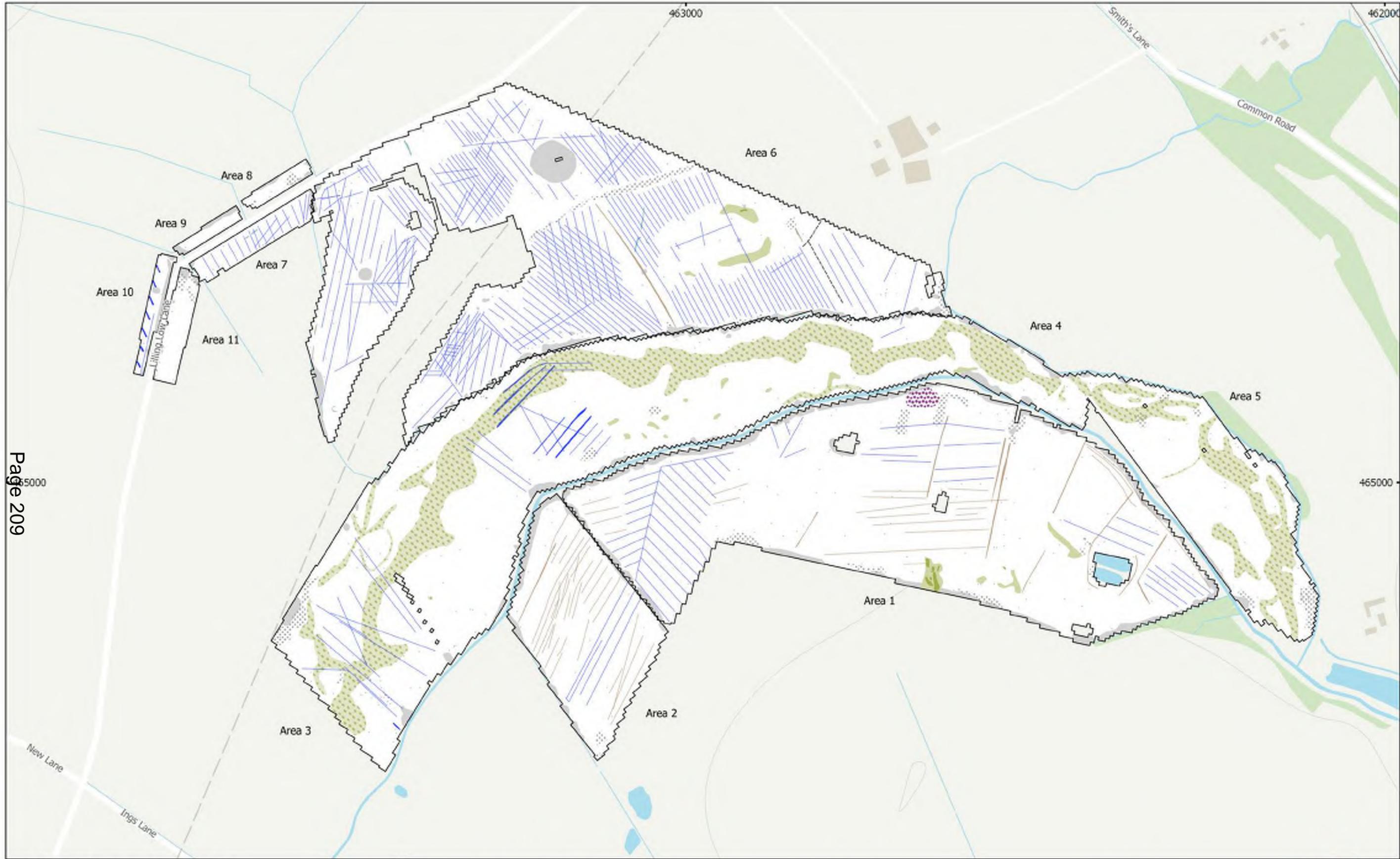


MSSE463 - FAS works on the River Foss, York
 Figure 2 - Location of Survey Areas
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- Survey Extent
- Unsurveyable

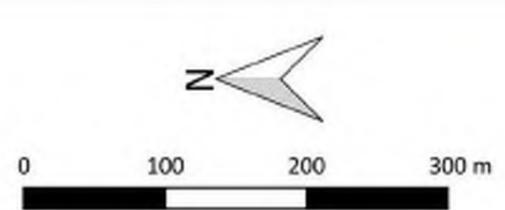






MSSE463 - FAS works on the River Foss, York
 Figure 4 - Magnetic Interpretation (Overview)
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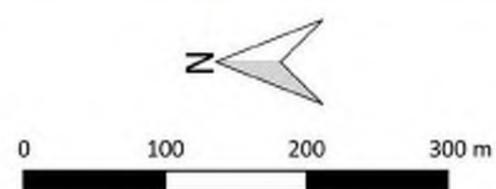
- | | | |
|--|----------------------------|----------------------|
| Agricultural (Strong) / Drainage Feature | Natural (Strong) | Service |
| Agricultural (Weak) | Natural (Weak) | Drainage Feature |
| Magnetic Disturbance | Undetermined (Weak) | Ferrous (Spike) |
| Ferrous/Debris (Spread) | Industrial/Modern (Spread) | Agricultural (Trend) |
| Palaeochannel / Natural (Spread) | | |

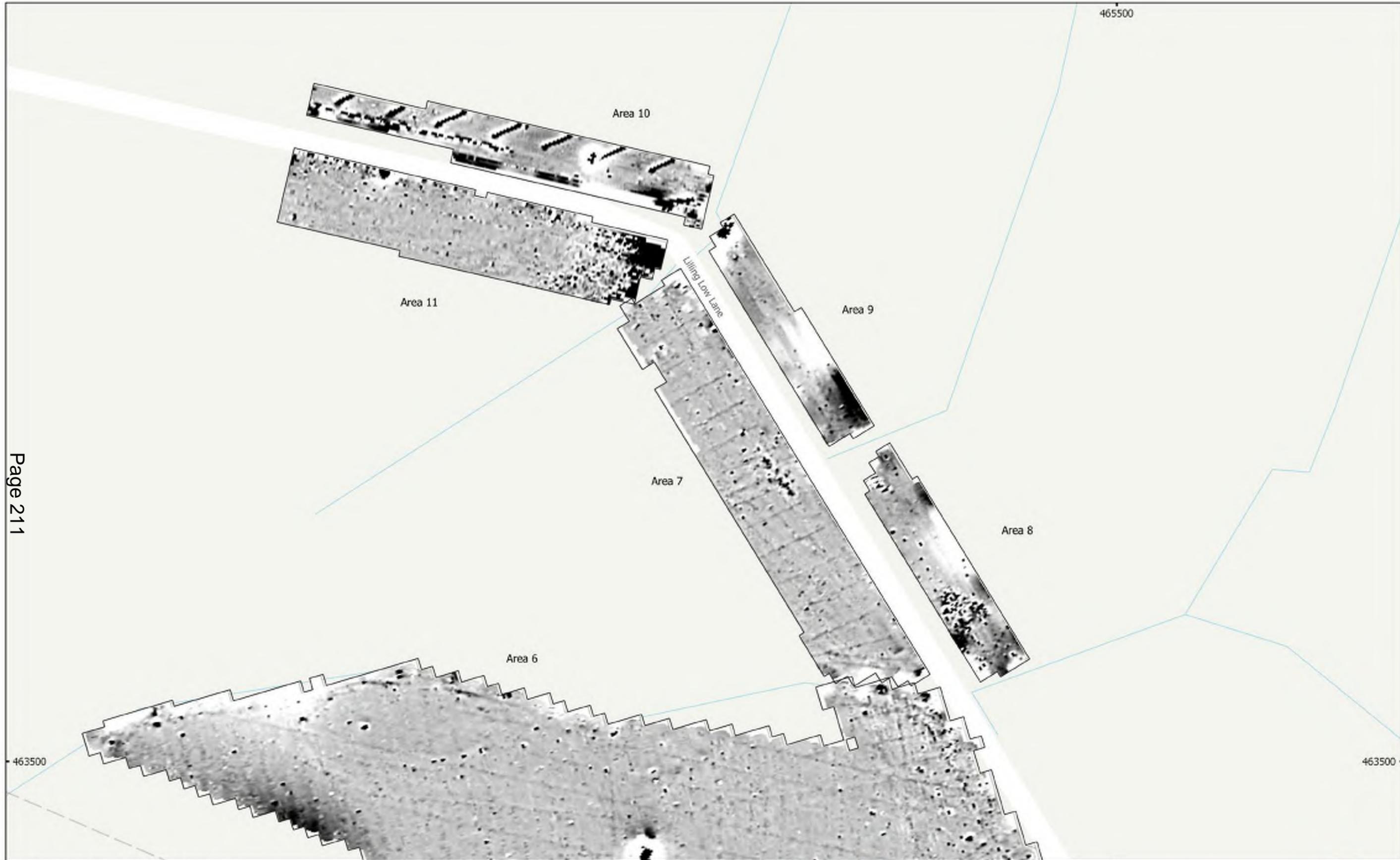




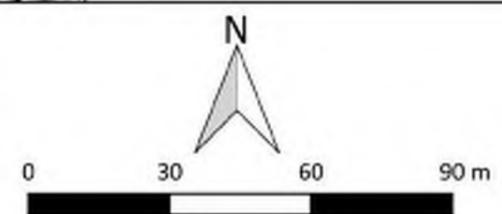
MSSE463 - FAS works on the River Foss, York
 Figure 5 - Magnetic Interpretation Over Historic Maps (Overview)
 1:7,000 @ A3
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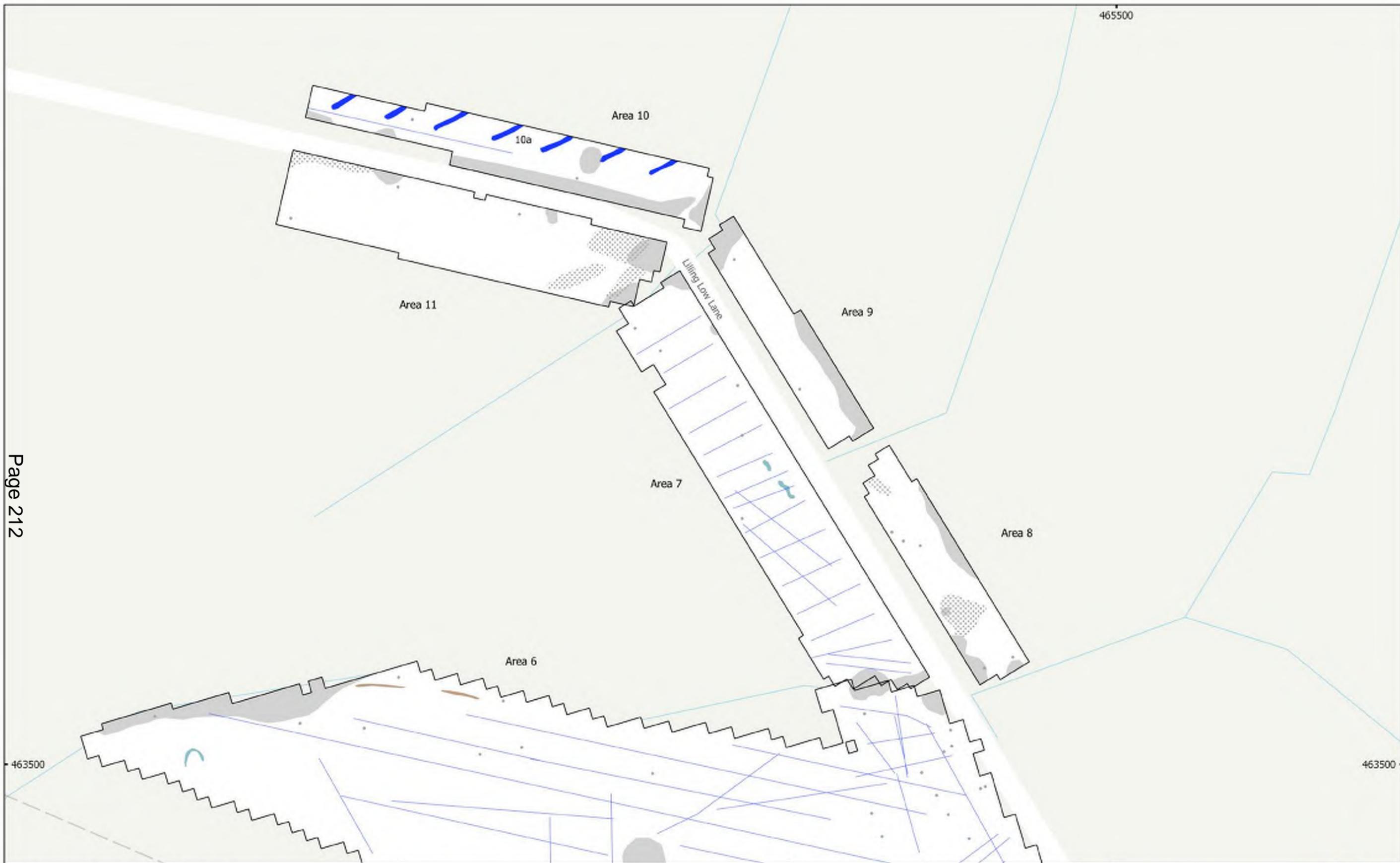
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|--|----------------------------|------------------|
| Agricultural (Strong) / Drainage Feature | Natural (Strong) | Service |
| Agricultural (Weak) | Natural (Weak) | Drainage Feature |
| Magnetic Disturbance | Undetermined (Weak) | Ferrous (Spike) |
| Ferrous/Debris (Spread) | Industrial/Modern (Spread) | |
| Palaeochannel / Natural (Spread) | Agricultural (Trend) | |





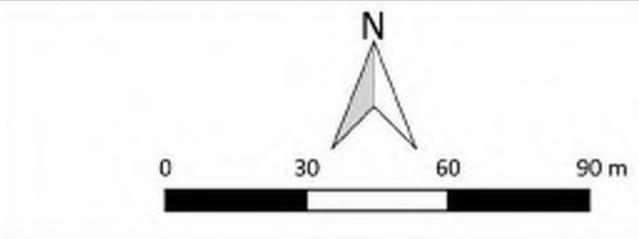
MSSE463 - FAS works on the River Foss, York
 Figure 6 - Magnetic Gradient (North)
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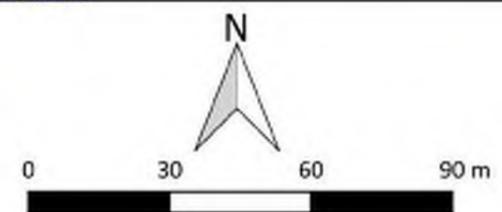
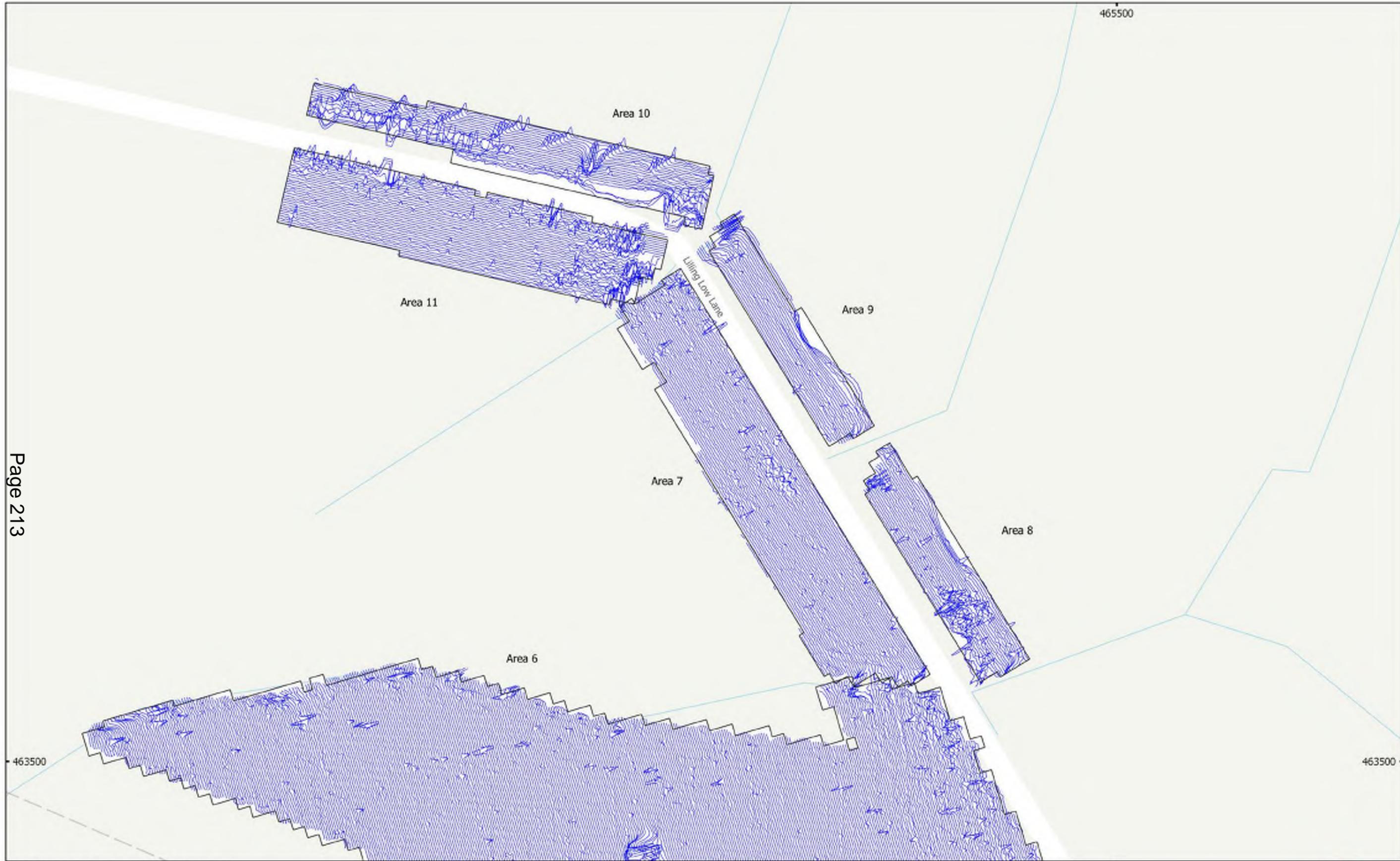


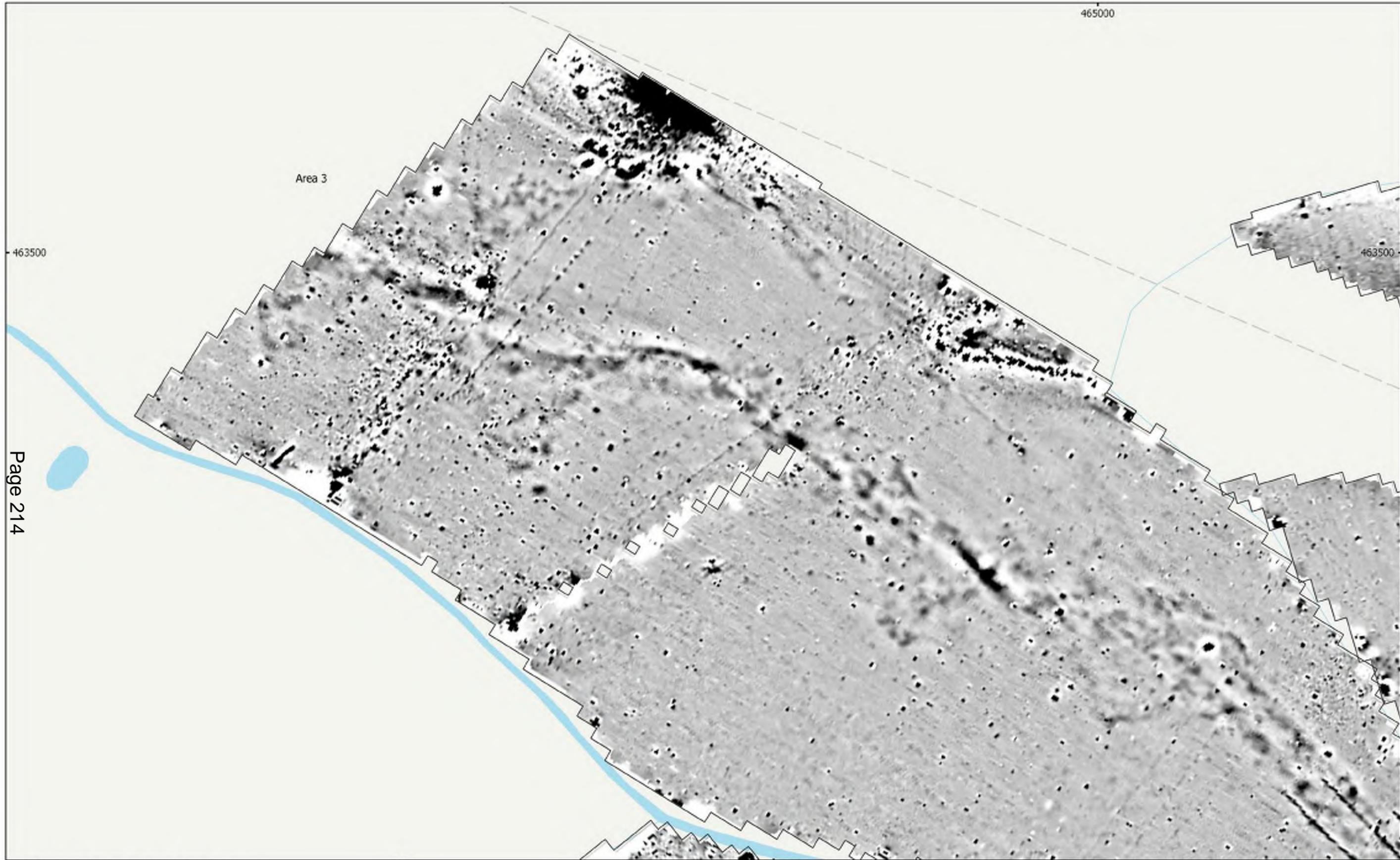


MSSE463 - FAS works on the River Foss, York
Figure 7 - Magnetic Interpretation (North)
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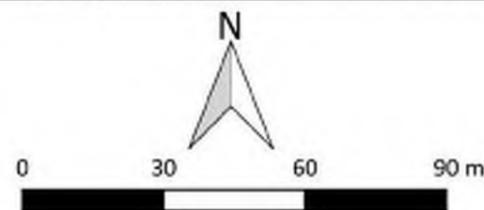
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| Agricultural (Strong) / Drainage Feature | Drainage Feature |
| Agricultural (Weak) | Ferrous (Spike) |
| Magnetic Disturbance | |
| Ferrous/Debris (Spread) | |
| Undetermined (Weak) | |



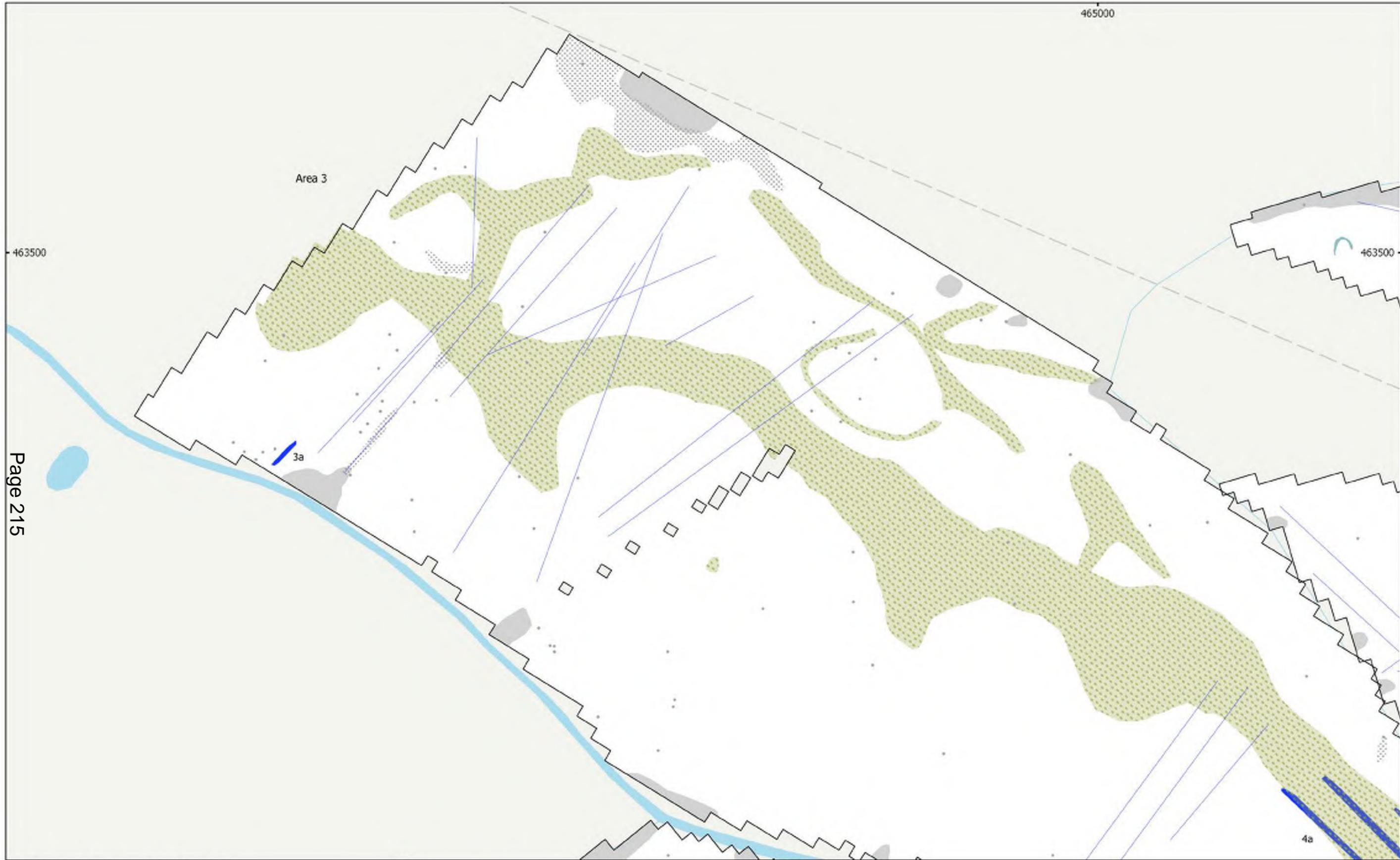




MSSE463 - FAS works on the River Foss, York
 Figure 9 - Magnetic Gradient (North-West)
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MSSE463 - FAS works on the River Foss, York
 Figure 10 - Magnetic Interpretation (North-West)
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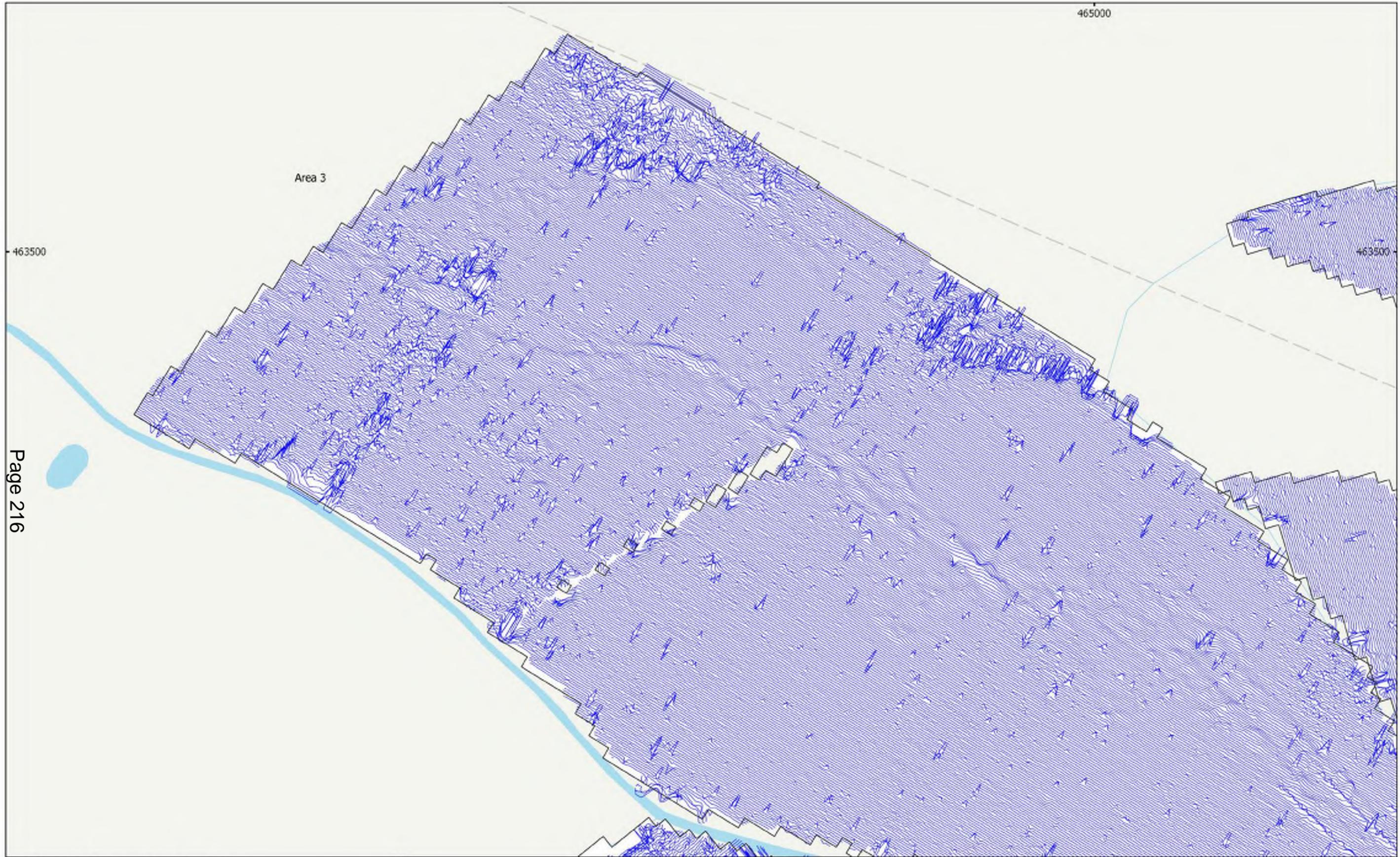
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| Agricultural (Strong) / Drainage Feature | Drainage Feature |
| Agricultural (Weak) | Ferrous (Spike) |
| Magnetic Disturbance | |
| Ferrous/Debris (Spread) | |
| Palaeochannel / Natural (Spread) | |
| Undetermined (Weak) | |



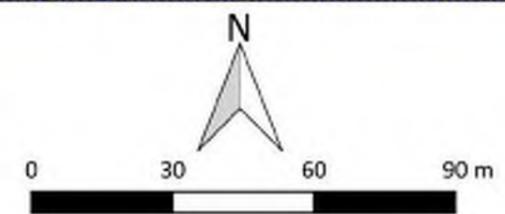
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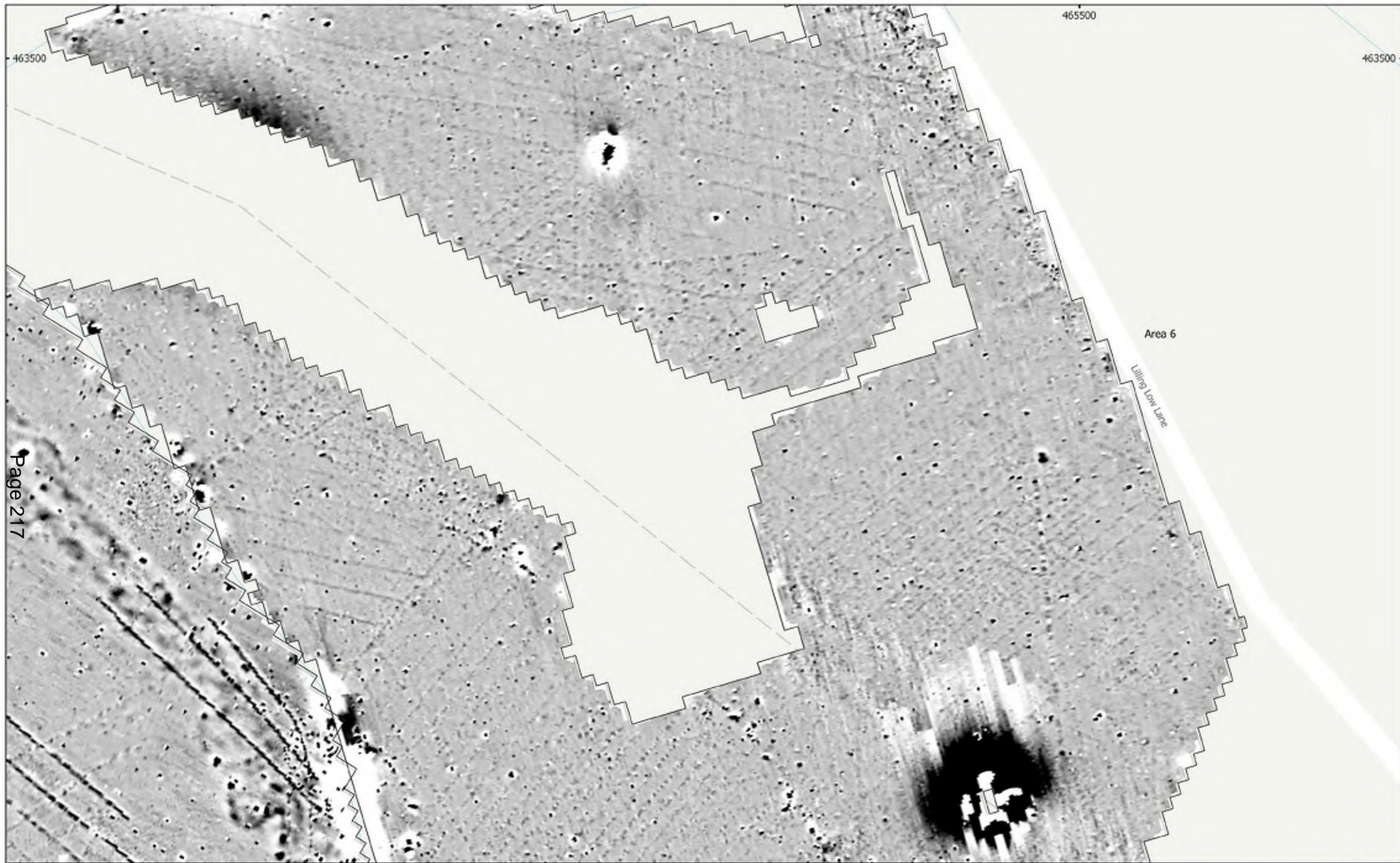
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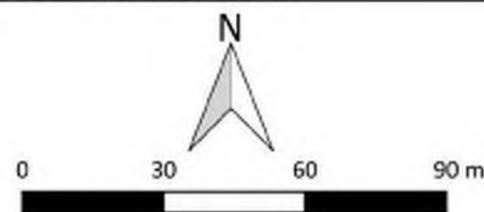
MSSE463 - FAS works on the River Foss, York
Figure 11 - XY Trace Plot (North-West)
30nT/cm @ 1:1,500 @ A3
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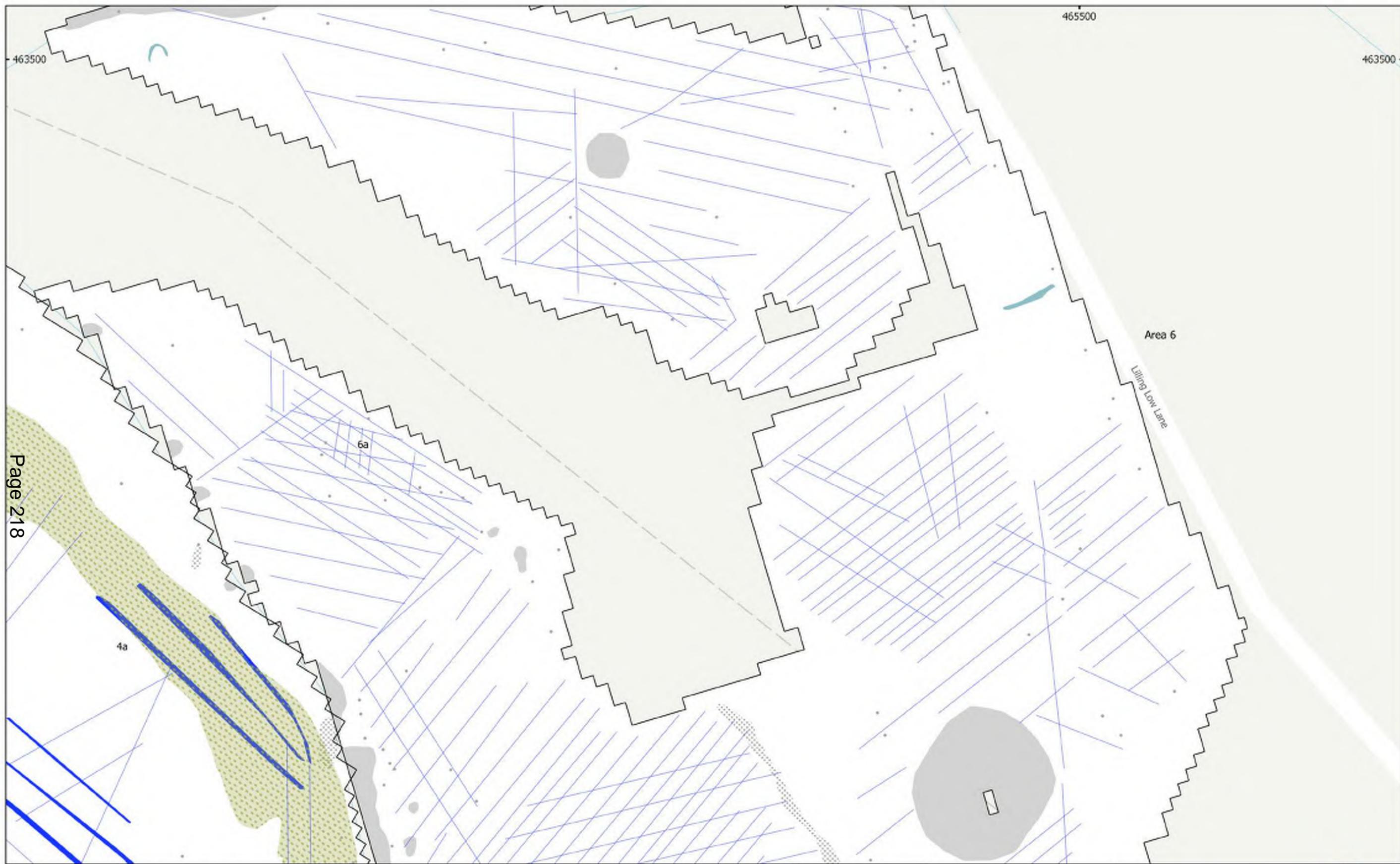




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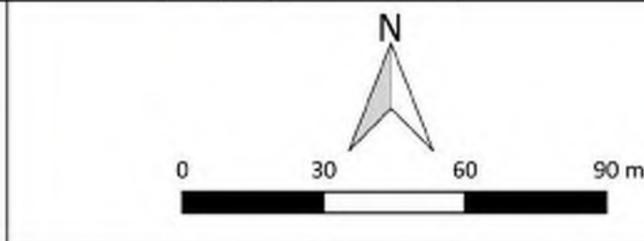
MSSE463 - FAS works on the River Foss, York
 Figure 12 - Magnetic Gradient (North-East)
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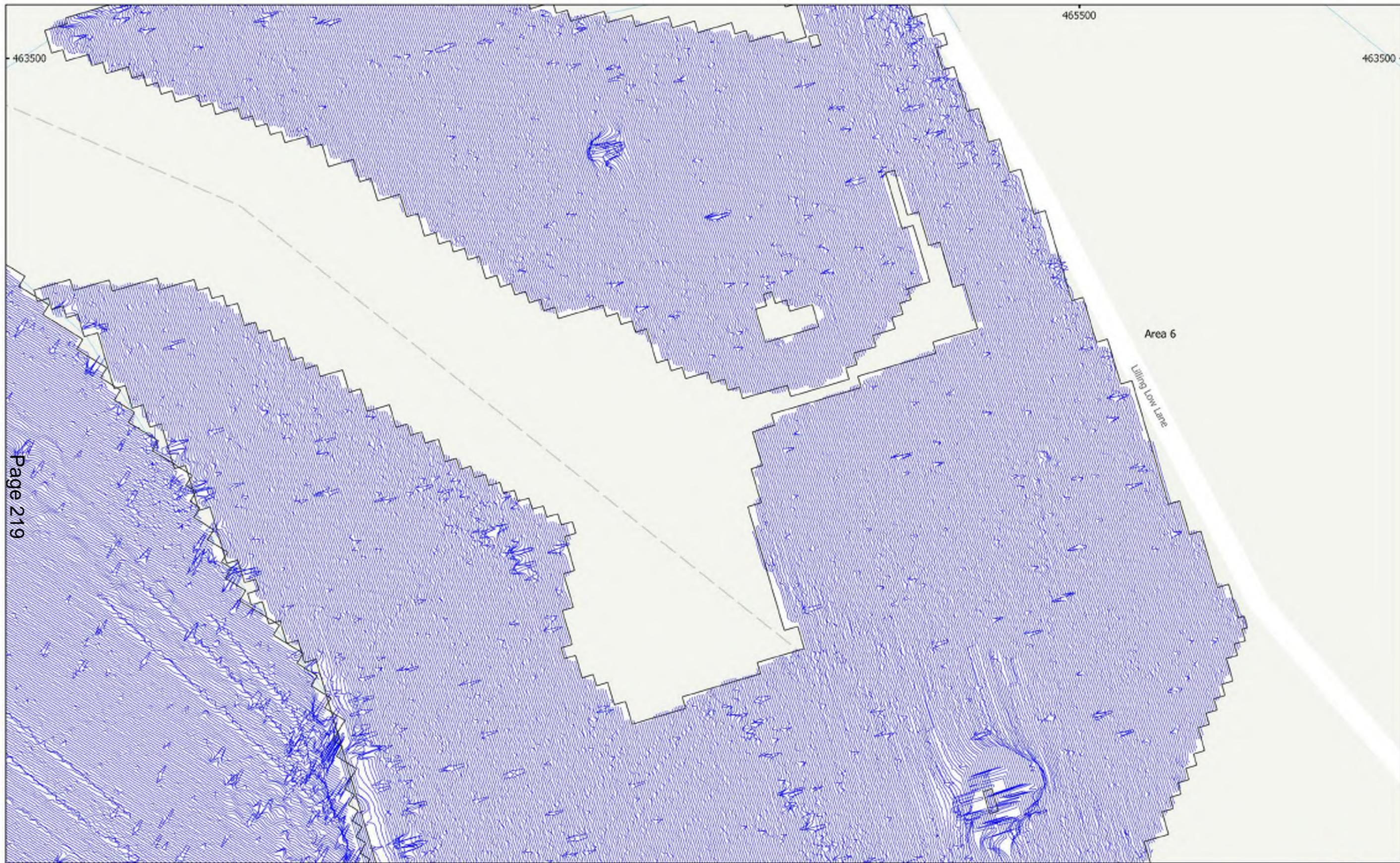




MSSE463 - FAS works on the River Foss, York
 Figure 13 - Magnetic Interpretation (North-East)
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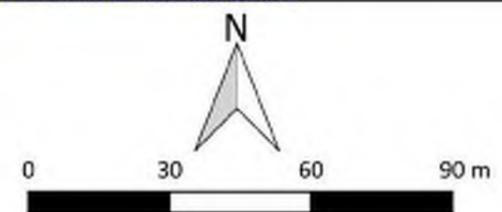
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| Agricultural (Strong) / Drainage Feature | Drainage Feature |
| Magnetic Disturbance | Ferrous (Spike) |
| Ferrous/Debris (Spread) | |
| Palaeochannel / Natural (Spread) | |
| Undetermined (Weak) | |

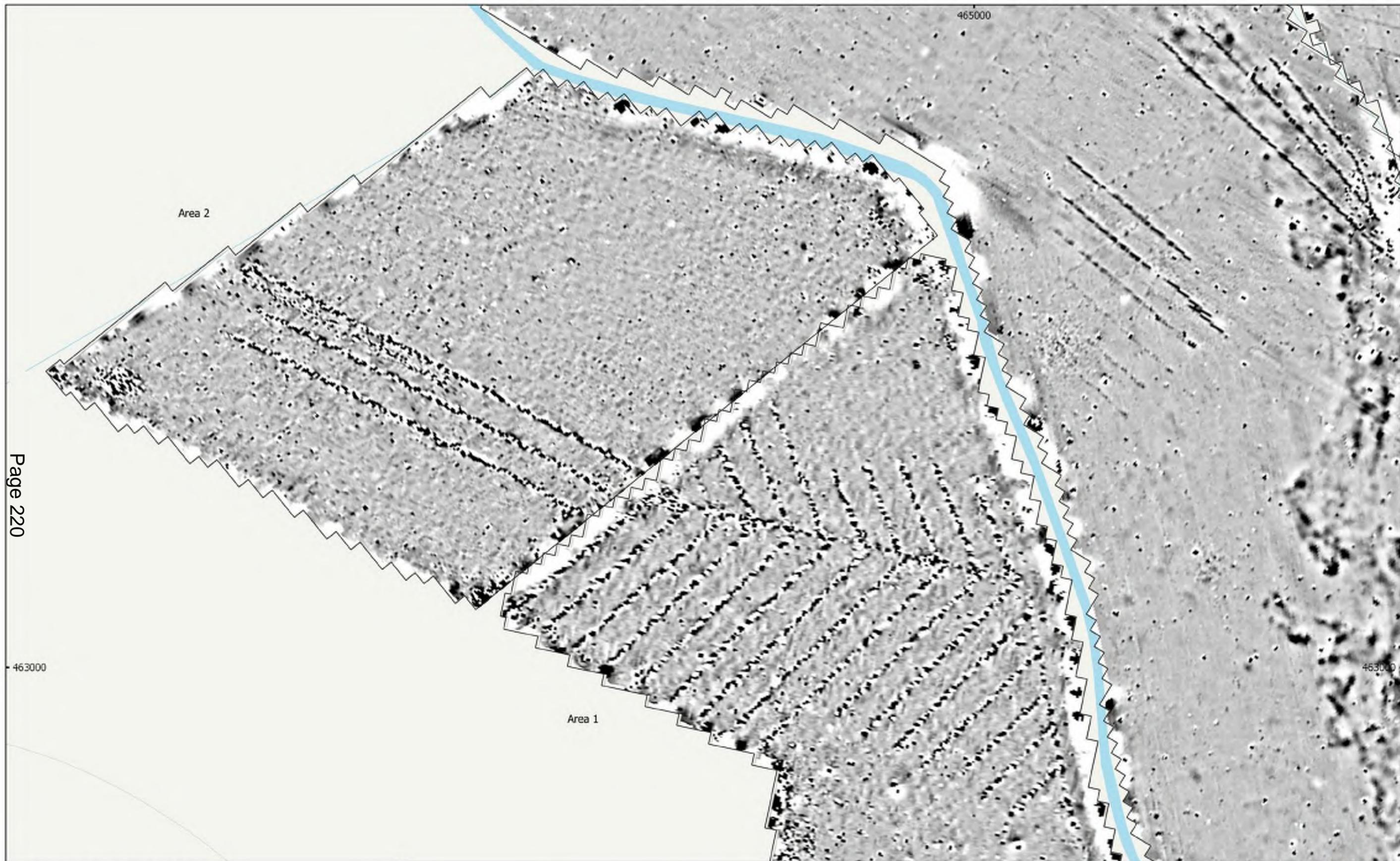




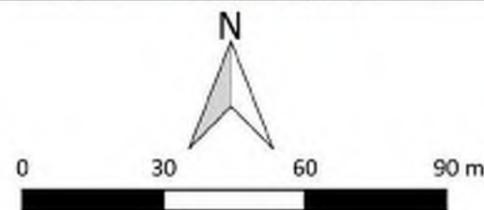
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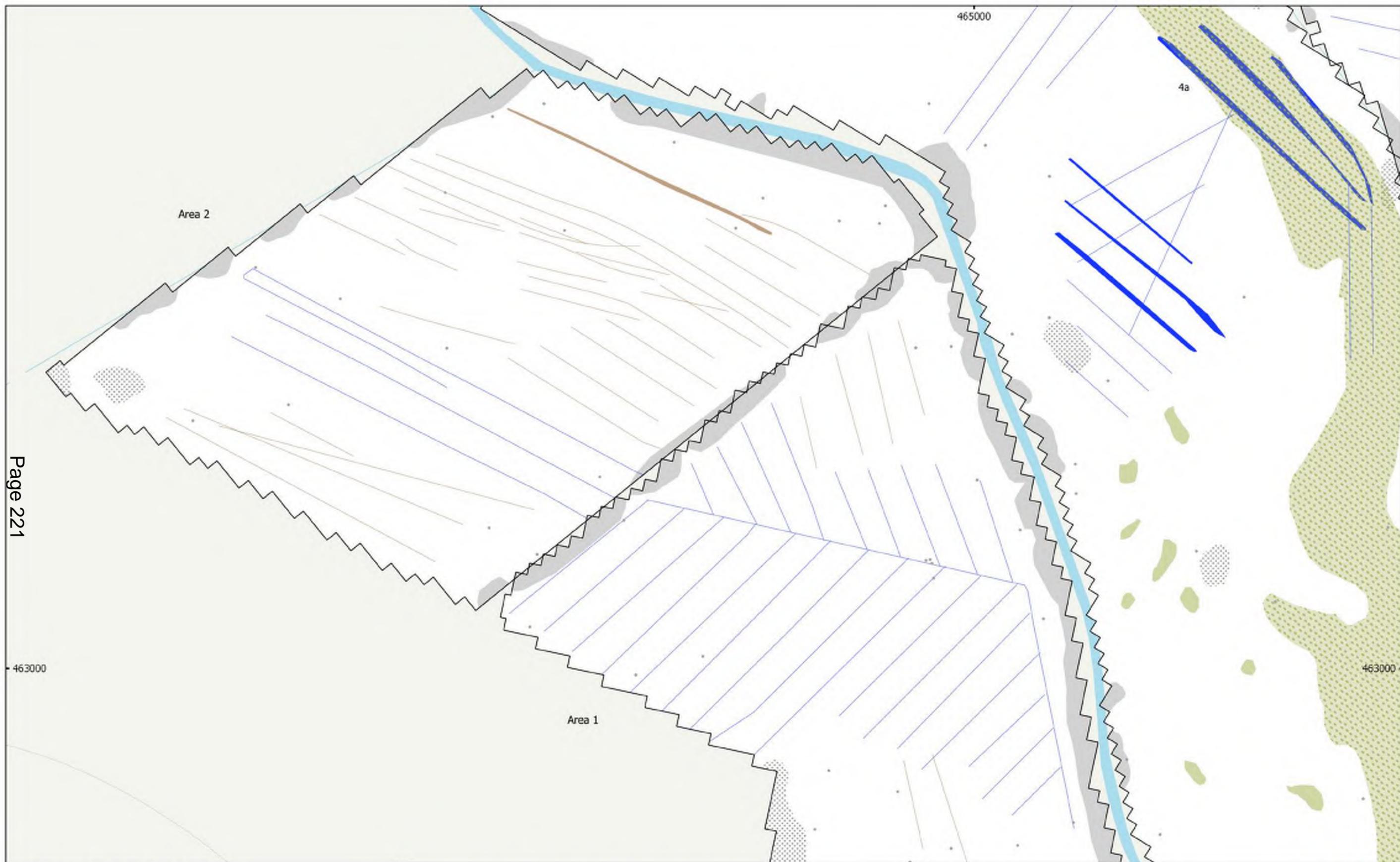
MSSE463 - FAS works on the River Foss, York
Figure 14 - XY Trace Plot (North-East)
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MSSE463 - FAS works on the River Foss, York
 Figure 15 - Magnetic Gradient (West)
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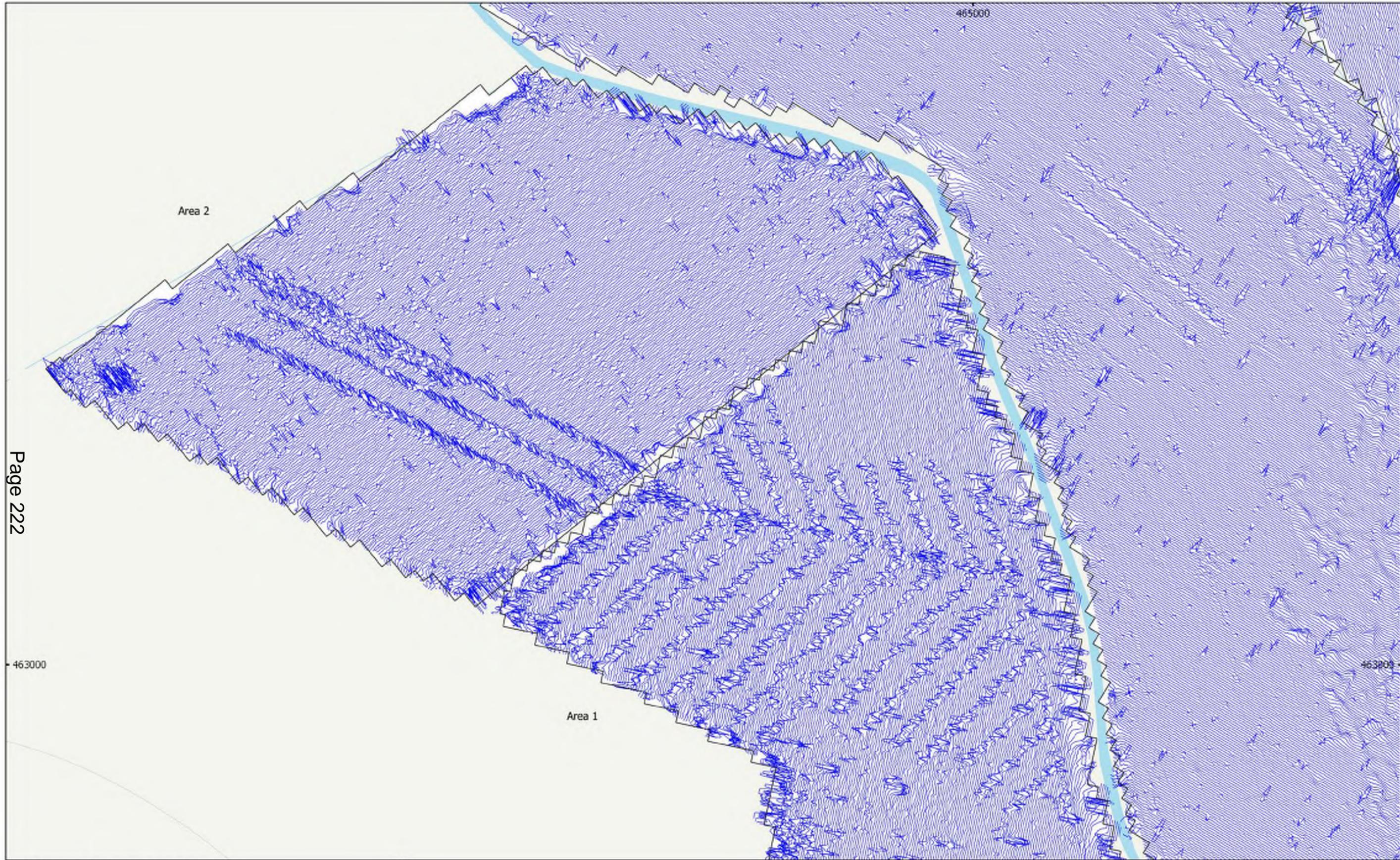


MSSE463 - FAS works on the River Foss, York
 Figure 16 - Magnetic Interpretation (West)
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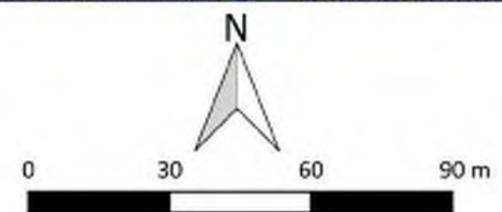
- | | |
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| Agricultural (Strong) / Drainage Feature | Agricultural (Trend) |
| Agricultural (Weak) | Drainage Feature |
| Magnetic Disturbance | Ferrous (Spike) |
| Ferrous/Debris (Spread) | |
| Palaeochannel / Natural (Spread) | |
| Natural (Weak) | |

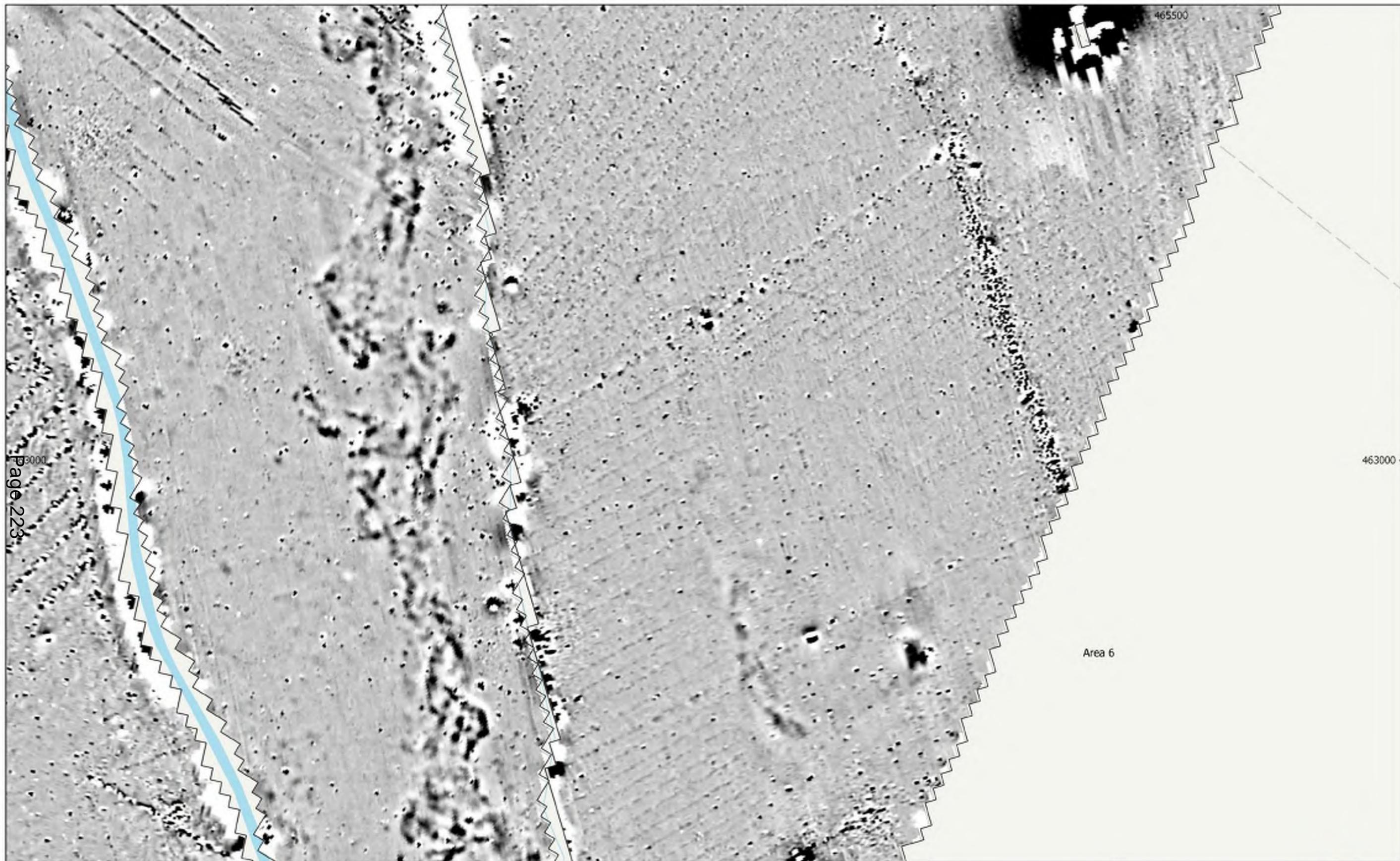


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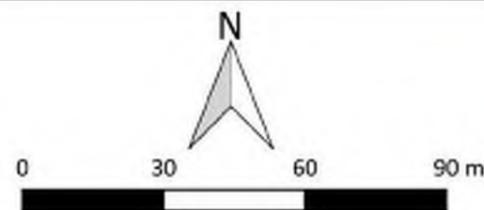
MSSE463 - FAS works on the River Foss, York
Figure 17 - XY Trace Plot (West)
30nT/cm @ 1:1,500 @ A3
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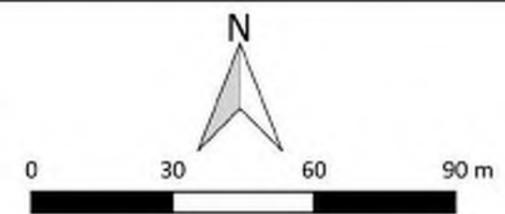
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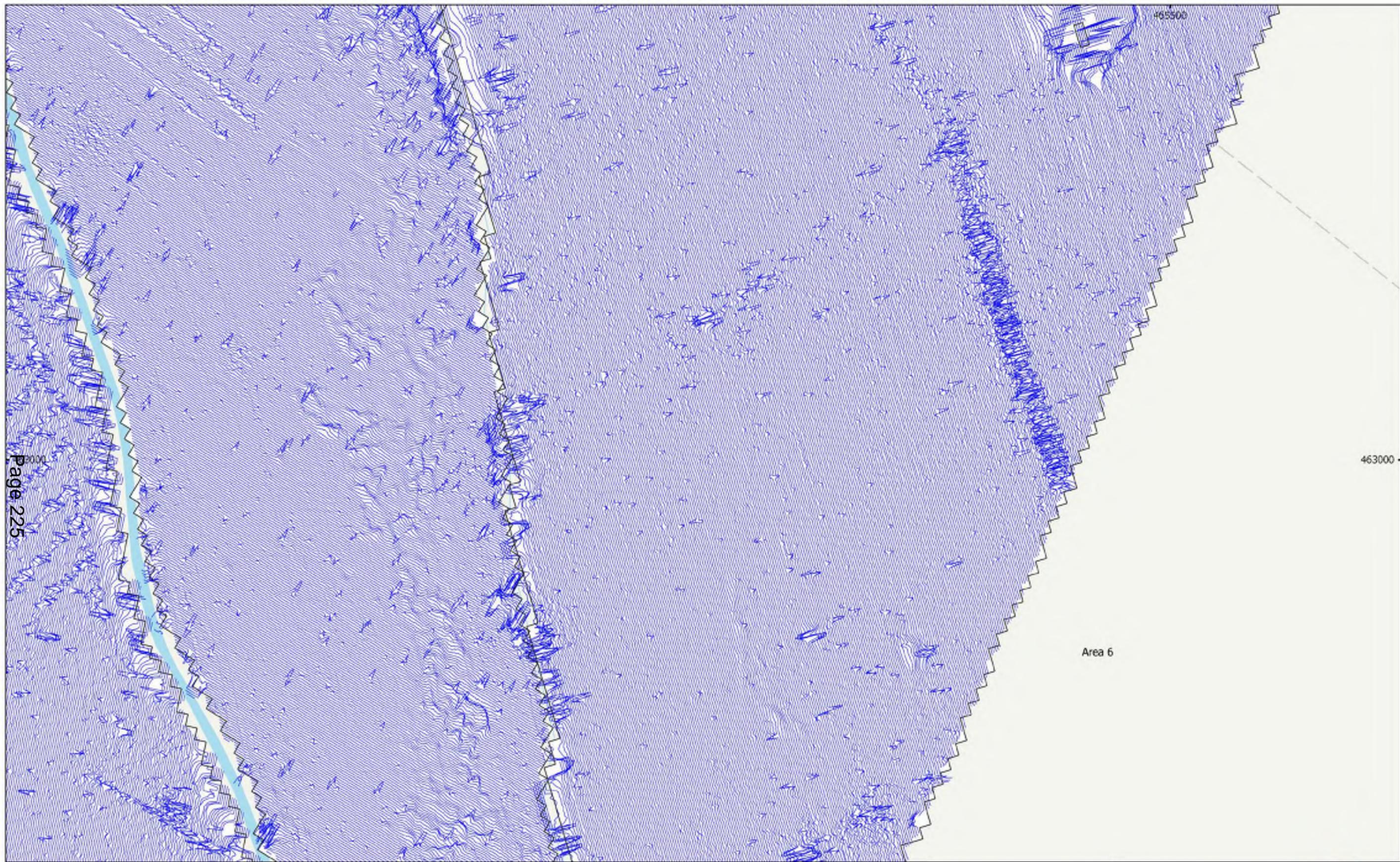
MSSE463 - FAS works on the River Foss, York
Figure 18 - Magnetic Gradient (East)
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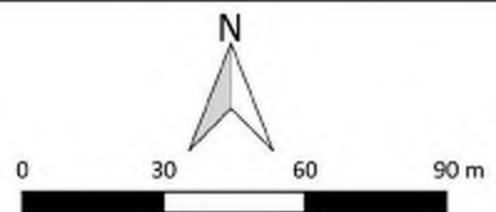


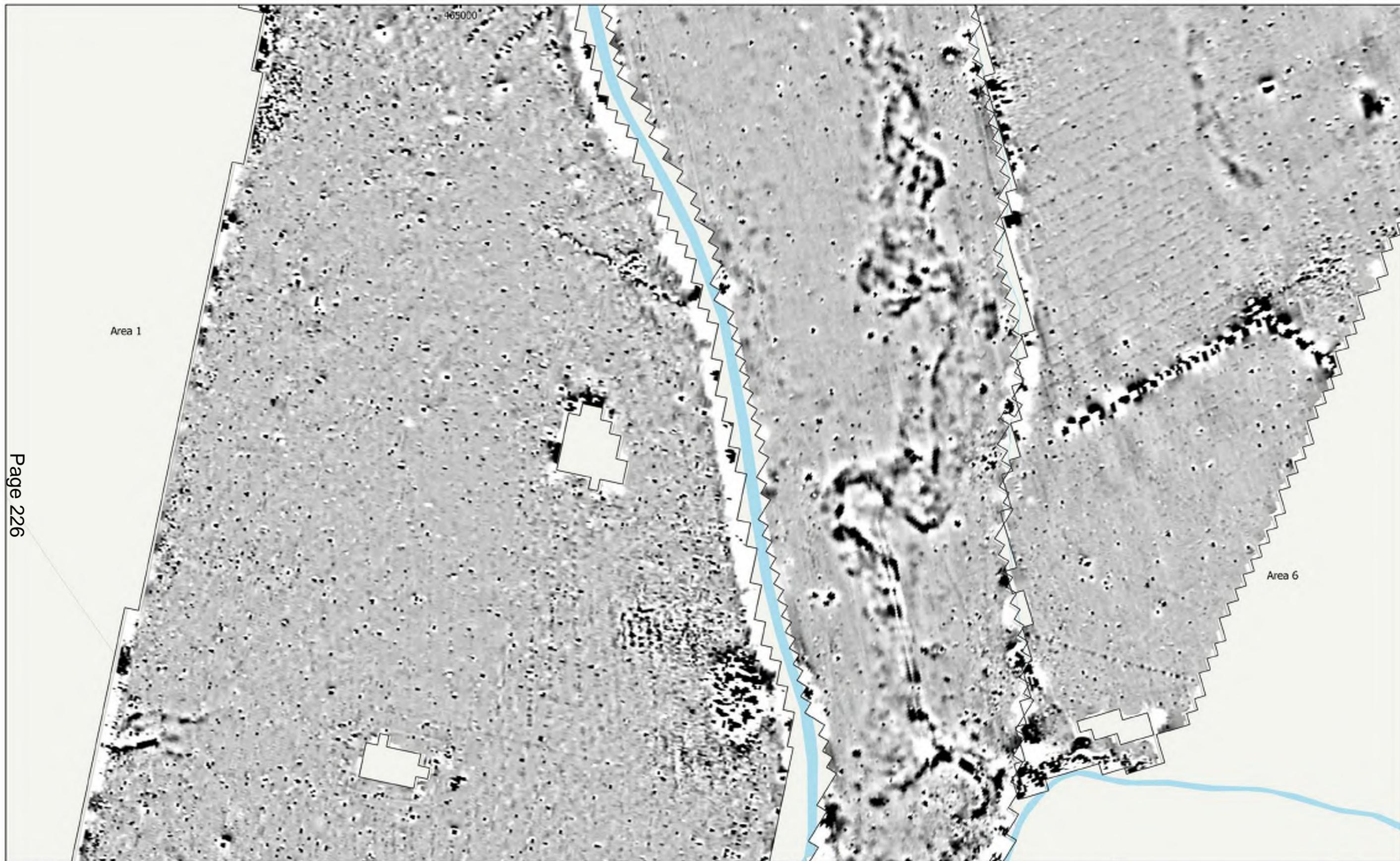
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|---|--|---|---------------------|
|  | Agricultural (Strong) / Drainage Feature |  | Natural (Weak) |
|  | Agricultural (Weak) |  | Undetermined (Weak) |
|  | Magnetic Disturbance |  | Service |
|  | Ferrous/Debris (Spread) |  | Drainage Feature |
|  | Palaeochannel / Natural (Spread) |  | Ferrous (Spike) |
|  | Natural (Strong) | | |



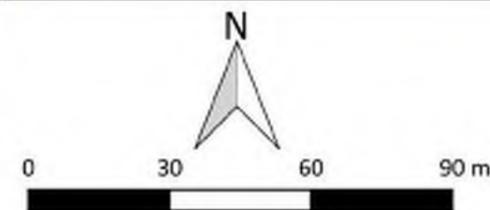


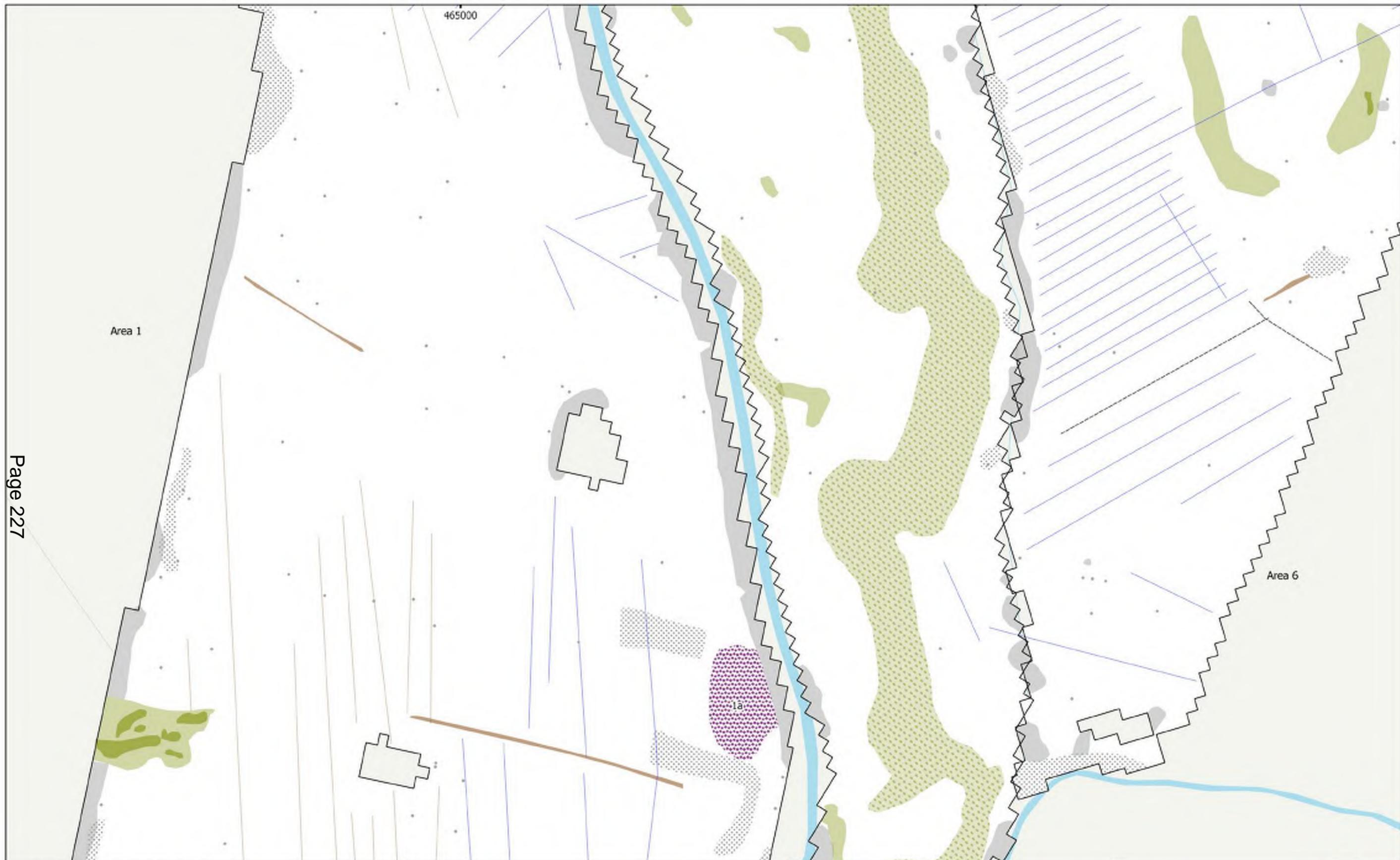
MSSE463 - FAS works on the River Foss, York
Figure 20 - XY Trace Plot (East)
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MSSE463 - FAS works on the River Foss, York
Figure 21 - Magnetic Gradient (Centre)
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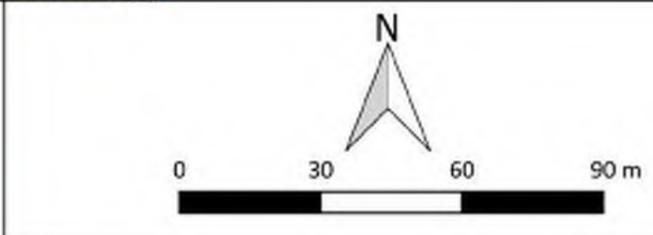


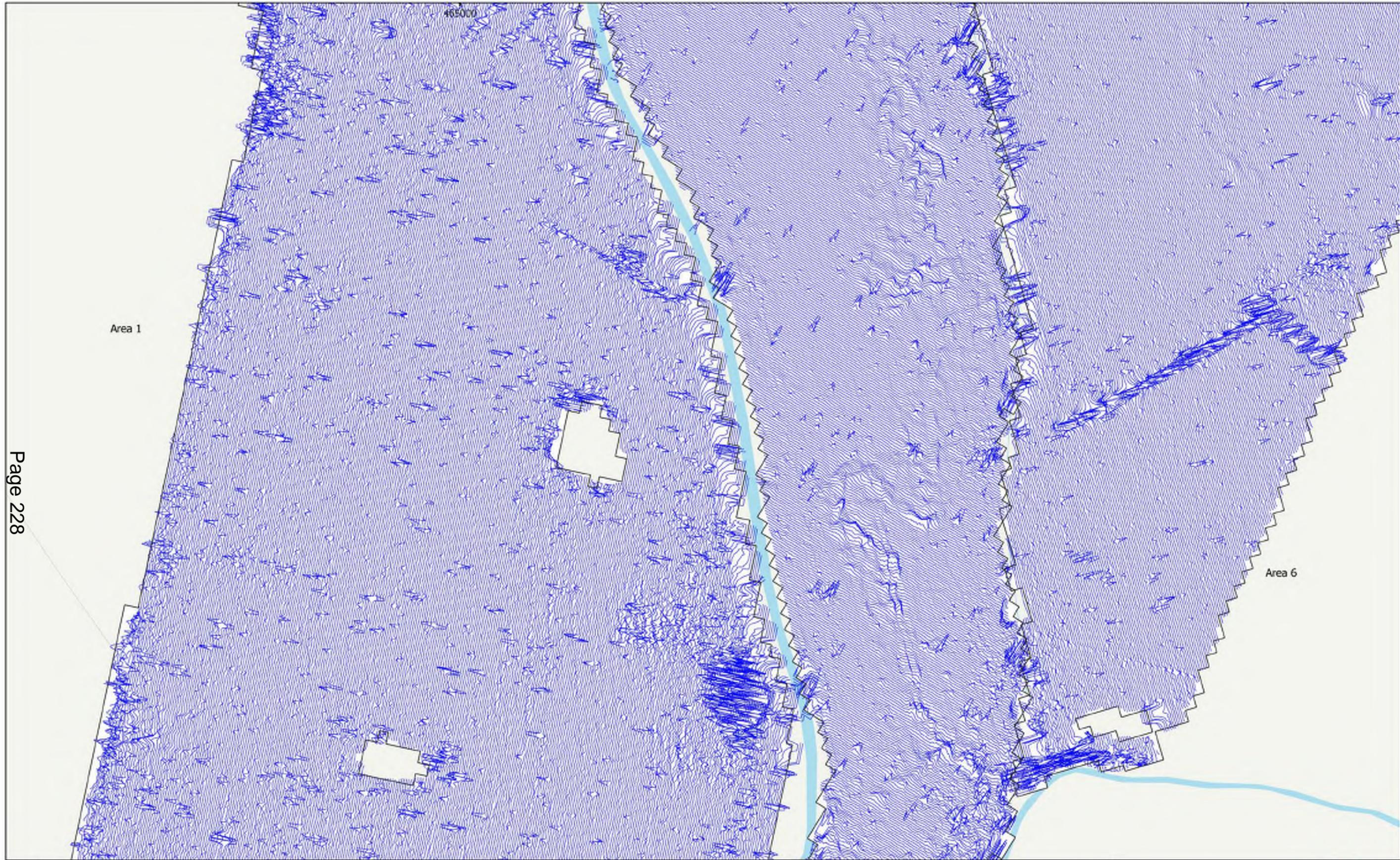


MSSE463 - FAS works on the River Foss, York
 Figure 22 - Magnetic Interpretation (Centre)
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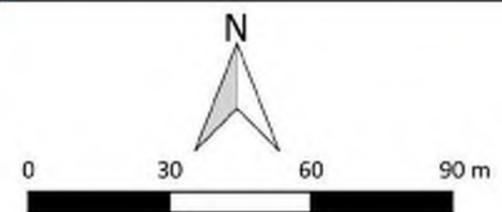
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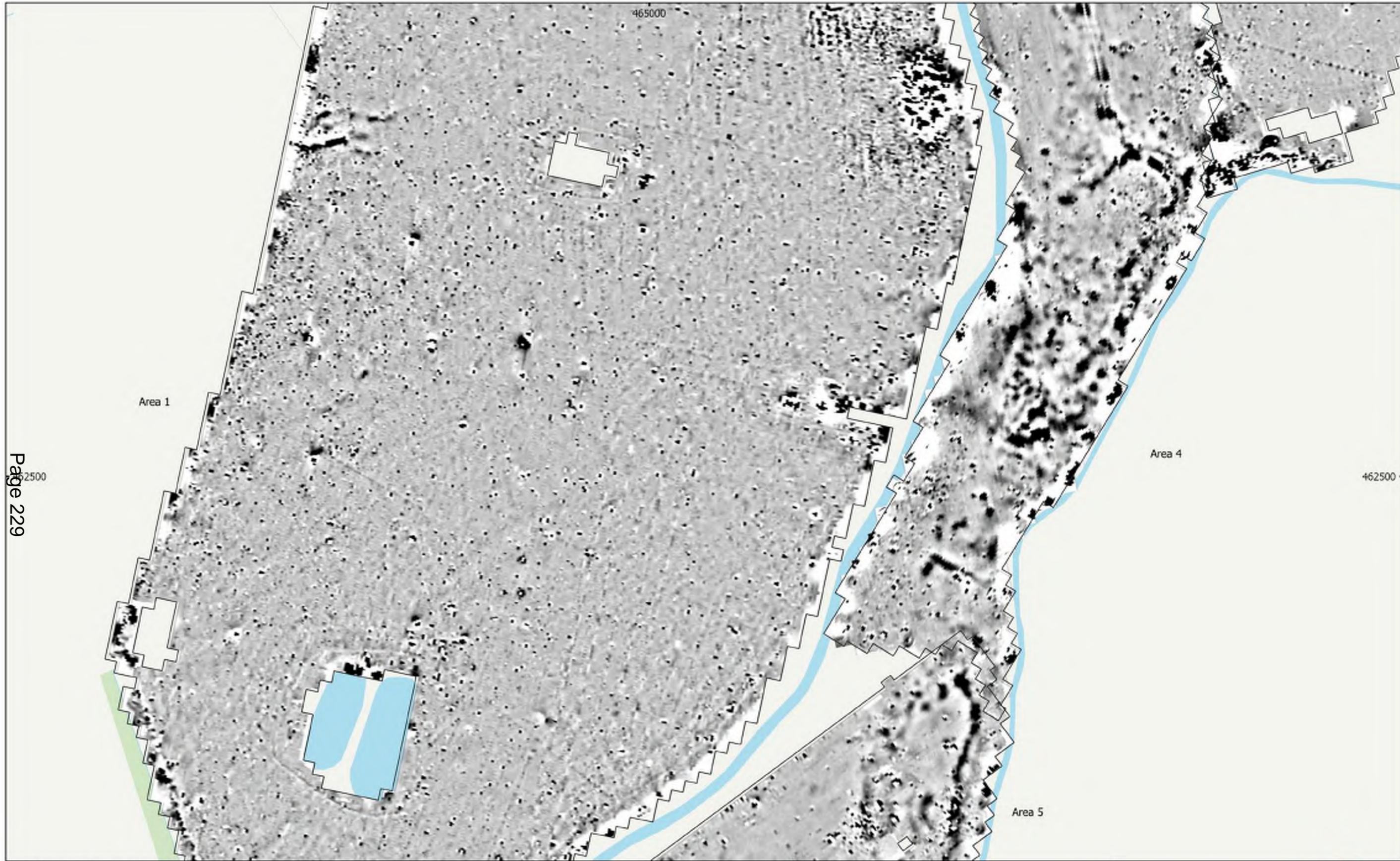
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|----------------------------------|----------------------------|
| Agricultural (Weak) | Industrial/Modern (Spread) |
| Magnetic Disturbance | Agricultural (Trend) |
| Ferrous/Debris (Spread) | Service |
| Palaeochannel / Natural (Spread) | Drainage Feature |
| Natural (Strong) | Ferrous (Spike) |
| Natural (Weak) | |



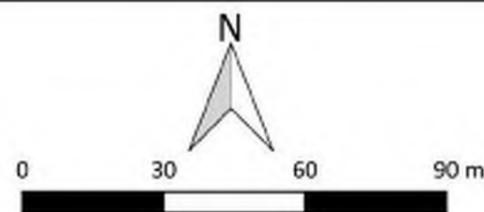


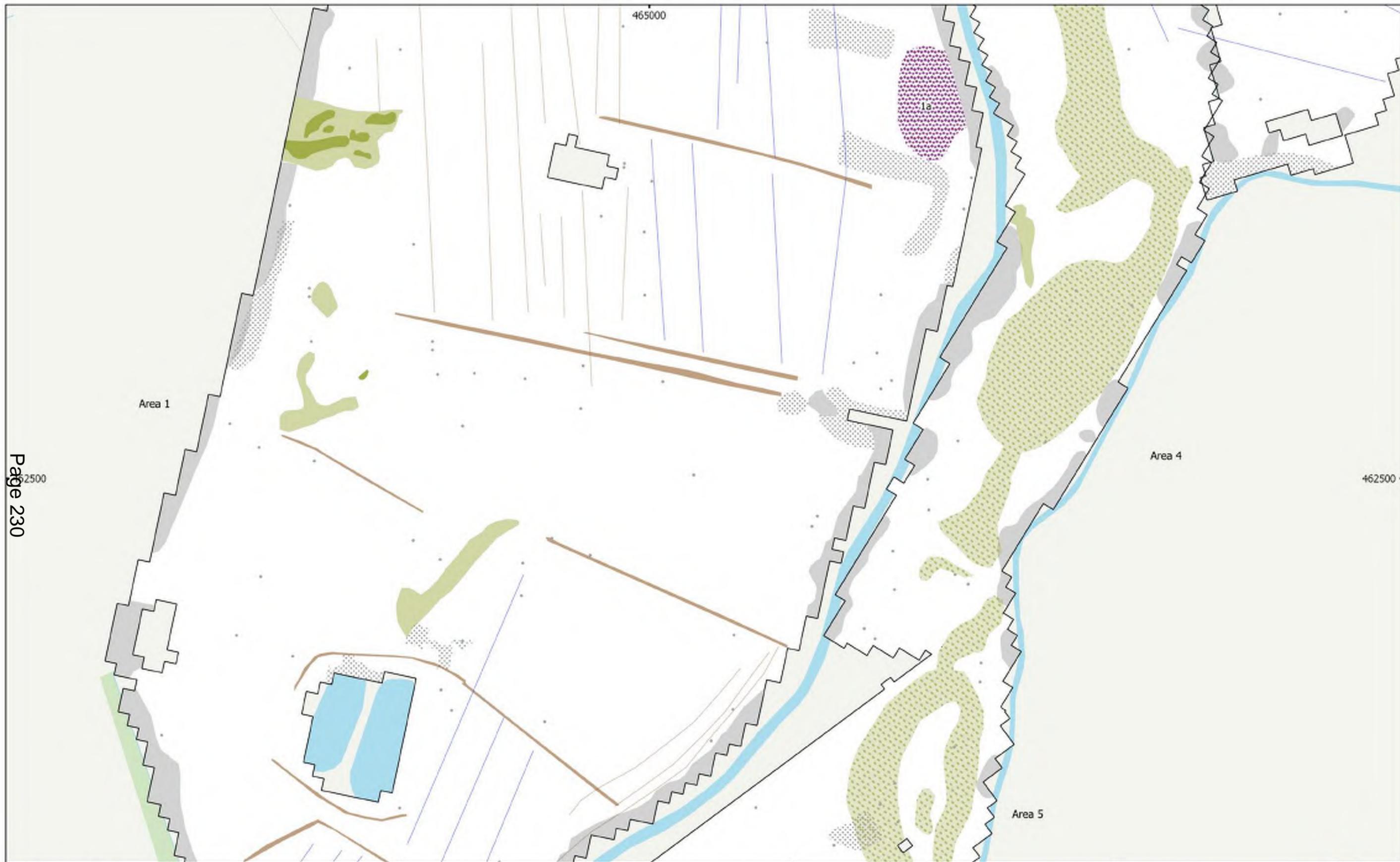
MSSE463 - FAS works on the River Foss, York
 Figure 23 - XY Trace Plot (Centre)
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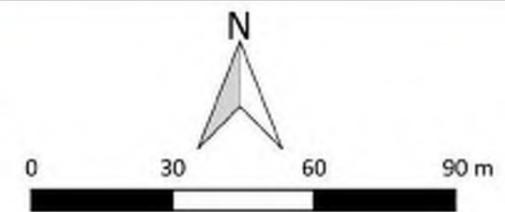
MSSE463 - FAS works on the River Foss, York
 Figure 24 - Magnetic Gradient (South-Centre)
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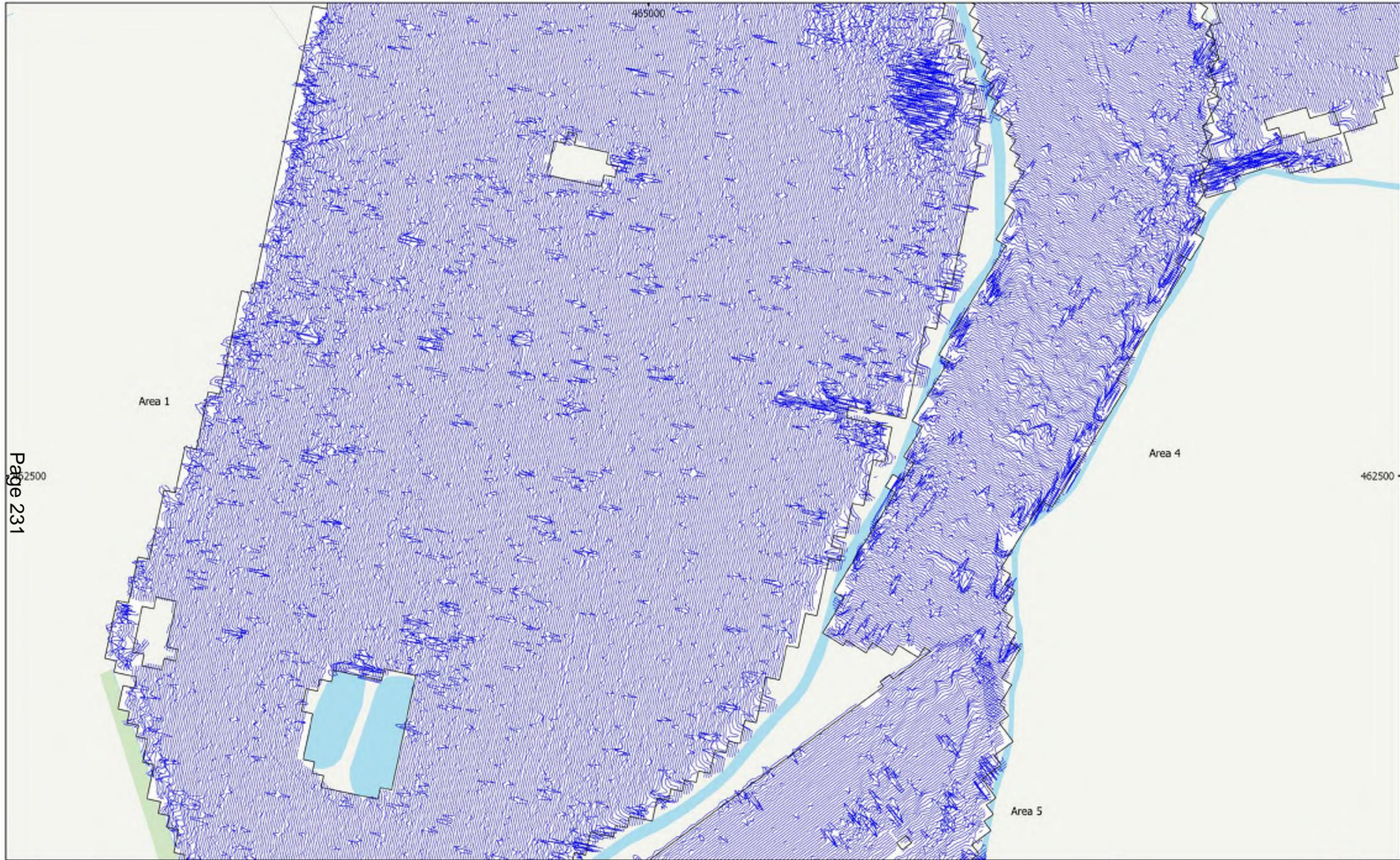




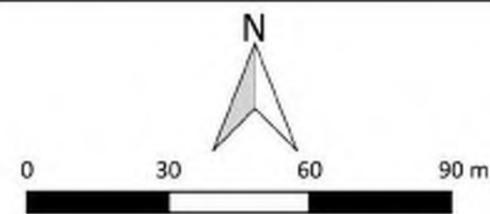
MSSE463 - FAS works on the River Foss, York
 Figure 25 - Magnetic Interpretation (South-Centre)
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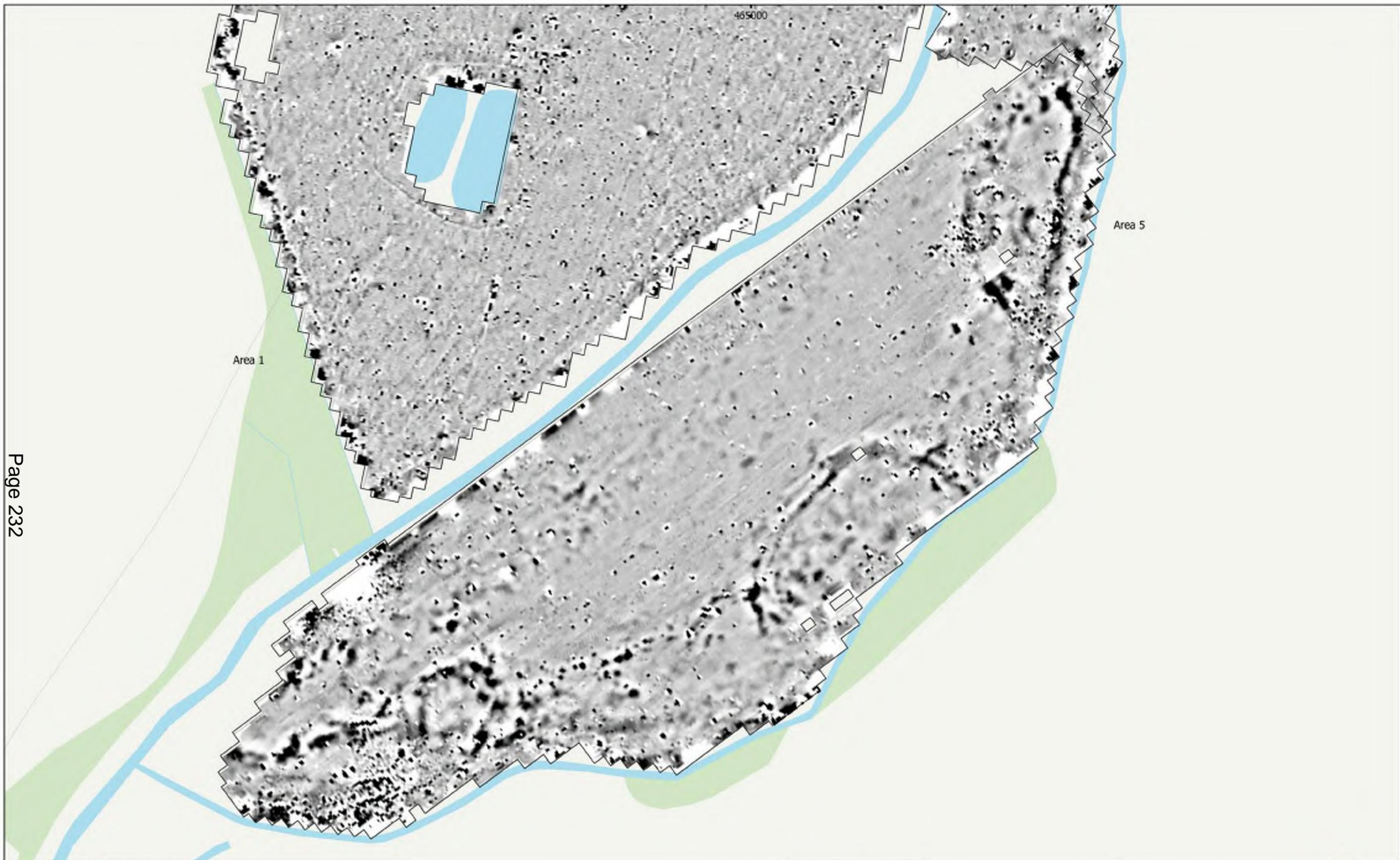
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| Agricultural (Weak) | Natural (Weak) |
| Magnetic Disturbance | Industrial/Modern (Spread) |
| Ferrous/Debris (Spread) | Agricultural (Trend) |
| Palaeochannel / Natural (Spread) | Drainage Feature |
| Natural (Strong) | Ferrous (Spike) |



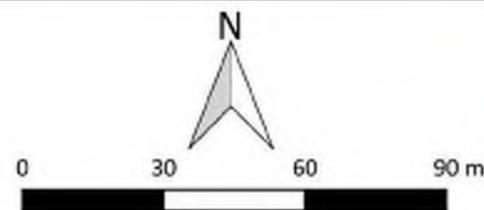


MSSE463 - FAS works on the River Foss, York
 Figure 26 - XY Trace Plot (South-Centre)
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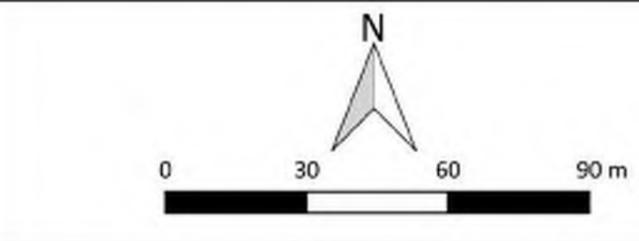
MSSE463 - FAS works on the River Foss, York
Figure 27 - Magnetic Gradient (South)
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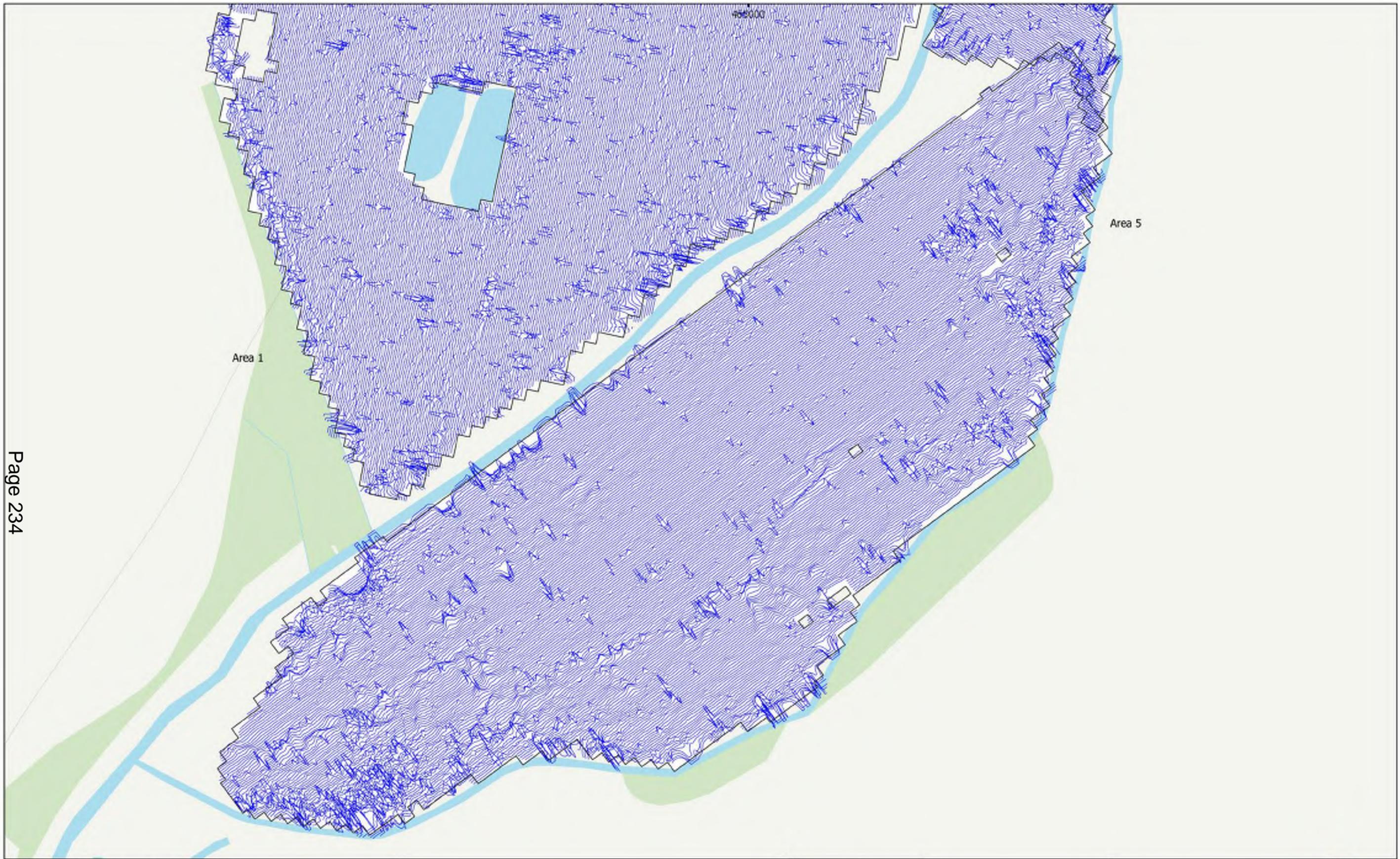




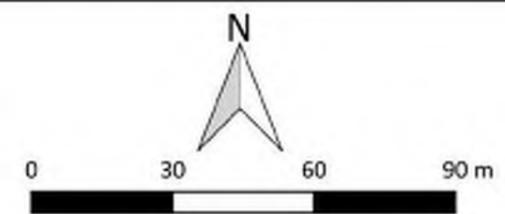
MSSE463 - FAS works on the River Foss, York
Figure 28 - Magnetic Interpretation (South)
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- | | |
|----------------------------------|----------------------|
| Agricultural (Weak) | Agricultural (Trend) |
| Magnetic Disturbance | Drainage Feature |
| Ferrous/Debris (Spread) | Ferrous (Spike) |
| Palaeochannel / Natural (Spread) | |
| Natural (Weak) | |





MSSE463 - FAS works on the River Foss, York
Figure 29 - XY Trace Plot (South)
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SITE	River Foss FMP		
CLIENT NAME	Capita		
YAT PROJECT #	6088, 6130	YAT REPORT #	2019/66
MUSEUM ACCESSION #	N/A	GRID REFERENCE	SE 65024 63189
PLANNING REFERENCE #	N/A	AAI OPS NOTICE #	N/A

TECHNICAL NOTE AND RECOMMENDATIONS FOR FURTHER INVESTIGATION

INTRODUCTION

In 2018, YAT conducted a watching brief on Site Investigation works in support of the York Flood Management Plan for up-stream flood water storage on the River Foss (YAT 2018/135). In March 2019, a 74ha geophysical survey was undertaken by Magnitude Surveys Ltd at the site (MSSE 463). Both pieces of work were undertaken on behalf of Capita at River Foss FMP, NGR SE 65024 63189 (Figure 1).

The purpose of this note is to summarise the findings of both investigations and to make recommendations for further investigation.

PREVIOUS INVESTIGATION: SUMMARY

In August and September 2018, YAT observed the excavation of 21 trial pits in the area (Figure 1). No archaeological features were identified, but in several places alluvial deposits with some degree of organic preservation were observed and interpreted as deriving from either a palaeochannel of the River Foss or from associated flood deposits. These were particularly present in TPs 2, 4, 5, 6, 9, 10, 11, 12 and 18. These appear to follow the former course of the river, with a notable wider spread of deposits at the southern end of the survey, although this could reflect a higher density of test pits in this area.

In March 2019, Magnitude undertook a 74ha geophysical survey of the site (Figure 2). 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.

DISCUSSION: ARCHAEOLOGICAL POTENTIAL

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

There is a high potential for the palaeochannel to preserve waterlogged archaeological remains, including palaeoenvironmental data pertaining to the evolution of the landscape, including anthropogenically-driven change, since the formation of the Foss in the post-glacial period after c.10,000 BC. The organic deposits recorded in the trial pits suggest that the site has the potential to preserve multi-proxy environmental remains such as pollen, plant remains and insects, amongst other organic debris. Additionally, the areas closest to the former river course may preserve any associated settlement activity or waterside structures.

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CLIENT NAME	Capita		
YAT PROJECT #	6088, 6130	YAT REPORT #	2019/66
MUSEUM ACCESSION #	N/A	GRID REFERENCE	SE 65024 63189
PLANNING REFERENCE #	N/A	AAI OPS NOTICE #	N/A

RECOMMENDATIONS

It is likely that the planning authorities will expect a degree of further evaluation across the site and therefore it may be useful to undertake a purposive geoarchaeological borehole survey with sample recovery and selective trial trenching in the areas where the impact is greatest, particularly in the borrow pit areas and the proposed embankment, and especially where these intersect with potential river deposits.

The borrow pits and embankment areas account for c.20ha. A typical percentage-based evaluation trench survey would be very extensive and is not recommended here as the likelihood of archaeology to be present across much of the site is thought to be low.

It is recommended that windowless sleeved borehole transects be cored across the impacted areas in the southern part of the site where the palaeochannel has been identified. This would require up to 2,000m of survey, which would permit broad characterisation of the area using c.30 cores.

If further deposits of interest are identified in the boreholes, are safely accessible and are to be impacted by the proposed scheme, then a limited number of stepped trenches could be excavated in order to better understand the deposits. Environmental samples for further analysis can be recovered from both boreholes, mainly microfossil and radiocarbon age determination, and open-sections in trenches, from which both micro and macrofossil samples as well as material suitable for absolute dating can be recovered.

In addition to the mechanically-driven cores, it is recommended that a hand auger is utilised in selected areas to refine the spread of the alluvial deposits and to provide data for the production of a deposit model for the area.

The remainder of the site is not under threat and should not require further investigation.

It is likely that during construction, a watching brief may be required by the planning authorities. There is also a risk that if the proposed survey identifies significant archaeological remains that will be impacted by the scheme then further archaeological mitigation works, such as excavation, may be required.

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CLIENT NAME	Capita		
YAT PROJECT #	6088, 6130	YAT REPORT #	2019/66
MUSEUM ACCESSION #	N/A	GRID REFERENCE	SE 65024 63189
PLANNING REFERENCE #	N/A	AAI OPS NOTICE #	N/A



Figure 1 Location of 2018 trial pits and potential palaeochannels

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SITE	River Foss FMP		
CLIENT NAME	Capita		
YAT PROJECT #	6088, 6130	YAT REPORT #	2019/66
MUSEUM ACCESSION #	N/A	GRID REFERENCE	SE 65024 63189
PLANNING REFERENCE #	N/A	AAI OPS NOTICE #	N/A

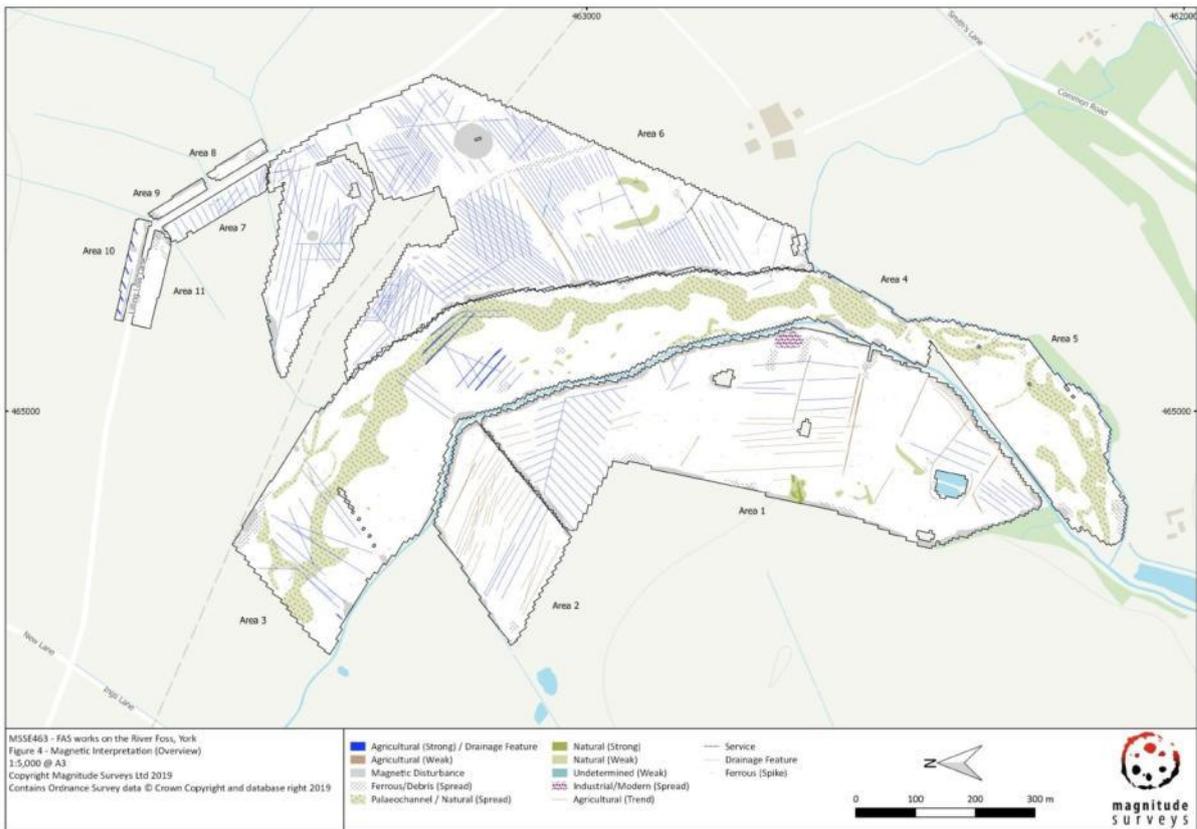


Figure 2 Geophysical interpretation (Magnitude Surveys): note North is to the left

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YORK ARCHAEOLOGICAL TRUST

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL INVESTIGATIONS, YORK FLOOD ALLEVIATION SCHEME, FLOOD CELL 11X STRENSALL: RIVER FOSS FLOOD STORAGE AREA

Site Location: Flood Cell 11X, Strensall
NGR: SE 65024 63189
Proposal: Erection of a new embankment to allow the flood cell to store water during flood events downstream. Excavation of a wetland pond to increase flood storage and act as a borrow pit for supply of earthwork materials.
Planning ref: N/A
Prepared for: Environment Agency
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Version	Approved on behalf of Local Authority by:	
	Curator	Date
1		

1 SUMMARY

- 1.1 As part of the Five Year Flood Management Plan for York (FMP), a new flood embankment is to be constructed at Flood Cell 11X, Strensall (SE 65024 63189). The scheme comprises the construction of a large earthen bank and a wetland pond, which will be used as a borrow pit for the supply of the scheme's materials.
- 1.2 This Written Scheme of Investigation (WSI) has been prepared in response to a Scope of Archaeological Investigations supplied by Stephen Kemp, Principal Archaeologist for the Environment Agency. The work will be carried out in accordance with the scope and this WSI, and according to the principles of the Institute for Archaeology (CIfA) Code of Conduct and all relevant standards and guidance.

2 SITE LOCATION & DESCRIPTION

- 2.1 The proposal site is located within agricultural land on either side of the River Foss, around 2km to the north-east of the village of Strensall (SE 65024 63189) (Figure 1). The area is a low-angle river vale lying between 15.65m AOD and 18.75m AOD. The site is bounded to the north and east by Lilling Low Lane whilst all other sides are bounded by agricultural land. Lilling Green Cottage Farm lies to the north-west of the site, whilst the U-Pass School of Motoring is located to the south-east. The site contains a number of unnamed water courses which appear as field ditches, including Black Dike drain to the south, and the south-western sector contains a small number of ponds.
- 2.2 The bedrock on site is of the Mercia Mudstone Group – Mudstone, sedimentary bedrock formed between 252.2 and 201.3 million years ago during the Triassic Period. Overlying the bedrock, from west to east, are superficial deposits of Sutton Sand Formation – Sand; Alluvium – Clay, silt, sand and gravel, and Alne Glaciolacustrine Formation – Clay silty. The Sutton Sand Formation was formed between 116 thousand years ago and the present during the Quaternary period and is formed of fine-grained silty sand. The Alluvium deposits were formed between 11.8 thousand years ago and the present during the Quaternary period and comprise of silty clay former river channels. The Alne Glaciolacustrine deposits were formed between 116 and 11.8 thousand years ago during the Quaternary period and are formed from laminated clay with silt and subordinate fine-grained sand beds with a little marginal sand and gravel (BGS accessed 27/09/2019).
- 2.3 Trial pits undertaken on the site in 2018 (Slater 2018) recorded the following natural deposits:

Trial Pits	Deposits (m BGL)			
	Sutton Sand Formation	Alluvial clays	Sands containing organic deposits	Glacial Boulder Clay
1	0.39m	0.41m	-	-
2	-	0.35m	1.6m	3m
3	-	0.25m	-	1.7m
4	-	0.3m	1.45m	-

5	-	0.3m	2m	2.8m
7	0.4m	-	-	1.1m
6	-	0.3m	1.4m	2m
8	0.32m	1.1m	-	1.3m
9	-	0.4m	2.2m	2.7m
10	0.3m	1m	3.7m	3.8m
11	-	0.31m	1.2m	2.41m
12	-	0.3m	1.2m	2.2m-
13	-	0.14m	-	-
14	0.44m	0.51m	-	-
15	-	0.37m	-	-
16	0.38m	-	-	2m
17	-	0.37m	-	-
18	0.26m	1.63m	1.71m	-
19	-	0.19m	-	-
20	0.32m	-	-	0.6m
21	0.5m	-	-	0.95m

3 DESIGNATIONS & CONSTRAINTS

- 3.1 There are no Scheduled Monuments or Listed Buildings within the site and it does not lie within a Conservation Area.
- 3.2 The site contains a number of former marl extraction pits now surviving as ponds.
- 3.3 There are overhead high voltage cables (400kv and 11kv) and five pylons crossing the site north of East Lilling Farm.

4 ARCHAEOLOGICAL / HISTORICAL 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 A number of cropmarks have been recorded within 1km of the site (Pastscape.org.uk accessed 16/10/2019) including a possible Bronze Age ring ditch which has been recorded around 500m north-east of the nearest trench (MON ID: 1182912). Other features can be seen close by, including a series of ditches, pits and a small enclosure measuring 10m by 6m (MON ID: 1182932) which could either form part of an Iron Age/Roman settlement, or be associated with the possible Bronze Age ring ditch. Around 300m east of the nearest trench, two parallel ditches of uncertain date were recorded measuring 70m long and 16 apart (MON ID: 1882933). It is thought the ditches could represent a form of boundary or trackway.
- 4.5 As part of the RCHME: Bolesford Project a Roman settlement was recorded to the west of Lilling Green Farm, around 850m to the nearest trench (MON ID: 918532 and 919014). The main part of the settlement was a double ditched enclosure measuring 78m by 71m externally and partitioned internally into compounds of varying sizes. The eastern side of the enclosure formed a boundary with a possible associated field system which was on the same alignment as the enclosure. The morphology of the site suggests a Roman date, and this is backed up by the presence of 4th century pottery in the north-west corner of the enclosure.
- 4.6 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.
- 4.7 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.
- 4.8 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.
- 4.9 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.
- 4.10 A series of geotechnical test pits and boreholes were monitored by YAT in 2018 (Slater 2018). Nothing of archaeological significance was recorded during these works.
- 4.11 A geophysical survey carried out in 2019 (Fortuny & Armstrong) of the site recorded an area characterised by extensive drainage in multiple orientations and patterns, indicating that the area has undergone significant land management. A palaeochannel was also recorded, on a north/south alignment across the centre of the site, characterised by meanders and oxbows.

5 AIMS

- 5.1 The aims of the evaluation are:
- to determine the extent, condition, character, importance and date of any archaeological remains present
 - to provide information that will enable the remains to be placed within their local, regional, and national context and for an assessment of the significance of the archaeology of the proposal area to be made
 - to provide information to enable the local authority to decide any requirements for

further archaeological mitigation for the site

6 EXCAVATION METHODOLOGY

6.1 The evaluation will comprise the following elements:

- Trial trenching
- Borehole monitoring
- Reporting

Please note that further stages of work or other mitigation measures could be required by the local authority, depending upon the results of the evaluation.

- 6.2 15 40m x 2m trenches will be excavated in the locations shown in Figure 2. Trenches will be stepped if necessary to excavate safely whilst ensuring their stated size at the base of the trench.
- 6.3 Should deposits exceed 1.20m in depth a sondage will be excavated at the end of each trench in order to record the lithological sequence. If organic deposits are encountered (silts and organic sands) bulk samples of 20L will be recovered for plant macrofossil and insect assessment if appropriate.
- 6.4 The trench locations will be accurately plotted by measurement to local permanent features shown on published Ordnance Survey maps using a GPS unit. All measurements will be accurate to +/-10cm, and the trenches locatable on a 1:2500 Ordnance Survey map to ensure our interventions can be independently relocated in the future.
- 6.5 Topsoil and subsoil materials will be removed by a mechanical digger fitted with a toothless bucket. Mechanical excavation equipment would be used judiciously, under archaeological supervision down to the top of archaeological deposits, or natural deposits, whichever is first identified. If archaeological material is present machining will cease and excavation will normally proceed by hand. Where deep homogenous deposits, or deposits such as rubble infill, are encountered, these may be carefully removed by machine with the approval of the North Yorkshire County Council (NYCC) Archaeologist and the Environment Agency Archaeologist.
- 6.6 The use of powered digging equipment may sometimes be appropriate to remove hard building materials or deep intrusions such as brick or concrete floors or footings. Powered digging equipment will only be used with the agreement of the North Yorkshire County Council (NYCC) Archaeologist and will not be used to cut arbitrary test pits through archaeological deposits.
- 6.7 All trenches will be sufficiently cleaned by hand to enable potential archaeological features to be identified and recorded. Areas will be recorded as sterile if devoid of archaeological material, the stratigraphic sequence will be recorded after which investigation of those areas will cease.
- 6.8 A sufficient sample of archaeological features and deposits will be stratigraphically excavated in the following manner to fulfil the evaluation aims and objectives:
- Discrete features will initially be half-sectioned, full excavation may follow if deemed necessary or appropriate
 - A minimum 25% proportion of the total length of linear features will be excavated in sections of not less than 1m in length
 - Relationships at junctions, interruptions or terminations of linear features will be sufficiently explored to determine relationships

- Structures will be investigated sufficiently to understand their form, function, extent and morphology, as well as their date and relationships to other features and deposits

7 RECORDING METHODOLOGY FOR EXCAVATION

- 7.1 All archaeological features will be recorded using standardised pro forma record sheets. Plans, sections and elevations will be drawn as appropriate and a comprehensive photographic record will be made where archaeological features are encountered.
- 7.2 Archaeological contexts 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. Sections drawings will be made at 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.
- 7.3 Archaeological contexts will be allocated unique numerical identifiers and described in full on a pro forma context record sheet in accordance with conventional archaeological record methods. All records will be checked and indexes of records compiled.
- 7.4 All site photography will follow accepted archaeological photography guidelines. Work in progress, general views, groups of contexts or features, individual contexts and sections will be digitally photographed.
- 7.5 Areas devoid of archaeological material will be photographed and recorded as being archaeologically sterile. The natural stratigraphic sequence within these areas will be recorded.
- 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 Other samples will be taken, as appropriate, in consultation with York Archaeological Trust 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.
- 7.9 Any human remains discovered will be left in situ, covered and protected pending notification of the discovery to the NYCC Archaeologist and the submission to the Ministry of Justice of an application for excavation. Exhumation of human remains will take place in compliance with environmental health regulations and only with a valid licence from the Ministry of Justice. An osteoarchaeologist will be available to give advice on site.

- Any **disarticulated** human remains discovered will be recovered and removed in appropriate packaging.
- Any **articulated** human remains that are found will be excavated in accordance with recognised guidelines (see 7.10) and retained for assessment.
- Any grave goods or coffin furniture will be retained for further assessment.

7.10 Human remains will be removed in accordance with the Burial Act 1857 and the Ministry of Justice exhumation licence, and with the guidance of CIfA Technical Paper 13 (1993) and APABE (2017).

8 GEOARCHAEOLOGICAL BOREHOLES

- 8.1 A total of 23 boreholes will be drilled to a depth of 5m BGL with a terrier rig, with material recovered in 1m plastic sleeves. The cores will be split at T&PA facilities and recorded by a geoarchaeologist using the Troels-Smith (1955) system of sediment classification (Appendix 1). The scheme breaks down a sediment sample into four main components and allows the inclusion of extra components that are also present, but that are not dominant. Key physical properties of the sediment layers are darkness (Da), stratification (St), elasticity (EI), dryness of the sediment (Sicc) and the sharpness of the upper sediment boundary (UB). A summary of the sedimentary and physical properties classified by Troels-Smith (1955) and a stratigraphic breakdown of the deposits will be recorded on proforma log sheets. The logs will be supplemented by digital photography.
- 8.2 All borehole locations will be located using a Leica GNSS to National Grid co-ordinates and Ordnance Datum. The boreholes records will be entered into the existing Rockworks deposit model.
- 8.3 A total of four cores will be retained and stored until a planning decision has been made. If appropriate, they will then be subsampled for microfossil (i.e pollen). The remaining cores will be stored for a maximum of one year after which time discard permission will be sought. Grab samples may also be recovered from the trenches in order to characterise the Alne deposits. The sampling methodology, processing and recording will be undertaken within the guidelines laid out by Historic England (2002a and b).
- 8.4 A strategy for palaeoenvironmental assessment will be designed once the results of the fieldwork are known. This will be carried out in conjunction with radiocarbon dating in order to provide a baseline understanding of the depositional sequence, the preservation of palaeoenvironmental remains and the significance of the site.

9 SPECIALIST ASSESSMENT

- 9.1 The stratigraphic information, artefacts, soil samples, and residues will be assessed as to their potential and significance for further analysis and study. The material will be quantified (counted and weighted). Specialists will undertake a rapid scan of all excavated material. Ceramic spot dates will be given. Appropriately detailed specialist reports will be included in the report.
- 9.2 Materials considered vulnerable should be selected for stabilisation after specialist recording. Where intervention is necessary, consideration must be given to possible investigative procedures (e.g. glass composition studies, residues on or in pottery, and mineral-preserved organic material). Allowance will be made for preliminary conservation and stabilization of all objects and

a written assessment of long-term conservation and storage needs will be produced. Once assessed, all material will be packed and stored in optimum conditions, in accordance with Watkinson and Neal (1998), ClfA (2014) and Museums and Galleries (1992).

- 9.3 All finds will be cleaned, marked and labelled as appropriate, prior to assessment. For ceramic assemblages, any recognised local pottery reference collections and relevant fabric Codes will be used.
- 9.4 Allowance will be made for the recovery of material suitable for scientific dating and contingency sums will be made available to undertake such dating, if necessary. This will be decided in consultation with Jennifer Morrison, Senior Archaeologist for the Environment Agency and the NYCC Archaeologist.

10 REPORT & ARCHIVE PREPARATION

- 10.1 An initial summary and recommendations will be submitted to the Environment Agency within two weeks of the completion of the site work.
- 10.2 Upon completion of the site work, 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 detailed results of the operation, describing structural data, archaeological features, associated finds and environmental data, and a conclusion and discussion.
 - d) A selection of photographs and drawings, including a detailed plan of the site accurately identifying the areas monitored, borehole and trench locations, selected feature drawings, and selected artefacts, and individual trench plans and sections.
 - e) Specialist artefact and environmental reports where undertaken, and a context list/index.
 - f) Details of archive location and destination (with accession number, where known), together with a context list and 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
- 10.3 A final report on the investigations will be expected by the 1st January 2020 unless otherwise agreed.
- 10.4 The report will be submitted in digital format to the commissioning body as well as direct to the NYCC Archaeologist for planning purposes and inclusion into the HER.
- 10.5 A field archive will be compiled consisting of all primary written documents, plans, sections and photographs. Catalogues of contexts, finds, soil samples, plans, sections and photographs will be produced. York Archaeological Trust will liaise with the Yorkshire Museum prior to the commencement of fieldwork to establish the detailed curatorial requirements of the museum and

discuss archive transfer and to complete the relevant museum forms. The relevant museum curator would be afforded access to visit the site and discuss the project results.

- 10.6 The owner of the Intellectual Property Rights (IPR) in the information and documentation arising from the work, would grant a licence to the Local Authority 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.
- 10.7 Upon completion of the project an OASIS form will be completed at <http://ads.ahds.ac.uk/project/oasis/>.

11 POST-EXCAVATION ANALYSIS & PUBLICATION

- 11.1 The information contained in the evaluation report may enable decisions to be taken regarding the future treatment of the archaeology of the development site and any material recovered during the evaluation.
- 11.2 If further archaeological investigations (mitigation) take place, any further analyses (as recommended by the specialists, and following agreement with the NYCC Archaeologist may be incorporated into the post-excavation stage of the mitigation programme unless such analysis are required to provide information to enable a suitable mitigation strategy to be devised. Such analysis will form a new piece of work to be commissioned.
- 11.3 In the event that no further fieldwork takes place on the site, a full programme of post-excavation analysis and publication of artefactual and scientific material from the evaluation may be required by the NYCC Archaeologist. Where this is required, this work will be a new piece of work to be commissioned.
- 11.4 If further site works do not take place, allowance will be made for the preparation and publication in a local and/or national journal of a short summary on the results of the evaluation and of the location and material held within the site archive.

12 HEALTH AND SAFETY

- 12.1 Health and safety issues will take priority over archaeological matters and all archaeologists will comply with relevant Health and Safety Legislation.
- 12.2 A Risk Assessment will be prepared prior to the start of site works.

13 PRE-START REQUIREMENTS

- 13.1 The client will be responsible for ensuring site access has been secured prior to the commencement of site works, and that the perimeter of the site is secure.
- 13.2 The client will provide York Archaeological Trust with up to date service plans and will be responsible for ensuring services have been disconnected, where appropriate.

- 13.3 The client will be responsible for ensuring that any existing reports (e.g. ground investigation, borehole logs, contamination reports) are made available to York Archaeological Trust prior to the commencement of work on site.

14 REINSTATEMENT

- 14.1 Following excavation and recording the spoil from the trenches will be backfilled unless requested otherwise. The backfill material will be levelled and compressed as far as possible with the mechanical excavator bucket, but will not be compressed to a specification. York Archaeological Trust are not responsible for reinstating any surfaces, including reseeding, unless specifically commissioned by the client who will provide a suitable specification for the work.

15 TIMETABLE & STAFFING

- 15.1 The timetable will be agreed with the client.

- 15.2 Specialist staff available for this work:

- Human Remains – Malin Holst, York Osteology Ltd
- Palaeoenvironmental remains – John Carrott, Palaeoecology Research Services Ltd
- Head of Curatorial Services – Christine McDonnell, YAT
- Finds Researcher – Nicky Rogers, Freelance
- Pottery Researcher – Anne Jenner, YAT
- Finds Officers – Nienke Van Doorn, YAT
- Archaeometallurgy & Industrial Residues – Rachel Cubitt and Dr Rod Mackenzie, Freelance
- Conservation – Ian Panter, YAT

16 MONITORING OF ARCHAEOLOGICAL FIELDWORK

- 16.1 As a minimum requirement, the NYCC Archaeologist and Environment Agency Archaeologist will be given at least one week's notice of work commencing and will be informed prior to completion on site. Any changes to this WSI may only be made with the written approval of the NYCC Archaeologist and Environment Agency Archaeologist. The NYCC Archaeologist and Environment Agency Archaeologist will be afforded opportunity to visit the site during the works to inspect the site and the archaeological recording, and discuss the project and any further mitigation requirements. York Archaeological Trust will notify the NYCC Archaeologist and Environment Agency Archaeologist of any significant archaeological discoveries that are made during the course of the project.

- 16.2 With the client's agreement illustrated notices may be displayed on site to explain the nature of the works.

17 COPYRIGHT

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

18 BIBLIOGRAPHY

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For current Historic England guidance documents see:

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

<https://historicengland.org.uk/advice/technical-advice/archaeological-science/>

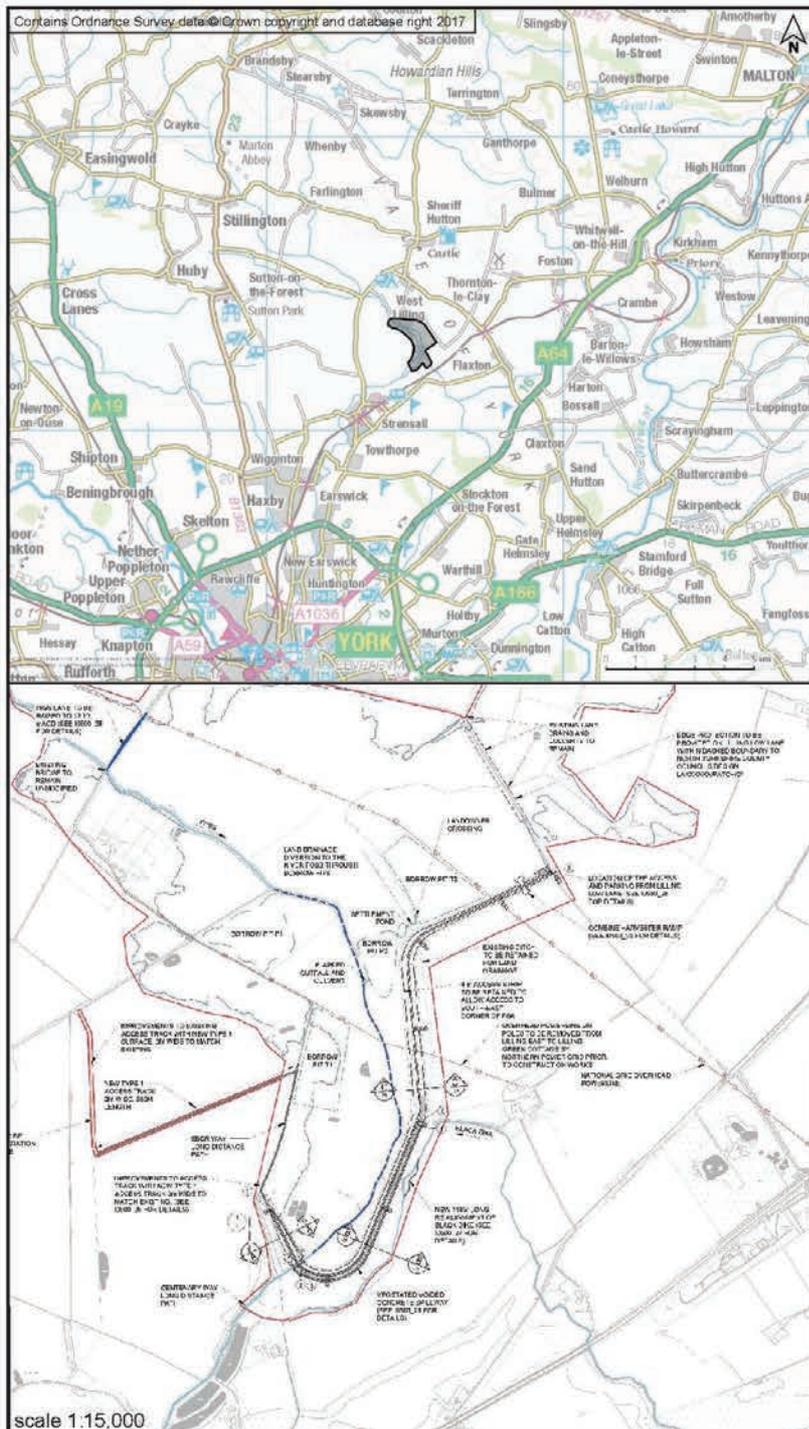
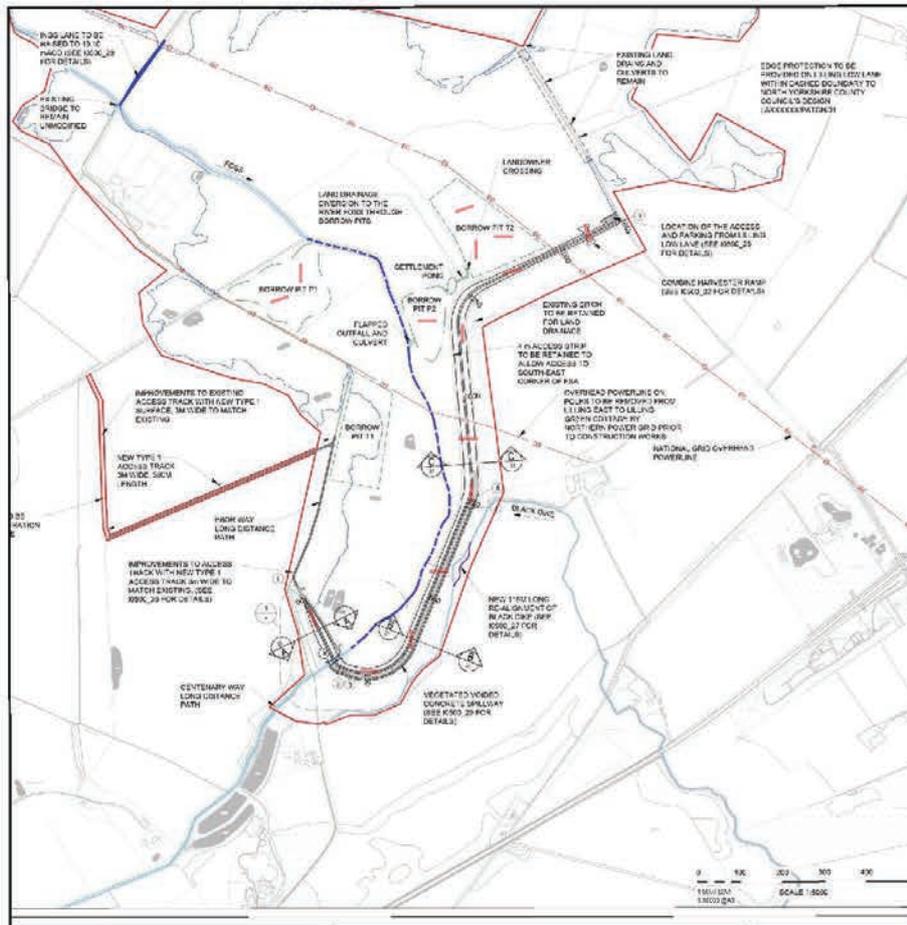


Figure 1 Site location and proposed works
 (taken from clients plan: ENV000381C-CAA-00-00-DR-C-10500-23 GA)



Trench (40m x 2m)

scale 1:15,000

Figure 2 Trench Locations
(taken from clients plan: ENV0000381C-CAA-00-00-DR-C-10500_23)

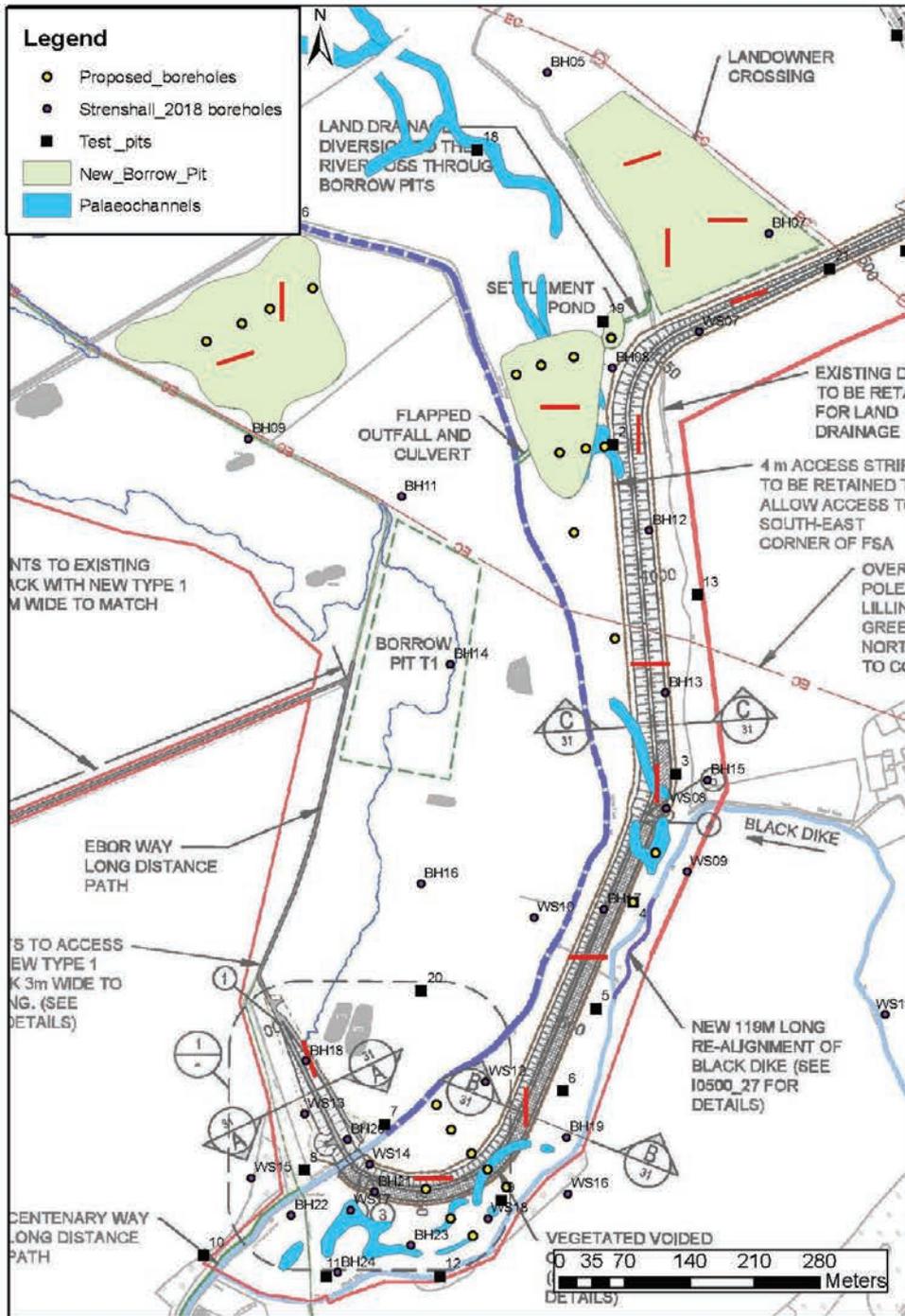


Figure 3 Borehole locations

APPENDIX 1 – BOREHOLE RECORDING METHODOLOGY

Darkness	Degree of Stratification	Degree of Elasticity	Degree of Dryness
nig.4 black	strf. well stratified	elas. very elastic	sicc. very dry
nig.3	strf.	elas.	sicc.
nig.2	strf.	elas.	sicc.
nig.1	strf.	elas.	sicc.
nig.0 white	strf. no stratification	elas. no elasticity	sicc. water

Sharpness of Upper Boundary	
lim.	< 0.5mm
lim.	< 1.0 & > 0.5mm
lim.	< 2.0 & > 1.0mm
lim.	< 10.0 & > 2.0mm
lim.	> 10.0mm

	<i>Sh</i>	<i>Substantia humosa</i>	Humous substance, homogeneous microscopic structure
<i>I Turfa</i>	<i>Tb</i>	<i>T. bryophytica</i>	Mosses +/- humous substance
	<i>Tl</i>	<i>T. lignosa</i>	Stumps, roots, intertwined rootlets, of ligneous plants
	<i>Th</i>	<i>T. herbacea</i>	Roots, intertwined rootlets, rhizomes of herbaceous plants
<i>II Detritus</i>	<i>Dl</i>	<i>D. lignosus</i>	Fragments of ligneous plants >2mm
	<i>Dh</i>	<i>D. herbosus</i>	Fragments of herbaceous plants >2mm
	<i>Dg</i>	<i>D. granosus</i>	Fragments of ligneous and herbaceous plants <2mm >0.1mm
<i>III Limus</i>	<i>Lf</i>	<i>L. ferrugineus</i>	Rust, non-hardened. Particles <0.1mm
<i>IV Argilla</i>	<i>As</i>	<i>A. steatodes</i>	Particles of clay
	<i>Ag</i>	<i>A. granosa</i>	Particles of silt
<i>V Grana</i>	<i>Ga</i>	<i>G. arenosa</i>	Mineral particles 0.6 to 0.2mm
	<i>Gs</i>	<i>G. saburralia</i>	Mineral particles 2.0 to 0.6mm
	<i>Gg(min)</i>	<i>G. glareosa minora</i>	Mineral particles 6.0 to 2.0mm
	<i>Gg(maj)</i>	<i>G. glareosa majora</i>	Mineral particles 20.0 to 6.0mm
	<i>Ptm</i>	<i>Particulaetestaemolioscorum</i>	Fragments of calcareous shells

Physical and sedimentary properties of deposits according to Troels-Smith (1955)



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

River Foss Flood Storage Area
Transport Statement
Addendum
May 2020



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1. Introduction

1.1 Purpose

- 1.1.1 This document is an addendum to the Transport Statement submitted with the original applications to Ryedale District Council (ref: 19/01263/MFULE) and City of York Council (ref: 19/02463/FULM) seeking full planning permission for a Flood Storage Area on the River Foss.
- 1.1.2 The document contains revised and updated details of the nature and management of the construction traffic associated with the development.
- 1.1.3 The revisions to the document were initiated by comments made by North Yorkshire County Council (NYCC) highways office in their consultation response.
- 1.1.4 Following these comments a review was undertaken by the applicant of the construction material requirements of the scheme given that the scheme was no longer able to proceed on the originally envisaged timetable partly due to delays that have and will result from the national COVID-19 emergency.
- 1.1.5 This document supersedes the applicant's response submitted in response to the NYCC highway consultation comments and updates the appropriate parts of the originally submitted Transport Statement as discussed further below.

2. Impact of Scheme Delays

- 2.1.1 The applicant's review concentrated on the need for the contingency element of imported clay that could be required at the start of the construction process should there be any delays in obtaining appropriate amounts of clay from the on-site borrow pits.
- 2.1.2 The original proposal included a quantity of clay material (circa 2,300cu.m.) proposed to be imported if necessary at the early stage of the construction phase. This amount of imported fill was always a 'worst-case' scenario but was necessary as a contingency against any on-site clay extraction or other delays that would prevent the work meeting the construction timetable envisaged.
- 2.1.3 However, in the current circumstances the original timetable for implementing the scheme has been abandoned. Whilst no firm revised timescale is yet available for implementation, the applicant has been able to review the construction plan and has concluded that there will now, in all circumstances, be the opportunity to provide an extended lead-in period to the start of the works. This in turn will enable a longer establishment period on site allowing more time to overcome any initial clay extraction difficulties or other start-up issues.
- 2.1.4 Therefore as a result of these timescale delays and construction plan review the applicant has concluded that the need for any or all of the 2,300cu.m of imported clay contingency can safely be removed from the proposal without jeopardising any future construction timetable.
- 2.1.5 The removal of this element of construction traffic obviously has an effect on the impact of the traffic and the highway infrastructure and local communities through which it will pass through. The scale of the impact is that a total of approximately 230 HGV delivery trips (460 total journeys) have been removed from the scheme.

3. Proposed Solution

3.1 Changes to the Transport Statement

- 3.1.1 The impact of the vehicles required to deliver the quantity of 'contingency' fill to the site originally envisaged was identified as a key concern by NYCC highways. This was particularly as its transport would involve relatively large movements of heavy goods vehicles during a compressed period of time. With the complete removal of the transport of this material from the proposal it is considered that the impact of the construction phase traffic will be considerably reduced both in terms of the potential damage to the access roads along which it travels and the potential disturbance to local communities.
- 3.1.2 The applicant therefore wishes to formally withdraw the proposal to import any of the 2,300cu.m. of clay fill from their proposal including from the submitted Transport Statement.
- 3.1.3 Furthermore they invite the local planning authority and local highway authority to assess the impact of construction traffic on this new basis. The proposal is to retain the originally proposed main construction 2-way vehicle routing at the revised lower volumes from the A64 priority junction with Scotchman Lane via Flaxton, West Lilling and on to Sheriff Hutton Road.
- 3.1.4 Under the circumstances that there are no sustained major objections to the revised proposal the applicant also accepts that the planning authorities, as part of any permission granted, will likely wish to impose a planning condition requiring the submission of a Construction Traffic Management Plan (CTMP) containing the detailed arrangements and possibly restricting the importation of clay fill as part of these.

3.2 Planning Condition

- 3.2.1 The applicant can confirm that they are content for a pre-commencement planning condition be imposed on any permission granted requiring the applicant to submit to the local planning authority a full CTMP. They are also content for this, or a separate condition, to restrict the importation of any clay material that could be otherwise sourced from the on-site borrow pits.

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York Flood Alleviation Scheme – Foss Flood Storage Area

Planning Application:

Design, Access and Sustainability
Statement



We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife. We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do. We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

Version

Scheme	York Flood Alleviation Scheme
Project name	Foss Flood Storage Area
Project 1B1S reference	
Date	8 th November 2019
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1 Introduction

1.1 Purpose

- 1.1.1 This Design and Access Statement has been prepared by Capita Property and Infrastructure Ltd (Capita), acting on behalf of the Environment Agency (EA). It forms part of a planning application submitted for the creation of the Foss Flood Storage Area (FSA), as part of the York Flood Alleviation Scheme (FAS).
- 1.1.2 The purpose of this document is to provide a commentary on the design process undertaken and explain the guiding principles that have underpinned and resulted in the final proposal.

1.2 Background to the Scheme

- 1.2.1 Storm Desmond in December 2015 brought flooding to many areas of Britain and North Yorkshire. The City of York saw some of the highest river levels on record, with significant impacts on local communities.
- 1.2.2 York has a long history of damaging flooding dating back to 1263. The most recent significant flood events in York have occurred in 1947, 1978, 1982, 2000 and 2015.
- 1.2.3 Defences across much of the city were installed, or greatly expanded, following the 1978 floods, including the Foss Flood Barrier being installed in 1987. This followed from the observation that greater flooding arose under certain conditions due to waters from the River Foss rather than the River Ouse.
- 1.2.4 During the 2015 event, however, conditions were such that widespread flooding was caused along the River Foss and its tributaries. The Foss Barrier was closed in order to try and reduce the impact along the river's corridor. However the barrier's infrastructure would have been overwhelmed if it had not been opened subsequently. This action actually reduced the severity of the flooding along the Foss by allowing the retained quantities of water to be released downstream.
- 1.2.5 However, despite this, communities living along the Foss were some of the most badly affected by the 2015 event. The majority of properties that flooded were located close to the centre of York, although there was also property flooding along the length of the river. Many houses in this area have gardens backing directly onto the river, providing a route for flood water. Huntington Road floods on a regular basis, causing disruption to a busy route into and out of York City Centre.
- 1.2.6 Flooding of the scale experienced in 2015 was the result of the wettest December on record followed by further heavy rains. Whilst the River Ouse generally responds slowly to rainfall, the River Foss responds quickly to heavy rain and flooding can be very sudden. Whilst the Foss Barrier have reduced the risk of flooding for many properties, the effects of the barrier weakens past the Heworth Green road bridge crossing of the Foss. This means that there are many properties upstream of this roundabout that are therefore still at a high risk of flooding.

1.3 Environment Agency Response

- 1.3.1 National flood risk modelling, developed for general planning purposes, indicates most land adjacent to the River Foss in York is located in the most vulnerable flood zone meaning this is land with a greater than 1-in-100 chance of flooding from river sources in any given year.

- 1.3.2 Though river sources are a key driver of flooding in York, the topography, number of watercourses and evidence from previous flood events indicate that river level response to heavy rainfall can be rapid. Current climate change predictions indicate that instances of extreme weather events will increase, which will increase the risk of flooding to the area.
- 1.3.3 In November 2016, the EA published a Five Year Plan for York, which set out high-level options for new and improved flood defences across the city to meet the target of better protecting 2,000 properties within the city. The plan established the basis for the further examination of potential solutions and recognised that one of the high-level options was the development of an upstream flood storage area to protect the Foss communities.
- 1.3.4 The ambitions of the 5-year plan were translated into the York Flood Alleviation Scheme (FAS), a series of individual and scheme proposals to comprehensively address the flood risks to property and people identified throughout the city. The York FAS as a whole has the following overall strategic aims:
- to reduce the risk of flooding to properties and people;
 - to strengthen the City's resilience to flooding by reducing the risk of flooding to infrastructure, transport links, utilities and businesses;
 - to work collaboratively to make an effective contribution to sustainable development and where possible secure economic growth;
 - to strive to achieve multiple benefits where possible; and
 - to ensure the selection of preferred option(s) follows the best practice *Flood and Coastal Erosion Risk Management Appraisal Guidance* (DEFRA, March 2010).

2 Selection of Development Site

2.1 Introduction

- 2.1.1 The selection of the particular site and broad solution presented in this application has emerged from an iterative process conducted to provide the optimum solution. The starting point was consideration of protecting properties along the Foss corridor north of the Heworth Green road bridge in York to Strensall village.
- 2.1.2 A total of 465 residential and 25 non-residential properties are at risk of flooding within this corridor should the area experience a 1-in-100 year flood event including the expected increase in future years due to climate change to 2080.
- 2.1.3 This section provides a brief overview of the process through which the proposed development emerged as the preferred option to deal with the flood risk along this section of the Foss corridor. A full report 'York 5 Year Plan, Flood Cells F8, F10, F11 - Options Appraisal Report, Environment Agency, October 2018' (OAR) detailing the entire process is available on request.
- 2.1.4 Once the location of the properties and areas at risk were defined the examination of the broad design alternatives along the corridor could commence.

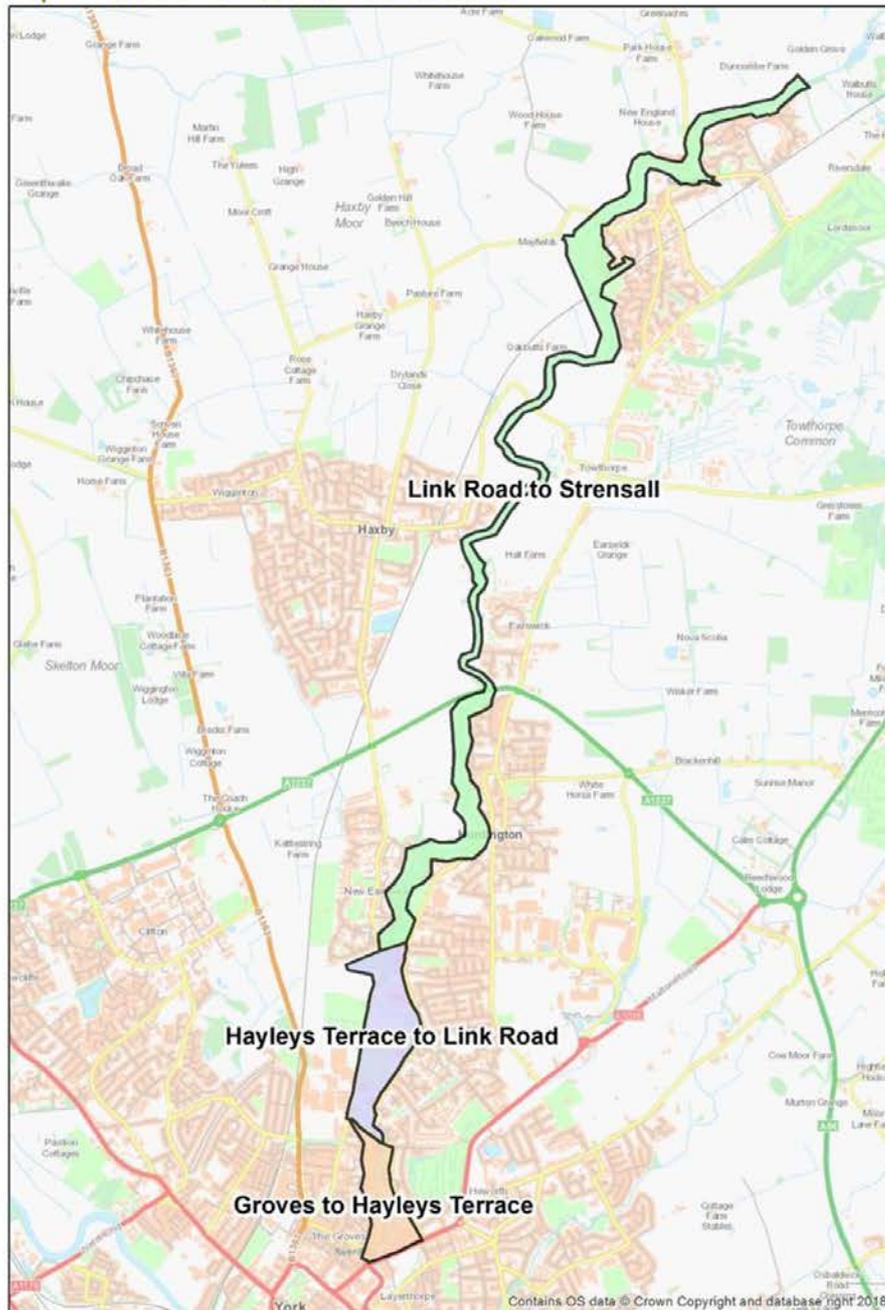
2.2 Development of Scheme Options

- 2.2.1 The proposed site and broad design solution evolved through a three stage process:
- Stage 1: Option Generation and Sifting (Long List)
 - Stage 2: Detailed Option Appraisal (Short List) and Selection
 - Stage 3: Detailed Design

Stage 1: Option Generation and Sifting (Long List)

- 2.2.2 As part of the first stage an objective assessment of a long list of options was undertaken in order to identify options to progress to the short list stage.
- 2.2.3 This consisted of the development and assessment of options within three areas along the corridor. These areas are illustrated on Map 1 on the following page and consist of the following stretches along the Foss:
- From the Heworth Green (A1036) Foss bridge crossing in The Groves area of York to Haley's Terrace/Fossway,
 - From Haley's Terrace/Fossway to Link Road,
 - From Link Road to Strensall village.
- 2.2.4 A long list of interventions was developed to identify possible flood schemes to improve the protection afforded to those areas that could be delivered in the individual areas themselves and/or by protecting those areas through catchment-wide options.

Map 1 – Location of Foss Corridor Sections



- 2.2.5 A workshop was held with EA representatives and City of York Council to sift the long list and agree on 'unlikely', 'likely' and 'possible' interventions; only 'likely' and 'possible' interventions were taken forward to the short list.
- 2.2.6 The workshop screened out the 'non-starters' based on the themes of flood risk, technical, economic, environment, social and safety. The process could then move to the second stage of appraising the short listed options.

Stage 2: Detailed Option Appraisal (Short List) and Selection

2.2.7 In addition to being able to contribute towards the overall aims of the York FAS the appraisal considered any proposal's ability to achieve a series of objectives derived from the York FAS and the characteristics of the Foss corridor. The broad categories of those objectives are summarised below:

- Flood Risk – this considered maximising the number of properties protected overall and within each flood cell, increases in risk due to climate change, reducing risk to life, infrastructure, business and transport links whilst avoiding increasing flood risk elsewhere as a result of delivery.
- Technical and Engineering – was the design flexible to accommodate future adaptation, how easy would it be to build, amount of disruption caused during construction and ease of maintenance and operation.
- Environment, Social and Cultural – these categories covered a wide range of issues and impacts including visual, heritage, biodiversity, ground conditions watercourse impacts, disruption and access.
- Consultation and Consents - stakeholder engagement and consideration of potential significant environmental effects and requirements for planning and/or other consents.
- Economics - appraisal of whole life costs and benefits in accordance with best practice guidance.

2.2.8 In considering these objectives the assessment took into account key constraints and opportunities covering the York FAS as a whole and the characteristics of the Foss corridor. Some examples of the constraints and opportunities that influencing the decision-making and site selection are described below.

2.3 Overall Key Constraints

2.3.1 The York FAS as a whole is subject to the following constraints which had an influence on the chosen solution:

- Time-bound funding constraints – there are central government conditions on some of the funding requiring that it must be used to provide benefits by 2021;
- Timely delivery, conclusion of options assessment and delivery of viable flood defence schemes on the ground;
- Heritage, Townscape and Landscape – The City of York is a place of significant historic character with a large number of designated heritage assets both above and below ground. Flood defence options need to take into account the special character of the City, particularly within the York Central Historic Core Conservation Area and the Areas of Archaeological Importance. There is potential to impact upon identified assets and to introduce changes to the setting of these assets;
- Planning and Environmental Legislation - All elements of the individual projects will need to comply with the relevant planning and environmental legislation and a number of different types of consents, for example Scheduled Monument Consent, SSSI Assent, may be required;
- Stakeholder and Landowner Agreement – Due to the spatial extent of the shortlisted options the number of landowners that may need to be engaged will be large, especially in the more highly urbanised areas;
- Protected species – There will be a requirement for a number of protected species surveys to inform planning applications and/or mitigation works before/during construction. Seasonal constraints on protected species surveys represent a potential constraint on the programme. These specific

ecological surveys are currently being programmed to remove the risk of delay to the programmed planning and construction dates.

2.4 Northern River Foss Corridor - Key Constraints

2.4.1 In addition to the above the following are key constraints identified within the corridor as a whole:

- Heworth Green/East Parade Conservation Area located at the downstream end;
- York Area of Archaeological Importance located within the more urban built up areas;
- Strensall Common SSSI and SAC is located within 500m of the corridor's northern boundary;
- River acts as a wildlife corridor;
- Public footpath runs beside the river's right;
- Multiple private properties border the banks;
- Agricultural land at the northern end consists of numerous landowners which would require separate negotiation and compensation if works proposed on their land;
- Potential impact on wider land drainage must be considered;
- Utilities, in particular high voltage National Grid pylons are located through farmland at the northern end; and
- Narrow working conditions particularly in the more urban areas due to limited space between properties and the watercourse.

2.5 Northern River Foss Corridor - Key Opportunities

2.5.1 Whilst there are a notable number of constraints, there are also potential opportunities such as:

- Environmental improvements and in-channel biodiversity along the River Foss channel, for example, through the incorporation of bankside cover and the creation of aquatic ledges to create micro-habitats;
- Potential for water quality improvements in the River Foss by mitigating some of the agricultural runoff from upstream fields;
- Potential to improve existing public rights of way along the River Foss as well as improving connection to local recreational and amenity features; and
- Potential to better understand the heritage and archaeology of the local area through archaeological discoveries and digs.

2.6 Short Listed Options

2.6.1 The short-listing process produced both catchment-wide options and also localised interventions within each of the three identified sections of the Foss corridor.

2.6.2 Amongst the 'do something' options an opportunity to create an upstream flood storage area was identified. The flood storage location considered most suitable was that in the general area upstream of the village of Strensall, in the vicinity of Walbutts Farm. This location is well situated for capturing flow within the catchment, it being downstream of several tributaries. The potential for intercepting flow would be reduced at locations further upstream. The area is also designated as Flood Zone 3, and as such already vulnerable to flooding.

- 2.6.3 Locations to the west of Strensall, between Strensall and Haxby, and west of Earswick were also considered. The site to the west of Strensall was ruled out as defences would need to be constructed at Strensall along the Foss; much of this area is already in Flood Zone 3. The latter two locations were both discounted as a result of their proximity to urban developments.
- 2.6.4 In addition to the 'do something' options taken forward to more detailed appraisal 'do nothing' and 'do minimum' options were also considered. All these are discussed in further detail below.

Do Nothing

- 2.6.5 In the 'do nothing' option, all capital and maintenance expenditure on flood defence assets and flood management practices would cease. This option was only used as a baseline as it was considered to be impractical as existing flood defences would deteriorate and eventually fail and flood risk would also increase due to the impacts of climate change.

Do Minimum

- 2.6.6 In the 'do minimum' option all current flood risk management activities in York would continue at their current standard. Existing defences would be maintained at their current level and existing flood risk management activities would continue throughout the appraisal period. However, flood risk would increase over the appraisal period as a result of climate change.

- 2.6.7 The 'do something' Short List options are summarised below along with the basic rationale for including them.

Option 1A: Linear Defences Only

- 2.6.8 This solution would require the construction of permanent and temporary hard engineered defences along all vulnerable sections consisting of new walls plus temporary protection for infrastructure most at risk.
- 2.6.9 Within the different areas the following interventions in combination were shortlisted:

Groves to Haley's Terrace

- Walls to protect properties on the right bank of the Foss on the towpath near Yearsley Crescent and low spot upstream of the Fossview development. This option provided a high level of protection to the residential properties.
- Flood wall to protect properties along Heworth Green from Fossview to Heworth Green on the right bank and at Heworth Green on the left bank. This infrastructure would also provide a high level of protection to residential properties and would also formalise existing defences protecting the Fossview properties.

Haley's Terrace to Link Road

- Install linear defences on left bank to protect properties on Meadowfields Drive with a temporary extension along Huntington Road. This offered a high level of protection to the properties and Huntington Road itself.
- Install linear defence on both banks near to the Huntington Road bridge. The main benefit of this option is to prevent overflows immediately downstream.
- Install linear defence on the right bank at Yearsley Crescent. The main benefit of this option is to prevent overflows immediately downstream.

Link Road to Strensall

- New linear defences combined with raising existing defences which would provide a high level of protection to properties on Pollard Close.

- Combination of linear and temporary defences which would protect a limited number of properties, provide a high level of protection to the nearby substation and Huntington Road itself.

Option 1B: Linear Defences Only – Adaptive

- 2.6.10 This would also require hard engineered solutions consisting of adapting existing and gradually increasing new linear defences including by raising existing walls plus temporary protection for vulnerable infrastructure. This would provide a lower initial standard of protection to properties, but would have a lower initial cost when compared to Option 1A.

Option 2A: Flood Storage Area

- 2.6.11 Flood Storage Area to be created north of Walbutts at Lilling Low Lane which would also require some minor downstream interventions to cover residual flood risk. This option was considered to have potentially significant flood risk benefits and be economically viable. If combined with other options, it could also make defences in the urban area cheaper, lower and have less of an impact.

Option 2B: Flood Storage Area (with increased capacity to account for Climate Change)

- 2.6.12 Flood Storage Area to be created at Lilling Low Lane which would also require some minor downstream interventions to cover residual flood risk. Provides additional protection over Option 2A allowing it to provide longer term defence against anticipated climate change effects.
- 2.6.13 Three further options were also considered (3A, 3B and 3C) that provided different combinations of a FSA and the adaptive defence approach.

2.7 Short List Analysis

- 2.7.1 The Short List Options, including Do Nothing, Do Minimum, and all Do Something options, were appraised against the objectives discussed above. Table 1 below is extracted from the OAR and summarises the scores of the various options. The lower the score the better the solution was aligned to the objective category in all options.
- 2.7.2 As can be seen option 2A was found to be best aligned with the overall objectives when averaged out, however, was ranked only fifth-best in terms of its standard of flood protection and reduction of flood risk. It was estimated to offer protection to greater numbers of properties and reduce the risk to life to a greater extent than the options involving only linear defences.
- 2.7.3 Option 2B was a very close second in the analysis (mostly as a result of its higher construction costs) but it offered the best overall standard of flood protection. Options 2A and 2B were rated highly for their ability to account for multiple sources of flood risk, due to their placement on the confluence of multiple upstream watercourses.
- 2.7.4 The combination options (3A, 3B and 3C) scored significantly worse than the pure FSA options due to the amount of works taking place within the urban area. This added greatly to the complexity of delivery, requiring consents and engagement from a large number of nearby stakeholders such as residents and businesses, as well as generating significant environmental impacts, such as noise and air quality impacts during construction, visual impacts, and potential damage to heritage assets, among others. These potential impacts would again be exacerbated by the large number of residents, business and communities in the urban area.

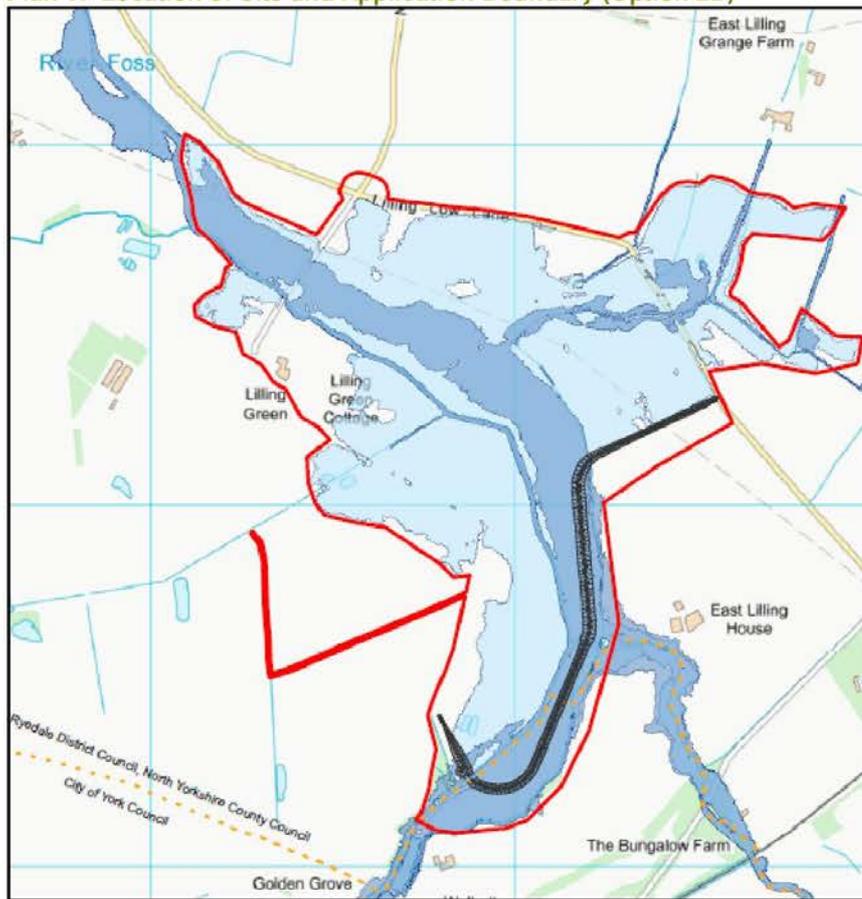
2.7.5 By contrast, the flood storage options, whilst still having impacts, their extent and scale would be significantly lower, affecting fewer landownerships, people and places.

Table 1: Appraisal Summary and Option Ranking

Option	Flood Risk	Technical	Environmental	Consents	Economic	Average Score	Ranking
Do Nothing	9.00	5.80	6.82	5.50	1.00	5.62	6
Do Minimum	7.13	5.60	4.27	5.00	2.00	4.80	5
Option 1A: Linear Defences Only	5.63	7.80	4.18	8.50	8.00	6.82	9
Option 1B: Linear Defences Only - Adaptive	6.13	6.40	4.64	7.50	7.00	6.33	8
Option 2A: Flood Storage Area	4.38	3.20	1.64	1.00	3.00	2.64	1
Option 2B: Flood Storage Area with increased capacity to account for Climate Change	1.25	3.40	2.27	2.00	5.00	2.78	2
Option 3A: Combined & Adaptive. FSA and Minor Interventions then Linear Defences	2.25	4.40	5.09	6.00	6.00	4.75	4
Option 3B: Combined & Adaptive. Linear Defences then FSA and Minor Interventions	3.25	5.40	5.18	8.00	9.00	6.17	7
Option 3C: Combined & Adaptive. FSA then some Linear Defences and Significant Property Level Interventions	2.25	4.60	4.18	5.00	4.00	4.01	3

2.7.6 Following the analysis the larger area of flood storage (Option 2B) was selected as the preferred option – see Plan 1 below. The decision not to select the highest ranked option was justified on the basis that the reduction in flood risk was deemed the most crucial objective and Option 2B provided the largest reduction in flood risk.

Plan 1: Location of Site and Application Boundary (Option 2B)



2.7.7 The following sections outline the DMRB Stage 3 process of the detailed site assessment and scheme development.

3 Site Context

3.1 Introduction

- 3.1.1 In order to assess the character and context of the selected site a number of studies were commissioned in order to fully examine the opportunity and seek to assess whether the proposed development was feasible. These studies examined the site's characteristics in order to establish the context within which the scheme could be designed in detail by producing a clear set of design principles and concepts that would drive the detailed design process.
- 3.1.2 The appraisal built upon the analysis contained in the site selection process described in the previous section.

3.2 Ground Investigations

- 3.2.1 It was raised at an early stage in selecting the preferred option that if all the material needed to construct the embankments was imported to site it would generate a substantial amount of traffic, which would potentially lead to air quality, noise, transport infrastructure and community impacts.
- 3.2.2 A decision was therefore taken, when weighing up environmental sensitivities and project needs, to attempt to source all or at least the majority of earthen material required for construction from within the site. Geotechnical investigations were undertaken to assess the suitability of material which could be found on site; these concluded that the material type and quantities required could be sourced on site. Further ground investigations were undertaken to determine the most appropriate and precise locations of the areas to extract the material from. The original analysis is captured in the accompanying Ground Investigations Report, the latter investigations in the Planning Statement and also in the minerals chapter of the Environmental Statement. However, in summary, the basic intention is that 4 'borrow pits' will be excavated – 2 temporary ones and 2 permanent. The layers of top soil and alluvial clay will be excavated and stockpiled on site to use in the surrounding body and top layers of the embankment whilst the underlying Vale of York clay is excavated and used to construct the core section as it is more plastic and will resist water migration.

3.3 Environmental Considerations

- 3.3.1 Avoiding, reducing or mitigating for any impacts the scheme may have on the environment was a key component of examining context of the site. An appraisal was undertaken the basis of which was the *Preliminary Environmental Information Report, York FAS – Foss Upstream Storage Area*, Environment Agency, January 2018 (PEIR), the findings of which are summarised below and the full report is available on request to the applicant.
- 3.3.2 The PEIR sought to address all the key issues associated with the potential development based on the basic initial requirements of the need for an embankment to hold flood water and the extraction of at least a significant amount of the material required for its construction from the site itself. It drew together the existing site information and reports and considered potential impacts of the construction works and the final scheme in operation.
- 3.3.3 A scoping exercise was undertaken to ensure that all potential environmental issues anticipated to be associated with the development were identified along with all

existing information. This provided a basis for assessment work which could identify the key issues to be considered once detailed design began, to inform further investigation work on potential impacts and refine potential design and environmental mitigation proposals.

- 3.3.4 This approach sought to ensure that all issues and concerns were taken into account at an early stage and that where necessary and practicable, avoidance and mitigation measures could be built into the detailed design. It was also intended to be the basis of discussions with key stakeholders. For example, it formed the basis of the engagement with the local planning authorities in determining whether the development came within the category requiring an Environmental Impact Assessment (EIA) to be undertaken and if so what the scope of such an assessment should be in order to inform any subsequent planning application.
- 3.3.5 The report provided a desk-based assessment of the initially scoped issues provided a summary of the key issues that needed to be taken into account in the detailed design and recommended further investigation works to provide additional detail where considered necessary.
- 3.3.6 It included baseline environmental information, potential construction and operational impacts, potential benefits, opportunities and mitigation requirements. It outlined the proposed approach to future environmental assessment for all the identified topics.
- 3.3.7 The PEIR was informed by desk-based studies, reviews of web-based information, site walkovers and consultation with key stakeholders. A summary of the main issues follows.
- Biodiversity and Nature Conservation
- 3.3.8 The proximity of the site to the Strensall Common Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) highlighted the need to if possible to avoid impacts on this sensitive area and where not to introduce adequate mitigation. Within the proposed site itself there were potential impacts identified on protected species and their habitats. This led to recommendations of further survey work but also highlighted opportunities for mitigation and enhancement (e.g. wetland and species-rich grassland creation).
- Cultural Heritage and Archaeology
- 3.3.9 Whilst there were no identified statutory or non-statutory heritage designations within or close to the site the lack of the proposed scheme detail meant that a full assessment would only be possible once this was known. With this proviso no fundamental issues were raised that would prevent the development of the detailed design. The possible presence of unrecorded archaeology was highlighted as requiring further investigation.
- Agricultural Land and Soils
- 3.3.10 The development is likely to lead to the loss of some good quality agricultural land with consequent impacts on landowners and farmers. Whilst these impacts would be unavoidable mitigation would ensure that the loss of productive land was minimised and a compensation scheme could be put in place to offset the effects.
- Landscape and Visual Impact
- 3.3.11 The impact on the local landscape (part of which is in the York Green Belt) and changes in the views of local residents and users of the adjacent public rights of way could potentially be negative. Using sympathetic design, landscaping, limiting exposed artificial materials and following the existing field pattern where possible were ways in which the scheme could mitigate the potential adverse impacts.

- Water Resources and Flood Risk
- 3.3.12 An initial assessment of possible impacts on hydrology and geomorphology identified both potential negative and positive impacts. Initial mitigation suggestions included ensuring strict pollution controls during construction, provision of compensatory habitats and ensuring safe passage of fish post-development. Further detailed assessments were recommended as the detailed design firmed up.
- Community and Socio-Economics
- 3.3.13 The main issues identified were the loss of agricultural land and potential disturbance from construction activities during development. Both these issues were covered elsewhere in the report and therefore no additional constraints on the design were identified.
- Air Quality, Noise and Vibration and Human Health
- 3.3.14 The assessment considered that potential impact of the development of these three topics were all considered to be predominately restricted to the construction phase. Furthermore the main impacts could be adequately addressed through the implementation of standard environmental protection practices so that there were considered to be no extraordinary impacts that would affect the scheme design.
- Existing Infrastructure
- 3.3.15 This concerned the potential effect on energy and communications assets of which the key elements which needed to be taken into account were two electricity distribution lines crossing the site.
- Transport and Access
- 3.3.16 At the time it was written the PEIR assumed that the bulk of material for the construction of the embankment would be sourced on-site. Construction transport requirements were expected to be the most likely to have an impact and it recommended that they be fully assessed within a transport statement. The potential need to reinforce or modify Ings Lane and Lilling Low Lane were also highlighted.
- Major Accidents and Disasters
- 3.3.17 No extraordinary impacts were anticipated within this topic and construction and operational health and safety plans would be able to mitigate and protect against the potential threats.
- Material Production and Usage
- 3.3.18 The likely gaining of the majority of the materials for the construction of the embankment from on-site meant that the main recommendation was to ensure the design minimised the use of new materials and those that were used would be sourced sustainably.
- Geology and Contaminated Land
- 3.3.19 The initial ground investigation results available at the time of writing the PEIR revealed a low likelihood of any contamination being present. The impact on any underlying geology was also considered to be very low or negligible.
- Waste
- 3.3.20 Any issues arising from the creation and disposal of waste were considered to be sufficiently dealt with through standard mitigation measures.
- Climate Change and Carbon Emissions
- 3.3.21 The construction phase of the project was considered to be likely main source of impacts during the lifetime of the scheme which will obviously be short-term. The use of a carbon calculator in the development of the detailed design and built in adaptability were recommended.
- 3.3.22 The PEIR, completed in early 2018, directed a number of subsequent studies and surveys that all fed into the design process as it progressed. These included

protected species surveys, an ecological appraisal, transport statement and further landscaping and archaeological assessments. Whilst these reports and surveys were conducted in parallel with the detailed design process the PEIR ensured that the key aspects of these issues and their potential impact on the fundamental design of the scheme were captured before this process began in earnest.

- 3.3.23 The need for an EIA to be undertaken was pursued with the local planning authorities based on information contained in the PEIR which resulted in the requirement for an assessment to be undertaken covering a limited number of topics. A full commentary of this process is contained in the accompanying Environmental Statement produced from the assessment.
- 3.3.24 In addition to the PEIR the site context was informed by reference to the policy framework and consultation with the general public and other key stakeholders.

3.4 Consultation

- 3.4.1 Throughout the process of identifying and developing the preferred option for the Foss corridor, consultation with the public and key stakeholders has been undertaken and recorded.
- 3.4.2 To inform the detailed design this consultation included seeking the public's views through publicity and public events. Local parish councils and affected landowners were consulted directly. Close liaison was also established and maintained with a stakeholder advisory group and targeted consultation undertaken with interested and directly affected parties.
- 3.4.3 Amongst the key stakeholders views sought were from those with a direct responsibility for the management of the Strensall Common SAC/SSSI including the Yorkshire Wildlife Trust, Natural England and the Ministry of Defence; the purpose of which was to ensure that the scheme could be designed to avoid any impact on the site rather than require mitigation against adverse impacts. Other views sought included those from the local planning authorities (Ryedale District Council and City of York Council) and North Yorkshire County Council as coordinating minerals authority and as the flood risk and highway authority covering Ryedale District.
- 3.4.4 Consultation was undertaken to determine any potential effects on infrastructure providers the most important being Northern Powergrid, covering two overhead lines and Yorkshire Water as managers of the Walbutts waste treatment facility. Initial discussions established that one of the power lines would almost certainly be affected.
- 3.4.5 The desire to retain access to the Public Right of Way (PRoW) adjacent to the site was raised by The Foss Society and local residents.
- 3.4.6 The Foss Internal Drainage Board (IDB) highlighted a number of issues which were taken forward into the detailed design including maintaining access for their purposes and a strategy for dealing with an 'extreme' flood event that would exceed the capacity of the FSA.
- 3.4.7 In addition to these initial consultations the process of engagement continued throughout the detailed design process and the accompanying Statement of Community Involvement contains full details of these consultations including the range of issues that emerged and a commentary on how the final scheme design was influenced by the various consultations.

3.5 Planning Policy Context

- 3.5.1 As discussed above direct consultations were held with the local planning and minerals authorities. This informed an initial appraisal of the key policy issues which would need to be addressed or have an influence on the scheme to be identified. This examined the development plans of the local authorities and the EIA regulations.
- 3.5.2 Establishing the basis of policy support for the principle for the development was foremost amongst the objectives of the exercise; on balance, support was considered to be strong, when the benefits and impacts of the scheme were weighed together. In terms of individual policy areas, environmental considerations and impacts, particularly on the York Green Belt, were prominent in the considerations to be addressed. The initial review reinforced the importance of addressing the issues identified in the PEIR and through other consultations.
- 3.5.3 A full assessment of the planning policy context is provided in the accompanying Planning Statement and Application Summary.

3.6 Design

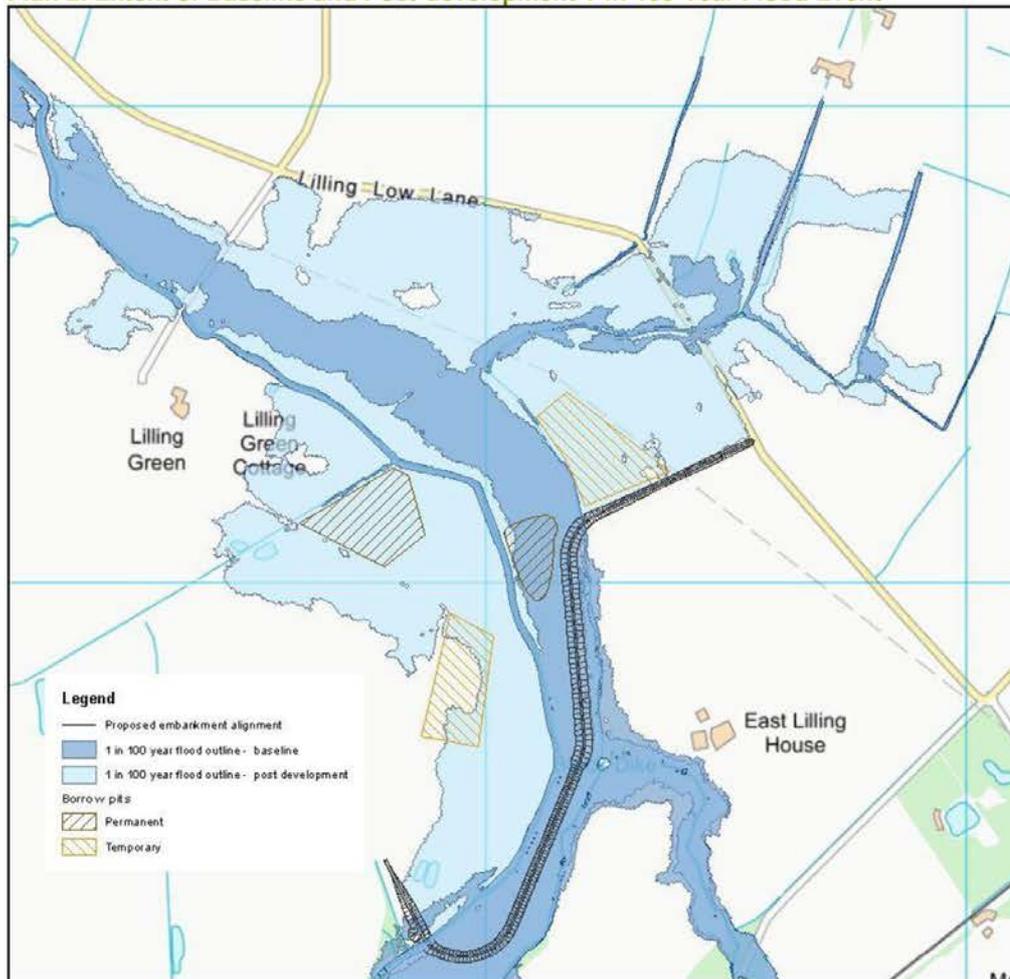
- 3.6.1 The next two sections discuss the design and access elements comprising the scheme. Included in the commentary are statements about how the issues identified from the assessment of the site's context were considered and to a large extent incorporated into the final design. The commentary above was essentially the initial assessment, however, refining and developing the context, parameters and constraints of the scheme was an ongoing process as more information became available from additional studies and ongoing consultation which all fed into the design process.

4 Design Statement

4.1 Overview

- 4.1.1 The application site is located in either side of the River Foss northeast of Strensall. It extends from north of the Haxby-Walbutt's waste water treatment works to a point southeast of Bridge Farm. It also extends northeast beyond Lilling Low Lane and towards East Lilling Farm. The downstream extent of the storage would be just upstream of the confluence between Black Dike and the River Foss (Grid reference: 464829, 462217).
- 4.1.2 The proposed storage area has been designed to provide protection from a 1-in-100 year flood and also cope with the increased impact of climate change up to 2080. It is expected that the Foss FSA project will better protect a total of 490 properties (465 residential and 25 non-residential) from flooding downstream along the Foss corridor in York plus a number of properties in Strensall. In addition to the scheme, 2 residential properties downstream will require further property-level protection measures to achieve this full standard of protection. A single commercial property will also not be fully protected to the design standard. Although better protected by the scheme it will not be offered additional property-level protection.
- 4.1.3 The project will involve the construction of an earth embankment, approximately 1.65km in length and with an average height of 2.5m and a maximum height of 3.85m above existing ground level, which crosses the River Foss. A flow control structure will allow water through the embankment along the line of the existing river, this will extend to maximum height of 5.75m from the base of the structure part of which will be below the river level. By controlling how much water can flow through, and by the embankment holding water back during high-flow conditions, potential flood waters will back up into a basin defined by the proposed new embankment and the natural topography of the land. This flood storage reservoir will only be full during a 1-in-100 year flood event. The footprint of the flood storage reservoir when full is shown in Plan 2 below which also shows the current baseline flood outline for a similar event.
- 4.1.4 The site is located within an area of open, arable farmland surrounded by, at most, gentle slopes with isolated prominent farmhouses and associated buildings. The overall flat landscape is divided by the River Foss and crossed by numerous water features (e.g. Black Dike, streams, ditches and temporary ponds).
- 4.1.5 The large fields are a key landscape element emphasised by the there being few boundary features. The hedgerows that are present are relatively small and contain few trees. This provides more prominence to the trees, especially the mature ones that are present.
- 4.1.6 The open aspect and extended views across the area exaggerates the impact of the tall, large-scale high voltage electricity pylons crossing site approximately northeast to southwest.
- 4.1.7 The isolated groups of buildings at Lilling Green are within the application site as are parts of Lilling Low Lane and Ings Lane all with narrow carriageways.
- 4.1.8 A PRoW forming part of the Centenary Way, Ebor Way and the Foss Walk routes is within the redline boundary and partly runs along the eastern boundary and Ings Lane.

Plan 2: Extent of Baseline and Post-development 1-in-100 Year Flood Event



- 4.1.9 The red line planning boundary (see Plan 1) covers approximately 151.88ha but the physical aspects of the scheme would only permanently use land for the embankment structures, borrow pits and environmental mitigation. The potential area of flood storage at full inundation would occupy approximately 130ha, however, this land would be able to continue in agricultural use (or utilised for environmental mitigation as proposed around the borrow pits) as inundation would be infrequent. The scheme would follow the right (western) bank of the Black Dike, and the planning site boundary includes a section of this watercourse to allow for a short section to be diverted.
- 4.1.10 Following the identification of the preferred option and with the site identified and its context appraised, development of the outline design was undertaken, with input from the design team. During this iterative process, multiple elements of the design were refined and amended, whilst making considerations for various receptors in the vicinity of the project. Regular discussions within the project team also allowed for mitigation measures to be integrated into the design as opposed to added subsequently. The key elements of the design that were influenced prior to the preferred option being finalised are outlined below.

4.2 Layout, scale and appearance

4.2.1 The proposed storage area has been designed to store up to approximately 1 million cubic meters of excess flood water which, as discussed above, would occupy a total area of approximately 130ha. at full inundation. The scheme consists of the following key physical elements, the embankment and the borrow pits which are both shown in outline on Plan 2 above.

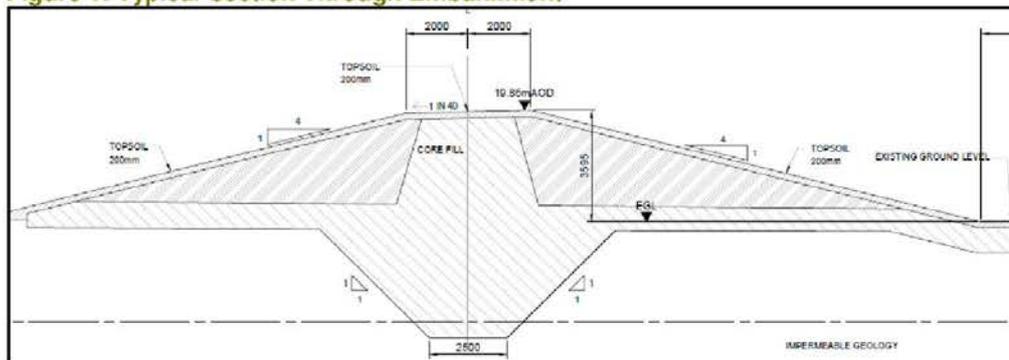
Embankment

4.2.2 The proposed embankment extends generally south to north across the central portion of the application site. It runs for a length of 1.65km from approximately 160m west of the bank of the River Foss, over the river and parallel to (but set back from) the west bank of Black Dike before changing direction towards the northeast, and ending just before Lilling Low Lane.

4.2.3 The general location of the embankment owes much to the desire to avoid any potential to alter the hydrology of the watercourse resulting in negative impacts on Strensall Common. This requirement was one of the key constraints on the development identified through early consultation and engagement with key stakeholders.

4.2.4 In order to construct the embankment a cut-off trench will be excavated to a level ranging between -0.5 to -3m below ground level. Core (Vale of York) clay material will be transported to the trench and compacted in layers. This trench will reach to the level of impermeable geology thereby preventing any seepage under the embankment. It will then be built up above ground level to the required crest level through a combination of core clay and the less dense or siltier clays. Finally, the entire embankment will be top-soiled and grass-seeded. Its height and construction varies along its length. The embankment is 1.65km long, its average height is 2.5m and its maximum reaches 3.85m along parts of the central section, its maximum width is 32m from toe-to-toe. Gradual 1-in-4 slopes apply generally along the whole length and Figure 1 below shows a typical section through the embankment showing the profile and different layers.

Figure 1: Typical Section Through Embankment



4.2.5 In order to achieve the storage capacity required the embankment needs to achieve a height of 19.85m above ordnance datum level. Due to the varying existing ground level across the site the height of the embankment varies considerably. The height and design was determined with reference to the main purpose of the embankment but was also designed to be as wide and low as practical given other constraints, such as minimising the amount of agricultural land lost, in order to help minimise its visual impact and appear to be as 'natural' a possible within the landscape.

4.2.6 At the western end the embankment gradually rises to a height of 2.8m above existing ground level with the wide crest being used to provide a vehicular access

track and turning head, finished in a tarmac surface, to the top of the flow control structure. Beyond the flow control structure the embankment continues for a few metres before sloping down slightly (0.7m) to a lower level at which a 575m length of the embankment is to be provided with a spillway to enable any excess flood water overtopping the storage area to do so without damaging the embankment.

- 4.2.7 The spillway will be protected on its crest, eastern and southern side by voided concrete sections. These will allow grass to be grown through the voids, to match the rest of the structure, whilst still protecting the top and side of the embankment from being subject to erosion. These concrete blocks will be similar to those illustrated in Photos 1 and 2 overleaf. Beyond the spillway the embankment gains height again and the first 75m of the eastern slope will be reinforced using turf matting to provide additional robustness to this grassed section.
- 4.2.8 Below the northern end of the spillway opposite the elbow bend in Black Dike a buried wall will provide scour protection to the bund and prevent it from being undercut or undermined by future migration of the watercourse. A similar feature was also incorporated on the western toe of the embankment at the closest point that the Foss comes to the feature prior to passing through the flow control structure.
- 4.2.9 The remainder of the embankment will be of the earth mound construction described previously. A ramp with a long shallow 1-in-16 slope on either side over the embankment will be created at the western end to allow farm vehicles to cross. This will be constructed from the same material sources from the site to build the main embankment and provided with a crushed stone surface to create a track over the feature with top-soiled and grass-seeded sides. The ramp was seen as an essential feature to prevent severance of farming units.

Photo 1 – Example of Voided Grass Blocks



Photo 2 – Example of Completed Scheme using Voided Blocks



Borrow Pits

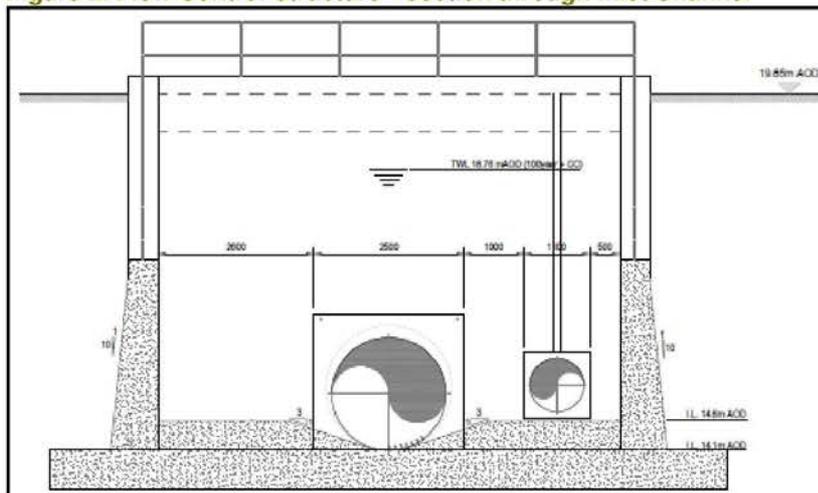
- 4.2.10 The feasibility for sourcing the material for the construction of the preferred option and the location of the borrow pits was determined through consultation with landowners and input from multiple technical specialists.
- 4.2.11 In order to construct the embankment the required amount of fill is 112,000m³ which will provide material for both the above ground level and the 'core' beneath ground level. The vast majority of this material will be sourced on site which substantially meets the ambition to minimise the amount of vehicle movements necessary, reducing the scheme's impact on the environment and local residents as well as creating the opportunity for biodiversity gains within the excavated hollows. A contingency amount of imported clay has also been allowed for totalling 2,300m³. This will be used to allow the construction timetable to keep to schedule if there is a delay in bringing the on-site borrow pits into use.
- 4.2.12 The reason for the decision to import some material was based on the need to have a quantity of 'contingency' fill which could be brought onto site to provide flexibility to the construction programme.
- 4.2.13 Four borrow pits will be created within the site boundary during construction, as indicated in the application drawings. Two of these pits will be temporary and following extraction will be backfilled and fully reinstated to their original condition and use. The remaining two pits will be left permanently excavated and used to provide environmental mitigation following completion of the site works. This arrangement allows there to be certainty regarding the extent of the excavations and amount of suitable material that can be extracted. It allows the vast majority of material to be gained from the on-site pits and transported within the site boundary on temporary haul roads to the embankment locations to enable their construction.
- 4.2.14 It was also proposed at an early stage that the borrow pits be used to create areas of wetland habitat within the site boundary and within the storage area. The design has been developed with input from river geomorphologists, ecologists and landscape architects to develop the concept of creating a 'backwater' to the River Foss, which is kept wet through a combination of groundwater, the routing of land drainage and flood events during high flow conditions.
- 4.2.15 After construction, the borrow pits to be retained will be profiled and re-landscaped, providing the opportunity for additional flood storage and the creation of the

proposed new wetland habitat. The 2 permanent borrow pits between them occupy 4ha. The larger of the two permanent ponds is adjacent to the west bank of the Foss and its irregular shape extend to a maximum of 160m in length. The smaller elongated pit on the eastern bank extends to a maximum length of 125m. The final proposals for the pits are shown in the accompanying landscaping drawings as described in section 4.3.

River Flow Control Structure

- 4.2.16 The embankment will incorporate a control structure as it crosses the River Foss, this will allow a continuous flow of the river in all circumstances through a tubular opening. This flow has been modelled to cope with the designed flood parameters and will not force water to overtop the embankment under these circumstances.
- 4.2.17 The structure is to be constructed from concrete and steel, materials which will be retained as the external finishes. It occupies the river section between the two parts of the embankment and is contained by two 30m long concrete wing walls reaching to the top of the embankment approximately 5.75m above the new cast concrete river invert. The structure and river banks are protected from scour by adjoining angled wing walls either side at both ends and sections of rip-rap stone proposed adjacent to the angled wing walls on either bank both upstream and downstream. The width of the structure's concrete headwall is 7.7m and the river flow control is provided by a 2.1m circular opening which will be restricted to 1.9m diameter by a steel plate. This arrangement provides a degree of future-proofing and adaptability with the option to adjust the opening of the steel plate for larger or smaller flows if required. To cope with any blockage of the main opening and a 0.9m diameter penstock gate valve, which will be closed under normal circumstances, is also provided. Figure 2 overleaf shows a section through the inlet channel.

Figure 2: Flow Control Structure - Section through Inlet Channel

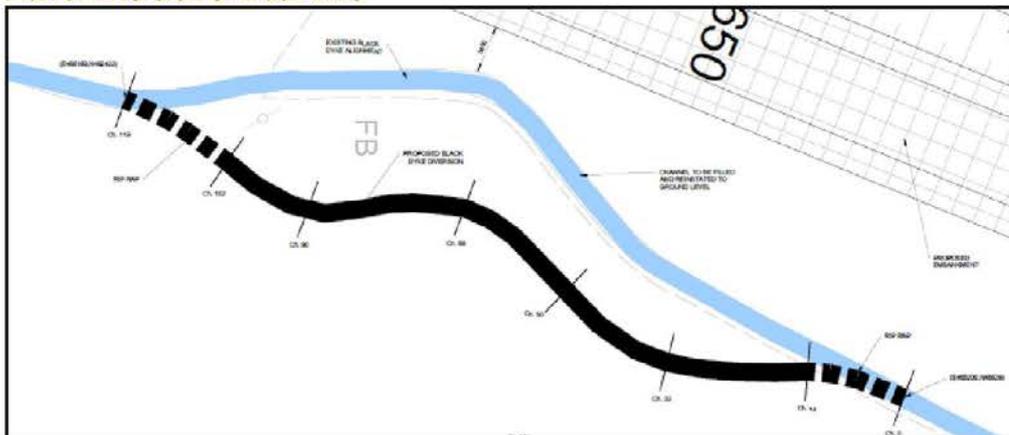


- 4.2.18 Depths in the channel will be monitored by sensors in the channel with readings communicated remotely via telemetry equipment sited on top of the embankment.
- 4.2.19 Additional engineering works to facilitate the construction of the structure in 'dry' conditions will be required in order to temporarily divert the Foss. A short section of the river Foss will be diverted to the east of the existing alignment as shown on drawing number ENV0000381C-CAA-00-00-DR-C-10500_24. This temporary channel will be designed to maintain flow capacity of the Foss whilst the structure is being built. Following completion of the flow control structure, the temporary diversion will be removed allowing the Foss to flow through the structure and the remainder of the embankment to be built.

Black Dike Re-alignment and other Drainage Works

- 4.2.20 Following the early decision to locate the embankment north of Black Dike it was proposed to re-align a short section of Black Dike in order to move the watercourse away from the line of the proposed embankment at its nearest point reducing the possibility of future scouring. This minor change has been determined as not to have any knock-on effects on Strensall Common.
- 4.2.21 The length of the diversion is 119m as shown in Plan 3 overleaf, full details are provided in drawings ENV0000381C-CAA-00-00-DR-C-I0500_27 and ENV0000381C-CAA-00-00-DR-C-I0500_29 within the application pack. The slopes of the new channel will be planted to provide additional biodiversity gain (see description paragraph 4.3) and will include a flat berm section. The outer bend of the diversion will also be protected by small irregular stone rip-rap of between 100-150mm in length to help prevent any further movement of the watercourse.
- 4.2.22 An existing land drainage ditch will be diverted into the eastern borrow pit in order to help maintain the 'wet' conditions required in the pit for the biodiversity improvements proposed. In order to ensure the maximum flow into the pit from the ditch an existing section of the ditch north of the proposed embankment will be filled in.

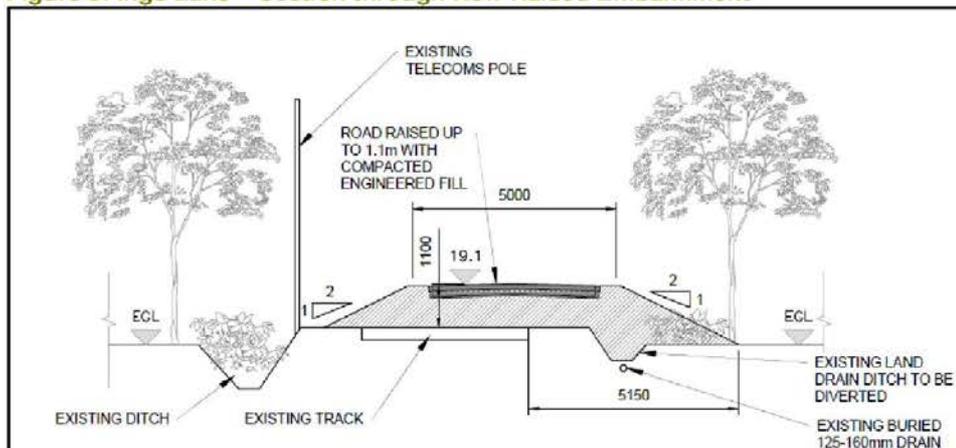
Plan 3: Diversion of Black Dike



Ings Lane Raising

- 4.2.23 Baseline data suggests that a short section of Ings Lane would flood during a 1-in-100 year event. However, completion of the development would make the extent of the inundation worse under these flood conditions. In order to mitigate this and improve the access arrangements under flood conditions to Lilling Green and along this section of the PRow it is proposed to raise this part of the lane to a level above the post-development 1-in-100 year + CC event water height. This is shown in drawing number ENV0000381C-CAA-00-00-DR-C-I0500_28 and involves a section of approximately 200m in length being raised to a maximum height of 1.1m above the existing track level. Figure 3 below shows a typical section through the proposed new lane.
- 4.2.24 The new 5m wide embankment will be engineered using material gained from the borrow pits and a new track formed using compacted crushed stone to match the existing arrangement. The track will join the eastern end of the existing bridge over the Foss; no changes to the bridge will be necessary to accommodate the works. A temporary diversion of the PRow will be required and this is fully discussed in the accompanying planning statement.

Figure 3: Ings Lane – Section through New Raised Embankment



Alterations to Utilities

- 4.2.25 The main services of statutory undertakers running across the site are high level National Grid high voltage electricity power lines suspended from pylons (running generally northwest to southeast, 11kV power line on wooden poles (running northwest from East Lilling House) and BT overhead and underground cables along Ings Lane and from Smith's Lane to East Lilling House. Also partially within the site is a section of the Teeside-Saltend ethylene pipeline which, at its closest, passes just east of Lilling Low Lane. However, there are no impacts on this infrastructure or alterations to the pipeline necessary. The line of all these services is shown on drawing number ENV0000381C-CAA-00-00-DR-C-I0500_25.
- 4.2.26 The high level pylons will be unaffected by the development as the design allows for any work to be kept at least 35m from any of the pylons. However, the 11 kV powerline serving East Lilling House from Lilling Green is proposed to be removed as it would have to pass over the embankment which is not considered acceptable from a safety perspective. A new service to East Lilling House will be installed from a new connection on Smith's Lane by the statutory undertaker Northern Powergrid.
- 4.2.27 The works to raise Ings Lane are adjacent to overhead section of the BT line serving East Lilling. At the time of writing no impact on this service is anticipated. If changes are required these will be agreed with Openreach, the service infrastructure provider.

Additional Works

- 4.2.28 North Yorkshire County Council, as the local highway authority, has requested verge reinforcement where the flood storage extent extends over Lilling Low Lane. The design of the edge protection has been provided by North Yorkshire County Council. Drawing number LAxxxxxx/Patch/01 within the application pack contains the full details of the works which essentially consist of casting a concrete support to the carriageway edge along the western side of the potentially vulnerable section of road.
- 4.2.29 An area of hard-standing to enable the EA to park and load/un-load grass cutting equipment to maintain the embankment will be created at the eastern end of the embankment with access from Lilling Low Lane. The area will be fenced, gated and provided with a new hedge on the northern boundary.

Means of Enclosure

- 4.2.30 New fences and gates are proposed around the whole embankment, parking area and access ramp. The fencing will be of a standard 1.2m high wooden post and

wire specification. The gates will also be wooden and of a standard 5-bar field gate style.

4.3 Landscaping

4.3.1 A scheme of landscaping is detailed in the application which focusses on, firstly, seeding of the new embankment in order to integrate the feature into the existing landscape minimising its visual impact. The area of, and around, the borrow pits will also be extensively landscaped with the principal aim of providing species-rich wetland and grassland habitats; the landscaping will also seek to soften the visual impact of, and further integrate, the embankment into the landscape. Compensation for the loss of trees and hedgerows will be provided where the opportunity allows, principally around the borrow pits and Ings Lane.

4.3.2 Full details are contained in drawings ENV0000381C-CAA-00-00-DR-L-C0700_36 to 43. In order for the landscaping and habitat creation proposals to be a success they will require a period of establishment and ongoing management. This has been recognised by the applicant and the details are fully laid out in the accompanying Landscape Environment Management Plan (LEMP).

4.3.3 The following landscaping and habitat creation measures have been integrated into the design if the scheme and shall be implemented during construction.

Wildlife ponds, marginal habitat and biodiversity enhancements

4.3.4 Two large wildlife ponds with and marginal habitat in the location of the borrow pits will be created. These two ponds will provide the main static water body for the site.

4.3.5 Smaller 'settlement' ponds connected to the larger body will also be formed facilitating the creation of adjacent marsh and wet grassland between the two ponds. These areas will be managed for wet meadow and wildflower species. This area will provide excellent cover for wading birds and other wildlife.

4.3.6 These features will create a habitat for a diverse range of invertebrate and amphibians.

4.3.7 Aquatic vegetation has been graded through to marginal and then marsh habitats around the perimeter of the ponds. Site-won material will be used to raise areas of land to create a wildflower habitat. It is intended to create a shallow margin to all pools to encourage wading bird species to feed and nest.

4.3.8 In order to help retain the water levels in the ponds the smaller pond will have an existing land drain diverted into it, a culverted outfall will connect it to the Foss. The larger pond will be connected to the Foss by the lowering of the river's bank allowing water to be retained in it.

4.3.9 Enhancements and improvements to sections of the Foss totalling 225m to increase the ecological capacity will also be undertaken. The length of the proposed Black Dike diversion will also be treated to create additional marginal habitat similar to that proposed for the ponds.

Species-Rich Grassland

4.3.10 Additional areas around the ponds outside the marsh/wetlands will be used to create species-rich grassland. This will further encourage a more diverse range of habitats and associated ecological benefits.

Trees and Hedgerows

4.3.11 Tree and hedgerow planting will be undertaken in multiple locations throughout the site. This will provide compensation for the loss of trees and contribute towards the mitigation of other ecological effects. The areas of proposed tree and hedge planting are:

- trees around the proposed wetlands – these are mainly around the margins of the two permanent ponds;
- trees either side of the western section of the embankment;
- trees either side of the embankment, on the eastern bank of the River Foss adjacent to the eastern end of the spillway; and
- new hedge along the north of Ings Lane, the new hardstanding area and smaller pond.

4.3.12 A Tree Protection Plan will be produced prior to development beginning in order to ensure the safeguarding of any trees or hedgerows that may be at risk from construction activities.

5 Access Statement

5.1 Operational Phase

- 5.1.1 All access issues covering the construction and operational phases of the development are fully described and assessed in the accompanying Transport Statement. However, the purpose of this statement is to summarise the operational access requirements and design considerations of the scheme.
- 5.1.2 The facility has been designed to be a passive structure and as such will not require any staff to be permanently present on site. Occasional routine inspections and maintenance will be required, focussed on the flow control structure, embankment and landscaping/ponds. For example, the embankment will require regular grass cutting estimated to be around 6 visits per annum. These inspections and maintenance will be undertaken by EA staff.
- 5.1.3 Inspections and maintenance of the watercourses will also continue to be required on behalf of the local IDB. These activities are anticipated to be no more frequent than they are currently but still at a very low frequency.
- 5.1.4 Vehicular access to the site is available via both Lilling Low Lane and an unclassified track off Sheriff Hutton Road. Improvements to these arrangements are proposed as part of the scheme in order to facilitate access for EA and IDB personnel and vehicles as described below.
- 5.1.5 Adjacent to the eastern end of the embankment a small area of hardstanding will be provided off Lilling Low Lane. This will be gated and locked and is intended only for EA and IDB use, for example, a typical use will be to safely unload and park grass cutting vehicles. An access strip 4m wide from the associated stock fence either side of the embankment will be maintained along the whole length to facilitate access for EA and IDB staff and vehicles.
- 5.1.6 From the west the existing unclassified track off Sheriff Hutton Road will provide access to the control structure and other features and will be subject to some permanent changes. Permanent improvements to two sections of this track and the creation of an additional section are proposed. In addition new tracks will be created along the western end of the embankment. All this work will allow access to the control structure and embankment even during a maximum flood extent.
- 5.1.7 Improvements will be made to a section of the existing track for approximately 350m north from the western end of the proposed embankment and involve extending the width of the stone-surfaced track to 4m. From the improved track two new asphalt tracks will also be created, one along the crest of the embankment to afford access to the top of the control structure and one along the eastern toe of the embankment to access the base of the structure.
- 5.1.8 From the northern end of the improved section of track a new 3m wide crushed stone track will be created along the boundary of the adjacent field to the west which in turn will link to an existing track (to be improved and widened to 3m) affording access to the existing main track. These tracks are detailed in drawing numbers ENV0000381C-CAA-00-00-DR-C-I0500_23 and 26.
- 5.1.9 During a 1-in-100 flood event access to Lilling Green will be maintained via Ings Lane by raising a portion of the lane above the maximum design height of the flood as described in section 4.
- 5.1.10 Without the development in place the PRow running through the site would be impassable at a number of points to users during a 1-in-100 year flood event. One of

these would be Ings Lane where access following the raising of the lane will be maintained. However, the other points will still be impassable following the scheme's implementation and in fact longer sections of the track along the site's western boundary will be flooded. The applicant is not able to justify raising the level of these sections above the maximum design flood height on either cost or environmental impact grounds. This is particularly so given that these areas are at the margins of the flood profile and will drain relatively quickly and that under baseline conditions sections of the PRoW would be impassable. The flood extent outline shown on drawing ENV0000381C-CAA-00-00-DR-C-I0500_23 shows the additional section of the PRoW that will be affected.

- 5.1.11 The above drawing also shows the short length of Lilling Low Lane that will also be inundated during this level of flood event. This section is unlikely to be affected under the baseline flood conditions but again it is considered that the cost and impact of raising this section of the lane cannot be justified. As described in the accompanying Transport Statement there is a convenient diversion via local lanes to avoid this section.
- 5.1.12 The proposed embankment to the east of the Foss bisects a currently contiguous landholding. In order to facilitate access between the two parts following the development, a wide ramp is proposed to be located at the eastern end of the embankment as described in the previous section, the ramp is illustrated in drawing number ENV0000381C-CAA-00-00-DR-C-I0500_32.

6 Sustainable Design and Energy Statement

6.1 Introduction

- 6.1.1 The principle of providing a sustainable development has been fundamental to the design of the proposal as it will be its delivery and operation should the application be approved.
- 6.1.2 The table below summarises those aspects that have been incorporated into the design, mitigation and delivery in order to achieve a sustainable, low energy development. More detail is provided in the other supporting documents such as the Environmental Statement on many of these issues.

6.2 Summary Table

Adapting to Climate Change	
Issue	Response
Reducing the Impact of Flooding	The whole scheme is seeking to significantly reduce the impact of flooding downstream in York. This is at the expense of unavoidable increased flooding locally of additional agricultural land. However, it has been designed in an extreme flood event to avoid any additional impact on residential properties or agricultural buildings.
	The capacity of the scheme to store water has been designed to take account of the predicted effects of climate change up to the year 2080.
Sustainable Drainage	The embankment has been designed, in terms of the construction materials and slope, to minimise the amount of surface water run-off. The embankment's concrete spillway is a large expanse but is constructed from open interlocking grids which allow water to percolate through.
Irrigation	None of the proposed landscaping will require any irrigation beyond the initial establishment period.
Energy Use	
Issue	Response
Design	The basic design of the scheme provides for the minimisation of energy use by using borrow pits to extract the majority of material required for the embankment. Provision has also been made to use the unsuitable material excavated from the pits to be reused on site. This means that there will be no export of fill material.
Construction	The contractor will be required to minimise the level of energy used. Part of their contract will require them to monitor planned and actual whole life carbon emissions associated with the delivery of the project. See also commentary on materials procurement below.
Operation	The facility will operate in a passive fashion requiring no powered mechanical equipment to control the flow. There will be no lighting provided to the site.

Water Pollution	
Issue	Response
Maintenance equipment using site, hardstanding and new tracks	No pollution control measures considered necessary due to very low level of usage.
Natural Environment	
Issue	Response
Biodiversity Gains	Significant improvements in the contribution the site makes to biodiversity are proposed in the scheme. Substantial new wetland areas incorporating 'marginal' vegetation and species habitats are being created which will contribute towards the creation, extension and diversification of a number of wildlife habitats.
Native Species	Native species of trees, shrubs and grasses will be used in all the landscaping proposals. The areas allocated for biodiversity enhancement will be excluded from farming activity and public access and will provide quiet undisturbed areas where wildlife can flourish.
Scheme management	In order to maximise the biodiversity gains of the proposed work the landscaping scheme will require both establishment and management. These commitments are outlined in the accompanying LEMP.
Waste and Recycling	
Issue	Response
Borrow Pit Material	All the material excavated from the borrow pits will be utilised on site whether it is used in the construction of the embankment or not and therefore there will be no waste from the pits exported off-site.
Top Soil	As above
Construction	The applicant requires that contractors implement schemes with the highest regard to sustainability. Construction policies and management plans will ensure that the production of waste from the site is kept to an absolute minimum and that which is generated is re-used or recycled as far as practically possible. The appointed Contractor will be required to agree a Sustainability Plan as part of the pre-start activities which will include a mechanism to ensure that they maximise the: <ul style="list-style-type: none"> • recovery, reuse and recycling of all resources; • use of recycled aggregates; • quantity, value, source and recycled content of the most frequently used materials; and • embedded water in materials used.
Materials	
Issue	Response
Long Life	The structure has a design life of 100 years plus with the need for maintenance reduced to an absolute minimum. Robust materials such as concrete and galvanised steel will be used in the construction of the flow control structure and spillway to promote longevity. Future flexibility to vary the maximum flow of the river has been built in through the potential to adjust the opening of a steel plate fixed across the wider opening in the concrete headwall.

Procurement	<p>The applicant has policies governing the procurement and use of 35 generic commodities, including materials such as timber and aggregates, for example:</p> <ul style="list-style-type: none"> • Delivering 'Creating a Better Place' by encouraging a "Greener Business World" and "Wiser Sustainable Use of Natural Resources"; • The whole life cost of a product is taken into account, including factors such as energy use, water use, air emissions etc; and • Social impacts of the product/service are considered.
Economic Benefits	
Issue	Response
Training and apprenticeships	As part of the Sustainability Plan to be agreed with the applicant the contractor will be obliged to consider opportunities for apprenticeships and/or getting people back to work as part of the project.
Sub-Contractor and supplier Policies	Within the Sustainability Plan the contractor will need to consider how the procurement of services or materials can benefit local small and medium sized enterprises.

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York Flood Alleviation Scheme –
Foss Flood Storage Area

Planning Application:

Planning Statement and
Application Summary



We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife. We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do. We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

Version

Scheme	York Flood Alleviation Scheme
Project name	Foss Flood Storage Area
Project 1B1S reference	
Date	7 th November 2019
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1 Summary of Application

1.1 Purpose

- 1.1.1 This statement has been prepared by Capita Property and Infrastructure Ltd (Capita), acting on behalf of the Environment Agency (EA). It forms part of a planning application submitted for the creation of the Foss Flood Storage Area (FSA), an integral part of the wider York Flood Alleviation Scheme (FAS).
- 1.1.2 The purpose of this document is to provide a commentary on the design process undertaken and explain the guiding principles that have underpinned and resulted in the final proposal.

1.2 Need for the Scheme

- 1.2.1 Storm Desmond in December 2015 brought flooding to many areas of North Yorkshire. The City of York saw some of the highest river levels on record, with significant impacts on local communities.
- 1.2.2 York has a long history of damaging flooding dating back to 1263. The most recent significant flood events in York have occurred in 1947, 1978, 1982, 2000 and 2015.
- 1.2.3 Defences across much of the city were installed, or greatly expanded, following the 1978 floods, including the Foss Flood Barrier being installed in 1987. This followed from the observation that greater flooding arose under certain conditions due to waters from the River Foss rather than the River Ouse.
- 1.2.4 Since the construction of the Foss Barrier in 1987, the flood risk and frequency of flooding along the Foss corridor has dropped dramatically. Between its completion and the December 2015 flood event, the Foss Barrier had successfully operated and mitigated flooding within the Foss corridor during every major flood event to impact York. However the scale of the 2015 floods overwhelmed the barrier's defences and despite subsequent installation of new pumps and monitoring equipment it cannot be relied on alone to protect the vulnerable properties in the Foss corridor.
- 1.2.5 National flood risk modelling, developed for general planning purposes, indicates most land adjacent to the River Foss in York is located in Flood Zone 3 – this is land which has a greater than 1-in-100 chance of flooding from river sources in a given year. Areas within a small buffer around most of the Flood Zone 3 extent are located within Flood Zone 2 - this is land which has a greater than 1-in-1,000 chance of flooding from river sources in a given year.
- 1.2.6 Without any further interventions it is calculated that a total of 465 residential and 25 non-residential properties are at risk of flooding downstream along the Foss corridor from Strensall to York's urban area. The project outlined in this application will restrict the maximum flow of the Foss meaning that during flood conditions excess water will back up and be temporarily stored behind an embankment thereby preventing this water flowing downstream. This will protect not only the vulnerable properties in the Foss corridor but also contribute to protecting other areas in York liable to flooding by not adding to the flow.

1.3 Evolution of the Proposal

- 1.3.1 The accompanying Design, Access and Sustainability Statement provides a detailed description of the development of the preferred option and the specific elements that make up the final submitted design. This includes a summary of the public consultation and stakeholder engagement work undertaken during the process. A

full description of the consultation is contained in the accompanying Statement of Community Involvement.

- 1.3.2 In summary, a series of solutions were examined to provide additional flood resilience which included building defences (walls, gates etc.) further downstream in York in multiple locations. Once assessed in detail the potential solutions were found to perform differently in terms of the level of flood protection they would provide; they also exhibited variations in both their costs and potential environmental impacts. Whilst not the cheapest, the chosen option was the one that provided the highest level of flood protection and at the same time had lower environmental impacts than most of the other options.

1.4 Description of the Proposed Scheme

General Description

- 1.4.1 The proposal, as submitted in this application, is to create a flood storage area that would, in the event of flood conditions, essentially hold back water that would normally flow downstream. The total area of the planning red line boundary is 151.88ha. The proposed storage area has been designed to store up to approximately 1million m³ of excess flood water occupying an area of approximately 111ha. The design accommodates flood water resulting from a 1-in-100 year event with extra capacity added to cope with the additional predicted effects of climate change in these instances to the year 2080. This will protect the 490 properties calculated to be at risk of flooding downstream during such an event with the exception of 3 properties in York. Two of these are residential which will be offered additional property-level protection bringing them up to the full level of protection. An additional single commercial property will remain below the standard, albeit benefitting from a lower risk as a result of the works.
- 1.4.2 Water will be retained by a 1.65 km long earth embankment which would vary in height and width. The average height of the embankment would be approximately 2.5m extending to a maximum of 3.85m along parts of the central section. It has been designed to have a shallow 1-in-4 slope across its width; this will result in a total width varying along the main sections from 27m to 32m. The flat crest section of the embankment generally varies from 4m to 5m wide. At either end, the embankment falls shallowly and narrows to reach the existing ground level.
- 1.4.3 Spanning the river itself, the scheme incorporates a structure designed to control the flow of the river. Essentially, this supports a concrete wall containing an opening which allows the forward flow of the river to flow at its 'normal' flow rate up to a maximum 10m³ per second. Under flood conditions the flow rate will not exceed this limit leading to excess water building up behind the flow structure and the embankment.
- 1.4.4 Whilst the flow control structure will be constructed from concrete, the embankment will be predominantly built from earth. It will incorporate an impermeable clay core along its entire length and run from a track just west 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 northeast, and ending just before, Lilling Low Lane.
- 1.4.5 Although overtopping of the embankment is not anticipated, protection called a spillway, consisting of voided concrete blocks, will be incorporated into a section of the southern side of the embankment allowing overtopping to take place without damaging the slope through wash-out.
- 1.4.6 The vast majority of the clay material required to construct the proposed embankment will be sourced from excavations called 'borrow pits' within the

application site area itself. These will be located on either both sides of the River Foss.

- 1.4.7 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 and other habitat to provide environmental mitigation:
- 1.4.8 Two temporary borrow pits (T1 to the west of the Foss and T2 to the east) will be excavated, with the voids subsequently being backfilled with material that does not meet the required safety standards for use in the embankment. The land will then be fully reinstated to its previous level and land use.
- 1.4.9 Borrow pit P1 on the west bank of the Foss will be excavated the fill from which will be used within the embankment core. This borrow pit will be retained permanently and connected to the Foss.
- 1.4.10 Borrow pit P2 on the east bank of the Foss will be excavated, with some of this material used for fill material within the shoulders of the embankment and some material used as donor material to backfill borrow pits T1 and T2, in order to reinstate them. This pit will thereafter be retained permanently and connected to the Foss.
- 1.4.11 The whole embankment, including the spillway, will be covered with top soil and sown with grass seed.
- 1.4.12 After construction, the retained borrow pits will be allowed to fill with ground and surface water and wetland and other wildlife habitats will be created in and around the excavated hollows, providing ecological mitigation to the area such as reed-beds and marshland habitat.
- 1.4.13 A drainage ditch currently flowing into the Black Dike will be diverted to flow into the river, via these wetland areas on the eastern bank of the Foss. A siltation pond will be constructed at the inlet of the drainage ditch to the wetland area and vegetated with reed-beds to encourage the deposition of silt and the uptake of nitrates and phosphates from agricultural run-off.

Other key elements of the scheme

- 1.4.14 Road-raising is proposed at Ings Lane to maintain access and egress to/from Lilling Green during the inundation of the flood storage area. The road will be raised to a point above the 1-in-100 year flood level over a length of 200m, with culverts to be integrated below the road, allowing for flood water to pass through.
- 1.4.15 In order to mitigate against the effects, such as increasing sediment, from more frequent backing up and slowing down of the River Foss channel, sections totalling 225m of the river channel will be converted into a 2-stage channel consisting of a narrow central section with lower and higher berms. Changes to Black Dike will involve its diversion along a 119m reach in order to move this section further away from the footprint of the embankment. This section will be profiled as a 2-staged channel as well, providing additional opportunities for biodiversity mitigation.
- 1.4.16 Buried scour protection will be placed along stretches of both the dry side and the wet side of the embankment where it most closely interacts with the River Foss and the Black Dike. They will span 75m along the wet side of the embankment and 50m along the dry side.
- 1.4.17 New asphalt-surfaced access tracks extending to the western side of the control structure will be created along the crest and northern toe of the embankment connecting to the existing farm track to the west of the control structure. These will provide access for maintenance of the structure. There will also be improvements to the initial 350m length of the existing farm track connecting to these new tracks.

- 1.4.18 In order to be able to gain access to the control structure during a flood event a new 560m section of access track will be created and another section improved to the west of the existing track thereby facilitating access from Sheriff Hutton Road above the maximum flood level.
- 1.4.19 A ramp capable of accommodating a combine harvester will be integrated into the design of the embankment at the eastern end, allowing access to the fields on both sides of the embankment. An area of hardstanding and parking will also be created off Lilling Low Lane to be used by EA and Internal Drainage Board staff and vehicles.
- 1.4.20 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 a trench filled with concrete inserted below the road edge.
- 1.4.21 A small area of hardstanding with access from Lilling Low Lane will be created at the eastern end of the embankment in order to provide a loading/unloading and parking area for grass cutting and other maintenance vehicles.

Associated Works

- 1.4.22 A section of overhead electricity power cables supplying East Lilling House from Lilling Green which passes over the proposed embankment will be removed. East Lilling House will be reconnected to the network via a new direct supply from Smith's Lane. These works will be undertaken by the responsible statutory undertaker, Northern Powergrid (NPG), before the works to the main scheme begins. The design of the works has not been included in the application as they will be undertaken by NPG under permitted development powers.

1.5 Scheme Impacts

- 1.5.1 It is considered that all the potential environmental impacts of the scheme have been identified and either the scheme has been designed to avoid any damage or their effects have been mitigated to acceptable levels.
- 1.5.2 A summary and commentary of these issues is contained in the accompanying Environmental Statement (ES) and its Non-Technical Summary contained within the application pack.
- 1.5.3 The site lies within an area of open countryside part of which lies within the York Green Belt. The policy appraisal of the proposal is subject to green belt and a number of other local, regional and national planning policies and guidance. These have been assessed and there is considered to be broad and specific policy support for the proposal and no fundamental conflicts remain that would outweigh this support.
- 1.5.4 Outside those potential impacts considered in the ES other issues that have been assessed are those of visual amenity, loss of agricultural land, flood risk, access and traffic and heritage impacts.
- 1.5.5 Although some negative visual and amenity impacts will be experienced during construction the operational impact of the scheme is judged to be slight. This is primarily due to the passive nature of the structure requiring no permanent staff and only occasional maintenance and inspections. Also the embankment has been designed to blend into the landscape as much as possible.
- 1.5.6 Given the size of the scheme the permanent loss of agricultural land is modest and totals 18.87ha. and it is considered that the other benefits accruing from the scheme

in terms of downstream flood resilience and biodiversity gains clearly outweigh the removal of this area from production.

- 1.5.7 In terms of flood risk, the scheme will increase the extent of flooding in the immediate area behind the embankment, however, the effects are minimised by the design, limiting the maximum extent of the flooding ensuring no adverse impacts on property.
- 1.5.8 Whilst the vast majority of the earth required to build the embankment will be sourced on-site there will still be heavy vehicle movements required to the site. These will involve transporting personnel, plant and some quantities of bulk materials including a contingency amount of fill for the embankment. The main access will be via a lane/track off Sheriff Hutton Road with a second access along Ings Lane used exclusively for the works there.
- 1.5.9 The impact of these movements has been assessed and the maximum impact would occur during the 'set up' stage prior to the start of construction proper. The highest level of vehicle movements would be a maximum of 96 two-way trips per day over a 3-week period. In terms of vehicles this would consist of 30 HGVs and 18 cars. As described the impact during the operation phase of vehicular traffic will be minimal.
- 1.5.10 A public right of way will be affected and a temporary diversion along Ings Lane will be required for a short period.
- 1.5.11 No important heritage assets have been identified on site and there will be no impact on any off-site assets. A geo-archaeological survey and assessment is proposed to help understand the former land uses and the extent of previous human activity.

Conclusion

- 1.5.12 The background and context to the application is considered to demonstrate that there is a clear and substantial need for scheme.
- 1.5.13 Furthermore, all relevant design, access and other environmental issues have been assessed and potential impacts avoided or mitigated as part of the design process. No fundamental issues have arisen that could not be satisfactorily addressed or that would prevent approval.

1.6 Structure and Contents of Application

- 1.6.1 The application seeks full planning permission for the scheme and the application form is supported by the following list of documents and drawings.
- Planning Statement and Application Summary (this document);
 - Design, Access and Sustainability Statement (including Energy Statement);
 - Environmental Statement incorporating:
 - Screening and Scoping Response,
 - Landscape Scoping Statement,
 - Minerals application correspondence,
 - Water Framework Directive Report,
 - Preliminary Ecological Appraisal,
 - Phase 1 Habitat Survey,
 - Bird survey report,
 - Otter and Water Vole survey report,
 - River Habitat Survey report,

- Habitats Regulation Assessment Screening report,
- Biodiversity Impact assessment Calculator, and
- Outline Construction Environmental Management Plan.
- Environmental Statement – Non-Technical Summary;
- Tree Survey;
- Geomorphology Assessment;
- Flood Risk Assessment;
- Statement of Community Involvement;
- Ground Investigation Report;
- Transport Statement;
- Heritage Statement; and
- Landscape Environmental Management Plan.

1.6.2 The table overleaf contains the application's drawings package.

Table 1: Application Drawing Package

Drawing Title	Drawing Number
Location Plan	ENV0000381C-CAA-00-00-MP-EN-C0400:9
General Arrangement (Site) Plan	ENV0000381C-CAA-00-00-DR-C-I0500_23
Site Access, Compound Area and Temporary Works	ENV0000381C-CAA-00-00-DR-C-I0500_24
Services and Boreholes	ENV0000381C-CAA-00-00-DR-C-I0500_25
Access Tracks	ENV0000381C-CAA-00-00-DR-C-I0500_26
Black Dike River Diversion - Plan and Section	ENV0000381C-CAA-00-00-DR-C-I0500_27
Ings Lane Raising – Plan and Sections	ENV0000381C-CAA-00-00-DR-C-I0500_28
Spillway – General Arrangement	ENV0000381C-CAA-00-00-DR-C-I0500_29
Embankment – Long Section	ENV0000381C-CAA-00-00-DR-C-I0500_30
Embankment – Cross Sections	ENV0000381C-CAA-00-00-DR-C-I0500_31
Landowner Access Ramp	ENV0000381C-CAA-00-00-DR-C-I0500_32
Flow Control Structure – Plan and Sections	ENV0000381C-CAA-00-00-DR-C-I0500_33
Flow Control Structure Inlet Channel – Plan and Section	ENV0000381C-CAA-00-00-DR-C-I0500_34
Flow Control Structure Outlet Channel – Plan and Sections	ENV0000381C-CAA-00-00-DR-C-I0500_35
Flow Control Structure - Sections	ENV0000381C-CAA-00-00-DR-C-I0500_36
River Foss Re-profiling – North Locations	ENV0000381C-CAA-00-00-DR-C-I0500_40
River Foss Re-profiling – South Locations	ENV0000381C-CAA-00-00-DR-C-I0500_41
Lilling Low Lane –Insitu Concrete Overrun Edge Repair	LAXxxxx/Patch/01
Landscape Masterplan	ENV0000381C-CAA-00-00-DR-L-C0700_36
Landscape Area A	ENV0000381C-CAA-00-00-DR-L-C0700_37
Landscape Area D	ENV0000381C-CAA-00-00-DR-L-C0700_40
Landscape Area E	ENV0000381C-CAA-00-00-DR-L-C0700_41
Landscape Cross Sections	ENV0000381C-CAA-00-00-DR-L-C0700_42
Landscape – Planting Schedule	ENV0000381C-CAA-00-00-DR-L-C0700_43

2 Planning History

2.1 Ryedale District Council

- 2.1.1 Within the application's red line boundary during the last 10 years the following permissions were granted by Ryedale District Council.

Location: Lilling Green Farm

Proposal: Erection of building to form cattery, domestic double garage, store/workshop and first floor office/gym/rest room.

Permission: Approved with conditions

Date of Approval: 23/08/2011

Location: Lilling Green Farm Cottage

Proposal: Erection of two storey side and rear extension with integral garage and erection of porch to front elevation.

Permission: Approved with conditions

Date of Approval: 15/07/2019

2.2 City of York Council

- 2.2.1 Within the application's red line boundary during the last 10 years no planning permissions have been granted by the City of York Council.

3 Planning Policy Review

3.1 Introduction

- 3.1.1 The Planning and Compulsory Purchase Act 2004 - Section 38(6) requires that decisions on planning applications are taken in accordance with the development plan unless there are material considerations that indicate otherwise.
- 3.1.2 The National Planning Policy Framework is a material consideration that must be taken into account where it is relevant to a planning application.
- 3.1.3 The following provides a review of the planning policy and guidance at central government level plus a review of the development plan policies within Ryedale District and City of York Council local authority areas. Additional commentary is provided concerning the Minerals and Waste Joint Plan (Publication Draft, 2016) a policy document covering both authority areas and considered to be a material consideration in the determination of the application.

3.2 National Planning Policy

- 3.2.1 The National Planning Policy Framework (NPPF) published by the Department of Communities and Local Government, 2019 sets out the Government's policy in relation to promoting the delivery of sustainable development through the planning system. It states that the "*purpose of the planning system is to contribute to the achievement of sustainable development.*" (Para. 7).
- 3.2.2 It makes it clear that the planning system has three objectives to achieve in order to deliver sustainable development - the economic, social and environmental and that these should not be exclusive but rather pursued in a complementary way.
- 3.2.3 In Chapter 11 'Making Effective Use of Land' the Framework suggests that planning decisions should:

"recognise that some undeveloped land can perform many functions, such as for... flood risk mitigation..." (Para. 118b).
- 3.2.4 Green Belt policy is outlined in Chapter 13 which states that the fundamental aim of a green belt is to "*prevent urban sprawl*" and to protect the "*open*" nature of the countryside. (Para. 133).
- 3.2.5 When considering the approach to development proposals in the Green Belt para.146 states that:

"Certain other forms of development are also not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it. These are [amongst others]:
b) engineering operations;"
- 3.2.6 The challenges of climate change and increased risk of flooding are addressed in Chapter 14 where it states that "*the planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk ...in ways that...minimise vulnerability and improve resilience...*" (Para. 148).
- 3.2.7 Chapter 15 addresses Conserving and Enhancing the Natural Environment and states:

"Planning... decisions should contribute to and enhance the natural and local environment by:

- *recognising the intrinsic character and beauty of the countryside...*
- *minimising impacts on and providing net gains for biodiversity...*" (Para. 170 b&d).

3.2.8 Supporting the implementation of the NPPF are a series of National Planning Practice Guidance notes including one on Flood Risk and Coastal Change which suggests that reducing flood risk is an issue where solutions should be sought both within and beyond their own local boundaries; it states:

"Local authorities...should seek opportunities to reduce the overall level of flood risk in the area and beyond. This can be achieved, for instance, through... safeguarding land for flood risk management, or where appropriate, through designing off-site works required to protect and support development in ways that benefit the area more generally." (Para. 50).

3.2.9 The above is the national policy context surrounding the scheme and these key issues are all reflected in the existing local planning policies detailed below. The local policy analysis is divided into the two authority areas, however, given the national policy guidance outlined above it is considered that the respective policies of the neighbouring authority should be considered as material considerations in the determination of the application.

3.3 Ryedale District Council – Development Plan

3.3.1 The relevant part of the Development Plan for Ryedale against which the proposal stands to be judged is The Ryedale Plan – Local Plan Strategy (2013) which is fully adopted. The most relevant text and policies contained in the local plan are considered below.

Vision, Aims and Objectives and Strategy Objectives

3.3.2 The spatial vision for Ryedale includes in its description the following aspiration that clearly recognises the role that the countryside could play in tackling flood risks:

"Our countryside will be an attractive, productive and multi-functional resource. Traditional activities such as food production, tourism, recreation and leisure will be accompanied by wider roles for flood storage and prevention and appropriate new forms of energy production." (Page 17).

3.3.3 This is reflected in strategic aim number three which seeks to minimise *"the risk of flooding and increasing resilience to climate change"* (Page 18) and strategic objective twelve which promotes adaptation *"...to the impacts of climate change through flood risk minimisation..."* (Page 19).

SP1 General Location of Development and Settlement Hierarchy

3.3.4 Policy SP1 states that development in *"open countryside...will be restricted to that... which is necessary to support a sustainable, vibrant and healthy rural economy and communities,"*

3.3.5 Para. 3.35 places emphasis on the role of the wider countryside can play in providing a range of *'services'*. These services are seen as complementing the role of the towns and smaller settlements and include the role of *"flood management"*.

3.3.6 Para. 3.37 recognises that the role and use of the countryside will develop particularly to *"mitigate the effects of climate change."* Examples of new land uses are given including *"flood storage [and] reducing flood flow rates"*.

SP9 The Land-Based and Rural Economy

- 3.3.7 The commentary on the land-based economy in para. 5.35 confirms the authority will be flexible in its support for appropriate new land uses. This is confirmed in the policy wording which states that *"Ryedale's land-based economy will be sustained and diversified with support for...appropriate new uses for land including flood management."*

SP12 Heritage

- 3.3.8 This policy, within the preamble in relation to landscape states that *"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."* (Para. 7.7)

SP13 Landscapes

- 3.3.9 The site falls within the Vale of York landscape character area described in para. 7.12 as *"a flatter and arable landscape of a patchwork of fields with hedgerows."*
- 3.3.10 Policy SP13 seeks to protect the distinctive landscape character areas in the district by *"Encouraging new development and land management practises which reinforce the distinctive elements of landscape character within the District's broad landscape character areas."*
- 3.3.11 These elements include:
- *"The pattern and presence of distinctive landscape features and natural elements (including field boundaries, woodland, habitat types, landforms, topography and watercourses),*
 - *Visually sensitive skylines, hill and valley sides,*
 - *The ambience of the area, including nocturnal character, level and type of activity and tranquillity, sense of enclosure/exposure."*

SP14 Biodiversity

- 3.3.12 The authority seeks to promote biodiversity in Ryedale by seeking *"Opportunities to enhance biodiversity and to improve the connectivity of habitats by creating and protecting wildlife corridors to allow species to naturally change their range in order to adapt to climatic changes or to strengthen populations and genetic diversity can be secured as part of new development schemes."* (Para. 7.16)
- 3.3.13 The policy wording supports this objective by requiring, amongst other things, the following:
- *"Supporting, in principle, proposals for development that aim to conserve or enhance biodiversity and geodiversity through the prevention of loss of habitat or species and the incorporation of beneficial biodiversity features;*
 - *Requiring a net gain in biodiversity to be provided as part of new development schemes;*
 - *Encouraging the use of native and locally characteristic species in landscaping schemes."*

SP15 Green Infrastructure Networks

- 3.3.14 The policy seeks to protect and enhance public rights of way and encourage access to *"land along river corridors."* It also encourages the creation of *"New habitats which reflect the locally distinctive habitat types included in Policy SP14"*

SP16 Design

- 3.3.15 Some of the key features of the policy relevant to the application are the requirements for development proposals to be *"well integrated with their surroundings"*, *"protect amenity and promote well-being"* and *"respect the context provided by its surroundings including...topography and landform."*

SP17 Managing Air Quality, Land and Water Resources

- 3.3.16 One of the key issues covered by this policy is the impact of development on the best and most versatile agricultural land. Para. 7.27 suggests that *"the loss of productive land, particularly the loss of the Best and Most Versatile Land is carefully managed and avoided, when balanced against other sustainability considerations which will need to be taken into account in guiding new development."* The paragraph further suggests that Grade 2 land is considered to be generally what forms the best and most versatile category within the district.
- 3.3.17 The policy wording states that land resources will be protected where *"proposals for major development coming forward on sites that are not allocated for development which would result in the loss of the Best and Most Versatile Agricultural Land will be resisted unless it can be demonstrated that the use proposed cannot be located elsewhere and that the need for the development outweighs the loss of the resource."*
- 3.3.18 The policy also seeks to protect air quality by *"only permitting development if the individual or cumulative impact on air quality is acceptable and appropriate mitigation measures are secured"*

3.4 City of York Council – Development Plan

- 3.4.1 The City of York Council does not currently have an adopted Local Plan. The Development Plan for York consists of the saved policies of The Yorkshire and Humber Plan - Regional Spatial Strategy to 2026 (RSS) and adopted neighbourhood plans. The saved policies of the RSS relate to the York Green Belt and therefore are relevant to this application. However, none of the adopted neighbourhood plans cover the application site.
- 3.4.2 In order to provide a framework for decision making in determining applications the assessment will principally have to be based on the NPPF policies and those saved from the RSS.
- 3.4.3 Whilst an unadopted Local Plan is currently in use as the reference document against which development management decisions on individual applications are being judged significant progress has been made towards the adoption of a new Local Plan which has reached the final plan-making 'examination' stage.

Yorkshire and Humber Regional Spatial Strategy to 2026

- 3.4.4 Published in 2008, the RSS has been substantially revoked save for specific sections of two policies (YH9: Green Belts and Y1: York Sub Area Policy). The saved sections both have the effect of requiring the definition of the York Green Belt boundary and implementation of the policy in order to:

"Protect and enhance the nationally significant historical and environmental character of York, including its historic setting, views of the Minster and important open areas which both relate to York." (Policy Y1- C2).

Draft Local Plan Incorporating the 4th set of changes, 2005

- 3.4.5 The unadopted local plan currently in use is the 'Draft Local Plan Incorporating the 4th set of changes, 2005'.
- 3.4.6 Whilst not having the weight of an adopted Local Plan it is a material consideration in the determination of this planning application. The weight afforded to it, however, will have to be considered in the context of the length of time since its original publication date and the up-to-date emerging policies of the new plan.
- 3.4.7 The most relevant policies for this application from the 2005 Plan are as follows:
- SP2: The York Green Belt
 - GP1: Design
 - GP4a: Sustainability
 - GP9: Landscaping
 - GP15a: Development and Flood Risk
 - NE1: Trees, Woodlands and Hedgerows
 - NE2: River and Stream Corridors, Ponds and Wetland Habitats
 - NE4a: International and National Nature conservation Sites
 - NE6: Species Protection by Law
 - NE7: Habitat Protection and Creation
 - NE8: Green Corridors
 - HE10: Archaeology
 - GB1: Development in the Green Belt
 - T2a: Existing Pedestrian/Cycle Networks
 - L4: Development Adjacent to Rivers

City of York Local Plan (Publication Draft) - 2018

- 3.4.8 The new City of York Local Plan (Publication Draft) was submitted on 25th May 2018 to the Secretary of State requesting the Planning Inspectorate to undertake an examination. Subsequently there has been proposed changes that have necessitated a further round of public consultation. Some of the key issues emerging from this process have been housing allocations, overall growth numbers and the approach to the proposed green belt. The additional public consultation period closed on 22nd July 2019 following publication of the proposed modifications to the draft plan.
- 3.4.9 Although the examination process still has some way to go the policies set out in the Plan can be considered to reflect the settled view of the local authority. The new plan and its underlying evidence base can therefore be given weight as material considerations.
- 3.4.10 The most relevant policies for this application from the Plan are as follows:

SS2: The Role of York's Green Belt and GB1: Development in the Green Belt

- 3.4.11 These policies reflect the purposes of the Green Belt expressed in Chapter 13 of the NPPF and the retained RSS policies in terms of the overriding aims being to prevent sprawl and protect the openness of the countryside. Policy GB1 of the emerging Local Plan provides detailed criteria against which any proposal needs to be judged. These, in part, mirror the regional and national guidance and state that consent will only be granted where:
- I. *"the scale, location and design of development would not detract from the openness of the Green Belt;*

- II. *it would not conflict with the purposes of including land within the Green Belt; and*
- III. *it would not prejudice or harm those elements which contribute to the special character and setting of York."*

3.4.12 In addition it lists the purposes for which consent will be granted if the above criteria are met. Included in the list of appropriate forms of development are "essential engineering operations".

GI2: Biodiversity and Access to Nature

3.4.13 This policy provides a local reflection of the national requirements set out in Chapter 15 of the NPPF and seeks to encourage biodiversity and will, amongst other objectives, require developments to:

- "ii. ensure the retention, enhancement and appropriate management of features of geological, or biological interest;*
- iv. result in net gain to, and help to improve, biodiversity;*
- vi. maintain and enhance the rivers, banks...;*
- vii. maintain water quality in the ...River Foss...."*

GI3: Green Infrastructure Networks

3.4.14 Paragraph 98 of the NPPF requires that decisions "should protect and enhance public rights of way". Policy G13 encourages the protection and enhancement of "the amenity, experience and surrounding biodiversity value of existing rights of way".

GI4: Trees and Hedgerows

3.4.15 Paragraph 170(b) of the NPPF encourages the recognition of the "intrinsic character and beauty of the countryside, and the wider benefits from natural capital" such as trees. The emerging Local Plan policy also recognises the contribution that established hedgerows as well as trees can make to the environment and seeks to protect the most prominent and valuable examples within development sites.

ENV4: Flood Risk and ENV5: Sustainable Drainage

3.4.16 Managing flood risk is a key theme of Chapter 14 of the NPPF which is reflected in policy G14 which states that "flood risk within the catchment will be successfully managed". Policy ENV5 also reflects the NPPF advice by encouraging the incorporation of sustainable drainage and minimisation of surface run-off in developments.

3.5 Waste and Minerals Authorities – Development Plan

Minerals and Waste Joint Plan (Publication Draft, 2016)

- 3.5.1 The Minerals and Waste Joint Plan (MWJP) is currently a draft document co-authored by the local waste and minerals authorities – North Yorkshire County Council, City of York Council and the North York Moors National Park Authority.
- 3.5.2 It seeks to provide guidance to developers, local communities and other interested parties on where and when minerals and waste development may be expected over the next 15 years in North Yorkshire. It also outlines how minerals will be managed to reduce any adverse impacts and maximise benefits to mineral resources and local economic growth.

- 3.5.3 The MWJP is currently at examination stage for compliance and soundness. It has been subject to further proposed changes and upon which the associated consultation has been completed.
- 3.5.4 The Plan, once adopted, will form part of the statutory development plan and the three aforementioned authorities will use it as a basis for decision making on planning applications for development relating to these activities. In its current stage and form it is considered to be a material consideration in the determination of this application.
- 3.5.5 Where the MWJP contains relevant policies, decisions will be made in accordance with the plan, unless there are other material considerations, related to planning, which indicate otherwise. The policies relevant to the development site are listed below:

S01: Safeguarding mineral resources

- 3.5.6 This policy outlines the types of surface and deep mineral resources that are identified within Minerals Safeguarding Areas, development within which is subject to Policy S02. The surface minerals resources safeguarded under the policy are identified on policy maps, including clay and sand and gravel.

Policy S02: Developments proposed within Minerals Safeguarding Areas

- 3.5.7 This policy sets out how proposed developments within mineral safeguard areas will be assessed. The policy states that:

"Within Surface Minerals Safeguarding Areas shown on the Policies Map, permission for development other than minerals extraction will be granted where:

- i) It would not sterilise the mineral or prejudice future extraction; or*
- ii) The mineral will be extracted prior to the development (where this can be achieved without unacceptable impact on the environment or local communities), or*
- iii) The need for the non-mineral development can be demonstrated to outweigh the need to safeguard the mineral; or*
- iv) It can be demonstrated that the mineral in the location concerned is no longer of any potential value as it does not represent an economically viable and therefore exploitable resource; or*
- v) The non-mineral development is of a temporary nature that does not inhibit extraction within the timescale that the mineral is likely to be needed; or*
- vi) It constitutes 'exempt' development (as defined in the Safeguarding Exemption Criteria list)."*

M13: Continuity of supply of clay

- 3.5.8 This policy ensures the provision of sufficient reserves of clay to provide a 25 year supply for existing manufacturing operations in the County. It identifies specific areas for future extraction to provide this supply, none of which are part of the application site.

4 Planning Appraisal

4.1 Introduction

4.1.1 Following the review of the policy framework surrounding the application the following key appraisal themes are considered to be the most relevant in assessing the proposal.

- Principle of Development and Green Belt Policy;
- Design and Amenity;
- Trees and Hedgerows;
- Agricultural Land;
- Flood Risk and Water Issues;
- Mineral Resources;
- Access and Traffic;
- Ecology and Nature Conservation;
- Heritage and Archaeology; and
- Ground Conditions.

4.2 Appraisal

Principle of Development and Green Belt Policy

- 4.2.1 The principal aim of the development as clearly set out in the application is to make a significant contribution towards the alleviation and reduction of flood risk, thereby improving the ability of communities in York and Strensall to cope with increasingly frequent and significant flood events.
- 4.2.2 There is considered to be strong support for the role of the countryside to contribute towards flood resilience in The Ryedale Plan which makes specific mention of this role in its spatial vision. The need to take positive action against flooding and the impact of climate change is further reinforced within strategic aims 3 and 12 respectively along with general support with Policy SP1.
- 4.2.3 No conflict exists in The Ryedale Plan between the proposed development and the traditional role of the countryside as it recognises that flood management is an acceptable new use within the open countryside (Policy SP9). Overall it is considered that this aim is strongly supported by current national and local planning policy.
- 4.2.4 At a national level NPPF, Chapter 14 emphasises the central role that the planning system can play in delivering greater flood resilience.
- 4.2.5 A section of the application site falls within designated green belt. This area is wholly contained within the City of York Council boundary. The York Development Plan is supported by the saved policies of the RSS that define the purpose of the York Green Belt. The proposal is considered not to be in conflict with the key objectives of the Green Belt as outlined in the RSS which in turn reflect national policy wording and guidance in the NPPF. Furthermore, within the context of the RSS policy wording the proposal, by improving flood resilience downstream, makes a positive contribution towards the protection of York's unique historic character by reducing flood risk in the city.

- 4.2.6 Policy GB1 of the emerging City of York Local Plan lists specific types of new development that are appropriate in the Green Belt providing that they satisfy three criteria. These criteria are set out para 3.5.11 above and it is considered that the first two reflect the NPPF objectives of preventing urban sprawl and protecting the openness of the countryside whilst the third criterion mirrors the specific objectives of the RSS in seeking to protect the unique character of York as a historic city.
- 4.2.7 The commentary below describes how the development is considered not to cause harm to the openness, visual amenity or intrinsic value of the countryside. It also does not encourage, provide any future opportunities for, or demonstrate any attributes of, urban 'sprawl'; it is therefore not considered to be in conflict with the overarching objectives of the Green Belt.
- 4.2.8 The third criterion relating to protecting historic York is clearly satisfied by the proposal as described above.
- 4.2.9 In satisfying these criteria the proposal is also considered to fall within the category of acceptable types of development as an 'essential engineering operation'. Therefore, the development is considered to be fully consistent with the national, regional and emerging local plan policies concerned with the Green Belt relating to the principle of this development.

Ground Conditions

- 4.2.10 Ground conditions have been investigated to establish the suitability of the site to accommodate the proposed development, whether the material to be sourced from the borrow pits is suitable for the construction of the embankment and the likely presence of any contaminated land (no risks from contaminated land were identified).
- 4.2.11 The proposed borrow pit locations have been placed in locations where there are thick deposits of plastic clay. Indications from investigations shows that this clay is worked as brick clay locally (e.g. Newton upon Derwent clay pit) and the stratum (geological known as the Alne Formation) is commonly around 4m thick. The current pit positioning follows the findings of two ground investigations, a primary investigation in Summer/Autumn 2018 and a supplementary secondary ground investigation in Autumn 2019. The primary study is included in the application pack (a summary is provided here) and this commentary contains the findings of the supplementary investigation.
- 4.2.12 The primary ground investigation for the flood storage area comprised of 26 exploratory holes and geophysical electro-magnetic surveying. The exploratory holes were arranged on the basis of a 300m x 300m grid and water wells were installed in around half of the holes. When the findings were assessed, it was seen that a small proportion of the points on this grid fell along a linear feature comprising a sand channel belonging to an ancient route of the River Foss. It was appreciated that the sand was a localised geological phenomenon and that in order to complete an assessment of the geology a number of additional holes were required. Subsequently in Autumn 2019 an additional six boreholes were drilled to between 5m and 7m depths on a central aligned north-south traverse situated away from the channel feature.
- 4.2.13 Now that this work is complete, a better understanding has been obtained on the sheet of lacustrine clay sediments which are present at the site. The lacustrine clays have been tested as part of the main phase ground investigation and found to be of firm or stiff nature beneath all the farmland with the exception of the central corridor of lowest lying boggy farmland. In the low lying strip of land there is a tendency for lens-shaped bodies of sand to occur along with softening of soils in the middle and lower parts of the lacustrine deposit is present, possibly resulting from the presence of the sand.

- 4.2.14 The primary and secondary ground investigations have provided a sound understanding of the geological conditions and has identified the extent of this poor strength zone (ancient sand channel). The borrow pits have been positioned on higher ground and in positions where the geology has been identified by triangulation providing greater confidence. A geophysical survey was also undertaken which shows no paleo-channel or ferrous anomaly (e.g. iron-rich sand) in the chosen pit sites.
- 4.2.15 The following excavation areas have been proposed, two of which are permanent pits and two of which will be reinstated to ground level and existing land use to minimise visual and landowner impacts. The reference numbers refer to the identifiers on the application drawings.
- 4.2.16 Borrow Pit P1 – This area is located within the higher topography where the primary and secondary ground investigation shows a thick layer of Alne Formation. This area will be excavated and the fill will be used within the embankment core. The borrow pit will be retained permanently and landscaped.
- 4.2.17 Borrow Pit T1 – This area is located away from the river where the primary and secondary ground investigation concludes there is a thick layer of Alne formation. This area will be excavated but will not exceed the maximum area indicated. The void will subsequently be backfilled with material that does not meet the required material safety standards (i.e. material with a higher permeability). The land will be fully reinstated to its original level and land use.
- 4.2.18 Borrow Pit P2 – This area is situated in low quality arable land which is known to flood frequently. This permanent pit will provide a wetland habitat, improve water quality and improve the river corridor. Some of this material will be used for fill material within the shoulders of the embankment and some material will be used as donor material to backfill Borrow Pit T1 and T2 to reinstate these to existing land use to minimise visual and landowner impact.
- 4.2.19 Borrow Pit T2 – Located in an area where the Ground Investigation shows a thick layer of the Alne formation. This area will be backfilled to minimise the loss of high quality agricultural land and to minimise impacts to the landowner. This area will be excavated up to the maximum area indicated. The void will then be backfilled with material that does not meet dam safety standards (i.e. material with a higher permeability). The land will be fully reinstated to its original level and land use.
- 4.2.20 Cut-fill calculations have been undertaken to ensure these borrow pits provide enough fill for the embankment and the embankment's impermeable core. The present borrow pit sizes account for a proportion of the material that is expected to be unsuitable following excavation which is inevitable in excavations of such a size. The final landscaped pits have been carefully sized to ensure the total permanent void equates to the supplementary material required to raise the embankment above ground level. This provides certainty that the permanent borrow pit areas will not change or increase in size when commencing site activities.
- 4.2.21 It was originally anticipated that all the clay material could be wholly sourced from the borrow pits identified on site. However, a 'contingency' amount of imported clay is now proposed, if required. This has arisen from the need to remove uncertainty from the construction schedule. The establishment of the clay recovery process from the borrow pits and the associated dewatering mechanism could potentially delay the programme; therefore it was considered prudent to have available an initial contingency amount of clay to enable construction to commence, without having to wait for the borrow pits to produce material.
- 4.2.22 In terms of quantities the total amount of material required to construct the embankment and undertake other engineering operations on site amounts to 112,000m³ of which up to 2,300m³ is intended to be imported. The traffic

implications of this are discussed in the accompanying Transport Statement and summarised further in this report.

Design and Amenity

- 4.2.23 The application site is located within an area of open arable farmland of large fields, with few undulations or boundary features such as trees and hedgerows. Residential properties are located within and close to the application site; those at Lilling Green are within the site and East Lilling House is just outside to the south east. Walbutts and The Bungalow are to the south, Bridge Farm to the northwest and there are also nearby properties at East Lilling Grange and East Lilling Farm to the northeast. A portion of Lilling Low Lane is within the application site as are public rights of way (PRoW) and tracks along the western boundary and along Ings Lane.
- 4.2.24 The River Foss dominates as a visual reference with its tributary the Black Dike; a number of other water features such as streams, ditches and temporary ponds are also present. A line of National Grid electricity cables supported on high-level steel pylons provide another prominent visual feature traversing the site from southeast to northwest.
- 4.2.25 Visual and residential amenity is likely to be affected during the construction phase of the project due mainly to impacts from noise and visual disturbance arising from the works themselves and associated vehicular movements. This will be most pronounced at the closest residential properties to the development and the users of the PRoW. The application seeks to minimise these impacts mainly through the implementation of the mitigation measures outlined in the scheme's Construction Environmental Management Plan (CEMP) appended to the ES including the application pack. Prior to development beginning the applicant will require the contractor to produce a Construction Traffic Management Plan (CTMP) detailing how the traffic travelling to, entering and leaving the site will be effectively managed safely and in order to minimise disruption and potential conflict.
- 4.2.26 It is considered that once operational the development will not to have any significant negative impacts on either the landscape or visual/residential amenity. A fuller description of the potential impacts is included in the Landscape and Visual Effects Scoping Statement included as Appendix A2 in the accompanying ES. The embankment, due to its length and height, will be a prominent feature in the local, generally flat, landscape. However, it has been designed to minimise this impact restricting the maximum height of the feature to 3.95m with the average height being much lower at 2.5m. The height at either end falls gradually towards the PRoW at the west end and Lilling Low Lane at the eastern extent thereby significantly reducing its visual impact from these key public viewpoints. The visual impact of the embankment is further reduced by the proposed top soiling and grass seeding of the feature along its entire length. This includes the length of the spillway which will incorporate voided, reinforced protection on the southern and western slopes through which grass will grow.
- 4.2.27 The width of the embankment will also reduce the visual impact; this varies but the central section will be around 30m wide allowing a 1-in-4 slope to be created which will provide a gentler more natural and less engineered appearance, encouraging the perception of views across and beyond the feature akin to an undulation within the landscape.
- 4.2.28 The residential properties nearest the embankment at Walbutts, The Bungalow and East Lilling House are further protected from views of the feature by; in the case of Walbutts and The Bungalow, by trees. Views from East Lilling House are restricted by the presence of other farm buildings within the grouping. Properties further away

will have long views across to the feature but the design mitigation is considered to substantially reduce any intrusion likely to be experienced.

- 4.2.29 The closest and most prominent views of the feature are likely to be experienced by users of the PRow running parallel to the section of the embankment west of the Foss. However, the design of the embankment at this point provides for a significant decrease in the height and consequent tapering of its width from the river's western bank to existing ground level.
- 4.2.30 Users of the PRow will also be exposed to near views of the flow control structure. This is a hard engineered structure the visual impact of which, close up, will be to some degree negative. However, from the footpath there is only a very short section which is exposed to an end-on view and clearly seen when crossing the Foss footbridge. The headwall of the structure is relatively narrow at 7.7m wide; it is contained either side by the embankment and the associated wingwalls. The flow control structure is not considered to visually impact any other receptors.
- 4.2.31 The other major engineered features of the scheme are the raising of Ings Lane and the excavation of the borrow pits.
- 4.2.32 In terms of Ings Lane this change will be viewed from Lilling Green and by PRow users. Both impacts are considered to be minor given the proposed landscaping mitigation proposed which will have the effect of breaking the view across the raised track for both receptors.
- 4.2.33 The borrow pits, whilst clearly a substantial change in the landscape have been carefully designed to exhibit a natural appearance and, along with the proposed mitigation planting, are not considered to be visually detrimental, particularly to the closest receptors along the PRow and Lilling Green.
- 4.2.34 The facility has been designed as a passive operational structure requiring very little maintenance. Infrequent inspection visits will be required from EA staff and the embankment in particular will be grass-cut approximately six times per year. The impact on residential amenity and the enjoyment of the PRow of these activities is considered to be minimal.
- 4.2.35 Overall careful design of the development is considered to have minimised its impact on the landscape, residential and footpath user's amenity. As such it is considered not to be in conflict with the appropriate planning policies outlined in section 3.

Trees and Hedgerows

- 4.2.36 There will be some impact on both trees and hedgerows as a result of the proposed development within the site. These are fully outlined in the accompanying Tree Survey included as an appendix to the ES.
- 4.2.37 Impacts along the line of the embankment and creation of the borrow pits have been avoided. However, the works to raise Ings Lane will result in the loss of 9 trees and a section of hedgerow along the length of the works. Seven of these trees are Ash, and whilst most of them are currently categorised as being in 'fair' condition, they are unlikely to survive in the long term due to Ash Dieback Disease.
- 4.2.38 Following the works to Ings Lane a new length of native-species hedgerow will be planted to replace the section removed in order to reinstate this strong boundary feature.
- 4.2.39 The accompanying landscaping plans provide details of all the proposed new tree and hedgerow planting in various areas throughout the site including immediately adjacent to the borrow pits and along Ings Lane.

- 4.2.40 The mitigation planting proposed provides for a total of 298 trees and 277 linear metres of hedgerow. This is considered to provide sufficient mitigation for the 9 trees and approximately 200 linear meters of hedgerow to be lost. As described in the accompanying Environmental Statement this planting also provides mitigation for other ecological impacts of the scheme.

Agricultural Land

- 4.2.41 The development will result in the loss of some Grade 2 agricultural land from production within the area of permanent works. Information from the regional agricultural land classification maps (*Regional Agricultural Land Classification Map, Yorkshire and The Humber Region*, Natural England, 2010) suggests, very broadly, that the site's Grade 2 land lies to the east of the Foss beyond the area of the river's corridor subject to frequent flooding. The remaining land to be removed from active production is likely to be Grade 3 a large proportion of which will be degraded by frequent flooding.
- 4.2.42 The total area of agricultural land (all grades) to be taken permanently out of production is 18.87ha. of which only a proportion will be Grade 2. As required by Policy SP17 of The Ryedale Plan this loss has to be balanced against "*other sustainability considerations*", the most important of which are the substantial benefits accruing from the development in preventing flooding downstream. In addition, the development, as part of the proposed mitigation measures, will also create biodiversity gains. The main areas will primarily be within land to be taken out of production i.e. from the borrow pits and the poor quality marginal land immediately west of the embankment between it and the Foss to be turned over to species-rich grassland, wetlands etc. as described elsewhere in the application.

Flood Risk and Water Issues

- 4.2.43 The Water Environment and Flood Risk chapter of the ES includes consideration of the issues identified from the Flood Risk Assessment and Water Framework Directive assessment.
- 4.2.44 The issues identified are split between construction and operational impacts. The construction risks are focussed around the potential for pollution of the watercourses, whilst during the operation of the scheme the impact of increased or reduced flood risk and loss of a section of natural river bed are the principal concerns. None of these issues are considered to prevent the scheme proceeding as appropriate mitigation has been incorporated into the design or other measures are in place to minimise the impact.
- 4.2.45 For example, the River Foss will be temporarily diverted to allow the construction of the flow control structure across the river which will remove habitats along the channel and banks of the river. Black Dike will be straightened to take it further away from the base of the proposed embankment.
- 4.2.46 Mitigation is proposed for both of these impacts; along the Foss a total of 225m of the channel and banks upstream of the flow control structure will be re-profiled to provide compensatory habitats. Similarly, the length of Black Dike to be altered will also be re-profiled in a similar manner.
- 4.2.47 The prevention of pollution during construction will be strictly controlled through the implementation of a comprehensive CEMP. The plan will be finalised with the appointed contractor but a draft is included as an appendix to the ES.
- 4.2.48 Operationally, the negative impacts of the increased flooding upstream of the embankment have been mitigated through the design, ensuring that the retained water has a maximum footprint so it will not adversely affect existing residential or other buildings. Improving access from Ings Lane during a large flood event by

raising its level and the potential harm to crops from more frequent flooding has been addressed through compensation arrangements with those affected.

Mineral Resources

- 4.2.49 One of the main conclusions of the ES minerals chapter is that the 'slight adverse' impact associated with the sterilisation of some of the resources below the footprint of the embankment and the borrow pits cannot be directly mitigated for, but that this impact is offset by the excavation and use of the mineral clay within the borrow pits and directly below the footprint of the embankment.
- 4.2.50 The most appropriate policy assessment for the proposed development, including the use of borrow pits on site to source the material required for the construction of the embankment, is considered to be the conditions listed in Policy S02 of the MWJP, discussed above in sub-section 3.5. This policy outlines that permission for non-mineral development can be given if a proposal meets one or more of six conditions. It is considered that the proposal satisfies the following three.
- 4.2.51 Not sterilising the mineral or prejudicing future extraction - only relatively small areas below the footprint of the embankment and the borrow pits would be inaccessible post-development. The remainder of the resource within the application site is still available for future extraction.
- 4.2.52 Extract mineral prior to the development - the mineral below the footprint of the embankment and within the borrow pits will be extracted up to a certain depth and utilised during the construction of the development.
- 4.2.53 Need for the non-mineral development can be demonstrated to outweigh the need to safeguard the mineral – it is considered that the benefits of the scheme to the wider communities outlined in the application clearly outweigh the need to safeguard the area of mineral. This view in particular is reinforced by the net loss and sterilisation of resource being comparatively small.
- 4.2.54 In meeting these criteria the development minimises its impact on the objectives of the draft plan and is considered to satisfy policy.

Access and Traffic

Construction Phase Impacts

- 4.2.55 The proposed access route for the construction plant, equipment and material is fully described in the accompanying Transport Statement. In summary, a single access to the site will be used for the majority of the development. This will be via a lane and track which runs past Bridge Farm to the site of the proposed embankment by the Foss where the main contractor's works compound will be sited. The track will be accessed from Sheriff Hutton Road.
- 4.2.56 Ings Lane will also be used to directly access the works area associated with the raising of this lane. Temporary mitigation measures to ensure safe access to the site will be fully set out in the CTMP which will form part of the site works information which will form part of the site's works information for the appointed contractor.
- 4.2.57 Access within the site itself across the Foss will be enabled by the construction of a temporary 11m long bridge just downstream of the location of the proposed control structure. This bridge will take the heavier vehicles, lighter vehicles will be able to use alternative river crossing points. Across the Foss these will be 'pipe bridges' which will be created by installing three 1.2m diameter culverts within the Foss channel topped with clay/stone fill within which a wooden deck would be installed to distribute the load. The river bank sides would also be engineered to enable a gentle slope to be created down to the pipe bridge. Two pipe bridges are required to cross the Foss plus a similarly constructed one across Black Dike.

- 4.2.58 These crossings will be in position for the duration of the works, then fully removed and ground levels reinstated to either their pre-existing state or that described in any associated landscaping/mitigation works.
- 4.2.59 To provide access within the site during construction a temporary access track, consisting of clean crushed stone atop a geotextile membrane, will be laid from the unclassified access track and along the southern side of the proposed embankment, utilising the temporary bridge to cross the river.
- 4.2.60 The works not using the main access will be those concerned with the carriageway edge protection to be provided to Lilling Low Lane which will be accessed directly from the highway. Similarly, as discussed above, the works to raise Ings Lane will be directly accessed from Lilling Low Lane and Ings Lane. The scale and therefore potential impact of these works will be relatively moderate.
- 4.2.61 During the proposed works to raise the section of Ings Lane a temporary diversion of the lane and associated PRow will be necessary whilst the works take place. The temporary diversion proposed is adjacent to the existing line of the lane and involves moving the line of the footpath and track approximately 35m west into the adjacent agricultural land. The diversion will be constructed from suitable plastic or aluminium matting with built up access ramps at either end. Throughout the works access will be maintained at all times for all users.
- 4.2.62 An application for the temporary diversion of the path will be submitted in good time for the required works which are likely to begin in 2020. At the time of writing the length of time required for the temporary PRow diversion is not known, however, it will be sought for a period not exceeding 6 months.
- 4.2.63 Following the completion of the works the temporary diversion will be removed and all the associated land returned to its original condition. Landscaping will also be provided along the western boundary to compensate for the removal of a length of hedgerow and trees.
- 4.2.64 Construction impacts will be managed by the appointed contractor through the completion of a CTMP.
- 4.2.65 The completed scheme is considered to comply with the relevant local plan and NPPF policies that encourage the creation of new habitats along footpaths and this section of the PRow receives the benefit of no longer being subject to inundation during 1-in-100 year flood events.
- Operation
- 4.2.66 The passive nature of the structure means that no permanent staff are required on site and only occasional maintenance and inspection visits are needed. It is considered that there are no adverse traffic effects post-development.
- 4.2.67 In terms of the impact on the PRow there are positive benefits on the section along Ings Lane as described above. Additional landscaping mitigation works will also be carried out adjacent to the section of the PRow running along the western boundary of the site further contributing to the ambitions of the relevant planning policies relating to footpath corridors and mitigating visual impacts of the development.
- 4.2.68 In terms of other impacts parts of the footpath are currently subject to flooding during 1-in-100 year events, for example, during that last flood of 2015, the bridge over Black Dike as washed away, making the PRow impassable until it was reinstated. Post-development, the scheme would affect an additional section along the western site boundary making this length subject to flooding where previously it was not.
- 4.2.69 The applicant is not able to justify raising the level of these sections above the maximum design flood height on either cost or environmental impact grounds. This

is particularly so given that these areas are at the margins of the flood profile and will drain relatively quickly and furthermore that, under baseline conditions, sections of the PRoW would already be subject to flooding.

Ecology and Nature Conservation

- 4.2.70 In order to assess the likely effects that the proposed development might have on the Strensall Common Special Area of Conservation (SAC) a Habitats Regulations Assessment (HRA) screening exercise was undertaken. This identified a number of potential impacts on the SAC (which is also designated as a Site of Special Scientific Interest), namely:
- potential changes to groundwater levels below Strensall Common;
 - potential changes to water levels in the Black Dike, which runs along the boundary of Strensall Common; and
 - potential air quality impacts of construction emissions on qualifying features.
- 4.2.71 All of the above have the potential to affect the plant community, structure and function, and the supporting processes within the SAC.
- 4.2.72 The HRA concluded that no significant effects were likely to be experienced by the SAC. A full copy of the report and supporting evidence is reproduced in the application pack. In summary, the SAC's distance from the development, the construction traffic being routed away from the SAC and the conclusions of the water modelling of the effects on groundwater and on Black Dike of the works showed at most only minimal impacts.
- 4.2.73 However, in order to confirm this analysis, the ES further recommended additional post-development monitoring within SAC of groundwater levels in order to ensure there is no adverse effect.
- 4.2.74 In addition, the extensive commentary within the ES on the potential effects of the development found that the application site provides some valuable habitats for ecology and nature conservation interests particularly along the watercourse corridors.
- 4.2.75 There were no species or habitats identified that were so adversely affected that any potential effects could not be mitigated.
- 4.2.76 The relevant planning policies seek to protect biodiversity and achieve a 'net gain' as part of developments. It is considered that the scheme supports these objectives in providing the proposed mitigation landscaping and other compensatory works.
- 4.2.77 In particular, compensation for the loss of some trees and sections of hedgerows will be provided around the borrow pits and elsewhere through additional tree planting and creation of a new habitat-rich environment including species rich grasslands and marshland, wetland areas (borrow pits and smaller pond). In addition, mitigation for the partial loss of the trees and part of the hedge line along Ings Lane is also proposed along the lane itself. Habitat creation is also proposed as an integral part of the proposed realignment of a section of Black Dike.
- 4.2.78 It is considered that all reasonable opportunities have been taken to meet the ambitions of local policy in connection with the biodiversity on the site. The following is the proposed mitigation measures for each of the protected habitats and species. In terms of specific species, assessments were made of the presence of all protected species on the site and the scheme assessed to determine if any mitigation measures or design changes were required.
- 4.2.79 The artificial channel created by the Foss flow control structure was considered a potential threat to fish and eels which resulted in loose and fixed rocks on the invert to create a 'fish pass', and 'eel tiles' installed to ease the passage of both. During

flood events it is also possible that fish will be swept into the borrow pits and smaller ponds. To ensure that fish are not trapped in the ponds appropriately designed outfalls will be provided back into main channel of the River Foss.

- 4.2.80 Once established the number of trees on site plus compensatory replacement of hedgerows will provide additional nesting opportunities for birds.
- 4.2.81 The bat survey revealed only one tree being used as a roost. This tree is not within the main works area but will be identified and protected for the duration of construction.
- 4.2.82 Great Crested Newts were also found on site and will be protected during the works; the creation of the small pool will provide compensatory habitat for any lost.
- 4.2.83 Of the remaining species, field surveys have identified the presence of both otter and water voles on site. In order to confirm the level of any impact additional pre-construction surveys will be carried out no more than 2 months prior to the start of works to ensure that any animals or habitats affected are dealt with to minimise disturbance.
- 4.2.84 Mitigation for these impacts will be provided through creating potential habitats, for example the Black Dike will be realigned to the east of the embankment. This will include a 45 degree profile and suitable native vegetation to provide foraging and sheltering resources. Vegetation planted around the smaller pond to be retained will be linked into woodland to the south of the embankment to create habitat linkages. Reedbeds created within the borrow pit area will provide good refuge for water voles. The ongoing management regime in line with good practice will be observed by site managers and the Internal Drainage Board which will also benefit otters and water voles. This habitat creation will increase the biodiversity of habitats which will in turn benefit otter and water voles using the site. The seasonal wetting of fields will also provide suitable habitat for water voles.
- 4.2.85 A pre-construction survey will also be undertaken to assess the presence of badger on or near the site. The scheme includes mitigation for any potential impacts through the creation of small stands of trees for example.
- 4.2.86 Non-native invasive species Himalayan Balsam and Giant Hogweed were recorded on-site. An eradication programme for their partial removal from sections of the site will be required as they occur in the area of the works. The programme will form part of the scheme's finalised CEMP.
- 4.2.87 There is a strong emphasis in national and local planning policy towards trying to achieve a 'net gain' in biodiversity in development proposals. The application is considered to meet this threshold which is confirmed by an analysis within the ES showing that there is a net gain in biodiversity of 11.34%. The flood alleviation scheme is therefore considered to be compliant with the NPFF, which stipulates development should avoid net loss of biodiversity, and that sustainable development should move towards achieving net gains.

Heritage and Archaeology

- 4.2.88 As required by local and national planning policy the site and surrounding area have been assessed for the presence of built heritage assets and archaeological interest, the process and results being described in the accompanying Heritage Statement.
- 4.2.89 In terms of the built heritage a desk-based study examined assets within and a reasonable distance from the application site. The nearest listed buildings on the National Heritage List for England (NHLE) are 700m to the northeast 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.

- 4.2.90 The nearby 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.
- 4.2.91 An initial assessment suggested 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 man-made Black Dike.
- 4.2.92 Monitoring of the geotechnical test pits indicated potential for preserved organic remains at approximately 1.2m deep. These are likely to indicate former channels of the River Foss.
- 4.2.93 Following the above findings further investigation works are proposed as part of the application which are proportionate and appropriate to the site. They consist of a geo-archaeological coring assessment which will seek to identify, characterise and record the former line of the Foss identifying if any material relating to human activity is present. Data gathered from the assessment will also aid in the understanding of former landscapes and associated human interaction.
- 4.2.94 Within the area of the borrow pits, traditional trial trenching is also proposed to identify, characterise and record features identified by a geophysics survey as well as examining the 'blank' areas.
- 4.2.95 The proposed further investigations will be captured in a Written Scheme of Investigation with the work intended to be undertaken prior to the determination of the planning application.

5 Conclusions

- 5.1.1 The discussion of the background and context to the application is considered to demonstrate that there is a clear and substantial need and support for implementation of the scheme.
- 5.1.2 All relevant design, access and other issues have been assessed and potential impacts addressed or mitigated as part of the design process. No fundamental issues have arisen that could not be overcome or that would prevent approval.
- 5.1.3 There is considered to be general and specific planning policy support for the scheme within the development plan and development management frameworks of both Ryedale District Council and City of York Council.
- 5.1.4 It is therefore considered that the applicant has taken account of all the key issues raised by the scheme, that the submitted proposal complies with planning policy and that environmental and other impacts have been addressed and/or mitigated to acceptable levels.

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15th January 2020

Ms. Rachael Balmer
Ryedale District Council,
Ryedale House
Old Malton Road,
Malton
North Yorkshire
YO17 7HH

Dear Rachael,

**REF:- Planning application 19/02463/FULM
York Flood Alleviation Scheme for the River Foss**

On Monday 13th January 2020, The Environment Agency gave a presentation in Sheriff Hutton Village Hall of the plans for the construction and work involved for the flood storage scheme of the River Foss in the Parish of Lillings Ambo.

About thirty parishioners, including all members of the Parish Council, were present to listen and then ask questions about the plans for the proposed development.

The Parish Council convened to discuss the plans and comments made during the presentation.

These points were raised:-

1) The route Construction Traffic will take to the site.

The plans show that all construction traffic will come from the A64 through Flaxton and West Lilling. In West Lilling it will take the left fork passing over a **single track bridge** at Howl Beck, before meeting the Sheriff Hutton/ Strensall Road. After a left turn onto the Strensall road and at approximately 1km, the plan is to turn left onto a track and a newly constructed road through Mr Wadsworth's farm.

The road through West Lilling is already busy with heavy goods vehicles cutting through from the A64 to the A19. The Parish Council has, in the past, made several objections about the amount of heavy goods vehicles passing through the village. The road is narrow, at one point on a bend, it is impossible for two lorries to pass side by side. The foot path is also narrow. Two people cannot walk along together, making it extremely dangerous when walking with small children and dogs. Many vehicles exceed the 30 mile an hour zone, again making it hazardous for pedestrians.

The single track bridge has been damaged and its edges remain taped with warning signs after more than six months. Can this already weakened bridge withstand an increased load of 2,300 tonnes, approximately 100 extra lorries, and construction traffic?

Could vehicles take a different route to the construction site? Gennell Lane, for example, a short single track road, could be upgraded with passing places instead of constructing a new track through farm land. This would divert traffic from West Lilling. It is also a shorter route than the existing plan. Other alternatives were suggested by the parishioners.

2) Flood water draining from the fields.

The Environment Agency states that flood water will take a little longer to drain from the fields, approximately 30 hours after the level of the River Foss has subsided. However, experience from the land owners and people who frequently walk along the foot paths are convinced that water will drain at a much slower rate due to the soil consistency. Farmers will lose crops and their livelihoods for which they will have no compensation. Their farms will lose their valuable agricultural land.

Due to the rising level of the river as it floods, water in the land drains between the Foss and Lilling Low Lane will back up and the land will experience a higher water table, causing flooding to the land and properties north of the Foss.

3) Flooding to land around Lilling Green Farm

You have had objections from Mr & Mrs Hodges of Lilling Green Farm, concerning the loss of access to their property and businesses of a cattery, livery stables and small holding in the event of flooding. The Environment Agency have agreed to raise the level of part of their access road by one metre to prevent flooding. They have refused to upgrade the whole of the access road, which because of excess water held back by the increase of road height will cause even more erosion. The Hodgson's do not own the road but have to maintain it, at their expense, to continue to living and working in their home.

4) Silting upstream of the River Foss

Silting is a problem in the river. How frequently will the entrance of the aperture of the pipe, through which the Foss flows, be dredged? Who will take responsibility for this?

5) The Centenary Way

The Centenary Way footpath runs very close to the construction of the scheme. Will this long distance footpath remain open during construction work? Will part of it disappear during flooding?

6) The Ecologist Report

The District Council's Ecologist, Mike Hammond, wrote a lengthy report which included a recommendation that other plant species be used other than those stated by the Environment Agency. Will those recommendations be adhered to?

Due to the above points, Lillings Ambo Parish Council cannot support the planning application.

Yours sincerely,

Helen Loynes

(Chairman of Lillings Ambo Parish Council)

Sent: 11 March 2020 19:22
To: Development Management
Subject: Comments for Planning Application 19/01263/MFULE

Planning Application comments have been made. A summary of the comments is provided below.

Comments were submitted at 7:22 PM on 11 Mar 2020 from Mrs Fiona Hill.

Application Summary

Address: Land Adj To River Foss Lilling Low Lane West Lilling
Formation of flood storage area consisting of construction of earth embankment with spillway, excavation of two temporary and two permanent borrow pits, erection of river flow control structure, re-profiling of sections of the River Foss, realignment of short section of Black Dike,

Proposal: raising of section of Ings Lane, carriageway edge protection to part of Lilling Low Lane and associated new and improved access arrangements, drainage, accommodation works, landscaping|cr|and biodiversity mitigation (cross boundary application with York)

Case Officer: Rachael Balmer

Customer Details

Name: Mrs Fiona Hill
Email:
Address: The Byre, Thornton Field House, Thornton Le Clay, Malton YO60 7QA

Comments Details

Commenter Type: Neighbour
Stance: Customer objects to the Planning Application
Reasons for comment:
Comments: In response to the amendments to the planning application 19/01263/MFULE:

Lillings Ambo Parish Council note that no consideration in the amendment has been taken to address the amount of construction traffic the Environment Agency propose to bring through the village of West Lilling. As we previously pointed out there are alternative routes they could use. The route through the village has two pinch points where vehicles cannot pass. One being a single track bridge, which has already suffered damage, and at a bend in the centre of the village. We already endure heavy goods traffic taking a short cut from the A64 to

the A19. Any more traffic would make life extremely unbearable, and extremely dangerous. The foot path is narrow. You have to stand back from the road when heavy goods vehicles approach. They drive very close to the curb because the road is narrow. The EA says the foot path is one metre deep. At one metre you are standing extremely close to large wheels thundering past!

Other observations that have not been addressed is the amount of water locked into agricultural land causing more substantial damage. This agricultural land, not designated to flood, will not be compensated.

The amendment says there may be temporary closures of Centenary Way and other foot paths. This is unacceptable.

Lilling Low Lane is expected to flood. Fold down signs will be placed to warn people. Who will monitor this and who will change the signs?

Who will maintain and clear the silt ponds which capture the water before it feeds into the River Foss?
Responsibility needs to be decided before construction commences.
There appears to be little maintenance strategy at present, only discussion with the Drainage Board. Surely, who maintains any work should be in place prior to commencement of the construction.

Due to the above observations, Lillings Ambo Parish Council cannot support the amended planning application.

Helen Loynes
(Chairman of Lillings Ambo Parish Council)

Item Number: 6
Application No: 20/00770/OUT
Parish: Norton Town Council
Appn. Type: Outline Application
Applicant: Mr Paul Sedman (Sutton Grange Developments)
Proposal: Residential development of 5no.dwellings (site area 0.72ha) - access to be considered
Location: Land at Sutton Grange Langton Road Norton Malton YO17 9PU

Registration Date: 26 August 2020
8/13 Wk Expiry Date: 21 October 2020
Overall Expiry Date: 7 October 2020
Case Officer: Alan Goforth **Ext:** 43332

CONSULTATIONS:

Norton Town Council	Recommend approval, subject to tree retention and protection over entrance way and main site.
Highways North Yorkshire	Recommend conditions
Yorkshire Water Land Use Planning	Recommend conditions
Archaeology Section	Recommend condition
NYCC Natural Services	Further information required
Building Conservation Officer	No objection
Tree & Landscape Officer	No objection – recommends conditions

Re-consultation

NYCC Natural Services	Mitigation to be secured by condition. Stage 1 Habitat Regulations screening assessment concluded no significant effect is likely
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Representations: AC Barker (objects), JD Barker (objects), Mr Mark Appleby (objects), Ms Margaret Pepper (supports), P Hudson and C Cuthbert (support).

BACKGROUND:

The application is to be determined by Planning Committee due to the applicant being a close relation to an elected Member of the Council. In addition representations received in response to the consultation exercise have raised objections based on material planning considerations.

On 27 October 2020 Members resolved to conduct a site inspection in advance of the determination of the outline planning application. The site inspection is scheduled for 4 December 2020 and will allow Members to gain an understanding of the proposed development in the context of the surrounding land, heritage assets, landscape features, adjacent residential development and the public highway prior to the detailed consideration of this outline planning application.

SITE:

The application site amounts to 0.7 hectares and is a grassed paddock associated with Sutton Grange (under the ownership of the applicant). The site is on the southern side of Norton. Access is gained via a tree lined, single lane private driveway which meets Langton Road 110 metres to the north east of the

site.

The site is outside of development limits and as such lies within the open countryside. The site is also locally designated as a Visually Important Undeveloped Area (VIUA). The site is within Flood Zone 1.

Sutton Grange is a 19th century dwelling of stone and slate construction and is considered a Non Designated Heritage Asset. The application site, at its closet point, is approximately 30 metres east of Sutton Grange house. The Grade II listed Sutton Barn stands beyond Sutton Grange approximately 110 metres north west of the application site.

Mill Beck is to the south of the application site and follows a south east to north west alignment. The topography of the site generally falls away towards the beck with a change in level of approximately four metres north to south. To the west of the application site is a woodland area associated with Sutton Grange. The site boundary comprises a timber post and rail fence on the northern and eastern sides with the beck to the south and mature tree and hedge planting to the west.

The land to the east and north east of the application site is being developed for 79 dwellings (Keepmoat Homes- Ebor Chase Development) under permission ref. 15/00098/MOUT. The nearest properties to the east of the site (Spring Beck Avenue) have been completed. There is also permission for six detached dwellings to the north of the private driveway north east of Sutton Grange under permission ref. 15/00099/MOUT. As a result new housing development will flank the existing private driveway to Sutton Grange.

PROPOSAL:

Outline planning permission is sought for a residential development of 5no.dwellings (site area 0.72ha) - access to be considered. All other matters (layout, scale, appearance and landscaping) are reserved for a future reserved matters application(s) although illustrative detail is provided in support of the outline proposals.

The site would be developed as 5no. self-build plots on the western side of the site. The developable part of the site has maximum dimensions of 75 metres in width (east -west) by 110 metres in length (north-south). The site narrows at its southern extent where it meets Mill Beck. A 0.19 hectare paddock to the north of the development site would be retained for use by Sutton Grange (outside of application site).

The access off Langton Road would be widened with a passing place created half way along the driveway. The entrance gates would be repositioned further into the site at a point on the private driveway 25 metres north east of Sutton Grange beyond what would become the shared driveway. The entrance to the application site off the driveway would be formed at the existing field gate into the paddock at the north end of the site. The new driveway would run along the northern and eastern sides of the site and would include a branch to the north of plot 2 and a turning head at the southern end of the site adjacent to plot 4.

The indicative plans show that the individual plots would be divided by beech hedgerows and there would be metal park railings along the frontage with the new driveway. A 5-10 metre wide landscape buffer strip of native tree planting would be created along the eastern boundary adjacent to the new housing development. A shallow swale to collect surface water off the driveway would run along the western side of this shelter belt parallel to the driveway. A narrow ditch would be created to the west of the dwellings to attenuate surface water from the individual plots. A mixed native hedge would be planted beyond the ditch along the western boundary. Foul water would be directed to a small subterranean pumping station adjacent to the new driveway from where it would be pumped to a gravity sewer on the existing driveway which links to the sewer in Langton Road.

Each of the detached dwellings would comprise of single and two storey elements. The indicative details show that the dwellings will be constructed from traditional materials such as brick and stone with slate pitched roofs. The dwellings will be designed with overdrawn eaves, verge details and intersecting roof lines subservient to the main ridge line. The window proportions would be similar to

Sutton Grange and the dwellings would incorporate traditional chimney stacks. It is also intended that the dwellings comply with Lifetime Home Standards which sets design criteria in relation to accessibility.

The application is accompanied by a Planning Statement, Design Intent Strategy, Visual Landscape Analysis, Ecological Impact Assessment, Flood Risk Assessment, Outline Drainage Strategy and an Archaeology and Heritage Desk Based Assessment.

POLICIES:

Under Section 38(6) of the Planning and Compulsory Purchase Act 2004 planning authorities are required to determine each planning application in accordance with the planning policies that comprise the Development Plan unless material considerations indicate otherwise. The Development Plan for the determination of this particular application comprises the following:

- The Ryedale Plan- Local Plan Strategy (2013)

The Ryedale Plan - Local Plan Strategy (2013)

Local Plan Strategy -Policy SP1 General Location of Development and Settlement Hierarchy
Local Plan Strategy - Policy SP2 Delivery and Distribution of New Housing
Local Plan Strategy - Policy SP4 Type and Mix of New Housing
Local Plan Strategy - Policy SP12 Heritage
Local Plan Strategy - Policy SP13 Landscapes
Local Plan Strategy - Policy SP14 Biodiversity
Local Plan Strategy - Policy SP16 Design
Local Plan Strategy - Policy SP17 Managing Air Quality, Land and Water Resources
Local Plan Strategy - Policy SP18 Renewable and Low Carbon Energy
Local Plan Strategy - Policy SP19 Presumption in Favour of Sustainable Development
Local Plan Strategy - Policy SP20 Generic Development Management Issues
Local Plan Strategy - Policy SP22 Planning Obligations, Developer Contributions and the Community Infrastructure Levy

The Ryedale Plan – Local Plan Sites Document (2019)

The following policies of the Ryedale Plan – Local Plan Sites Document are relevant to the assessment of the application:

- Policy SD16 - Visually Important Undeveloped Areas

Material Considerations

National Planning Policy Framework (NPPF)
National Planning Practice Guidance (PPG)
Self-build and Custom Housebuilding Act 2015 (as amended by the Housing and Planning Act 2016)

REPRESENTATIONS:

The LPA has received a total of 5 representations from local residents in response to the application of which three object and two are in support.

The objections and concerns can be summarised as follows:-

- Narrow entrance road/poor access
- Impact on existing mature trees along site access
- Tree planting on eastern boundary will obstruct natural light to dwelling and garden
- New tree planting could damage drains, property and public cycleway

- Impact on local wildlife

The representations in support raise the following points:

- Housing of character without impacting on rural location
- Proposed landscaping minimises visual impact
- Attractive houses within very nice setting
- Better than large developer cramming as many in houses on to the land

APPRAISAL:

The main considerations in the determination of this application are:

- Principle of the development;
- Impact on visual amenity, landscape character and form of the settlement including the VIUA;
- Impact on heritage assets;
- Impact on residential amenity;
- Highway impacts;
- Drainage;
- Archaeological impact; and
- Ecological impact.

Principle of the development

Policy SP1 (General Location of Development and Settlement Hierarchy) in the Ryedale Plan- Local Plan Strategy (2013) sets out a hierarchy of settlements and seeks to focus new development within the Principal Towns, Market Towns and Service Villages. The site is outside of the development limits of Malton/Norton (Principal Towns) and is, therefore, within the open countryside for planning purposes.

Policy SP1 of the Local Plan Strategy makes it clear that in such open countryside locations, development will be restricted to that which is necessary to support a sustainable, vibrant and healthy rural economy and communities; which can be justified to secure significant improvements to the environment or conservation of significant heritage assets or, to that which is justified through the neighbourhood planning process. Policy SP2 of the Local Plan Strategy, in relation to new housing development, provides policy support in principle for dwellings in the open countryside in specific circumstances. In summary these include, new build dwellings necessary to support the land based economy; the conversion of redundant or disused traditional rural buildings; replacement dwellings or the change of use of specific types of tourist accommodation. The proposal is not a form of development referred to in the relevant part of Policy SP2.

The LPA is confident that it can demonstrate a five year land supply as set out in the adopted Local Plan Sites Document. There is no requirement for new housing outside of the development limits of the Towns to achieve housing targets. The adopted Development Plan does not identify self-build plots as part of the land allocations identified in the Sites Document and does not provide specific policy support for self-build development plots in the open countryside. Therefore the proposal is contrary to Policy SP2 and this factor weighs against the proposal. This is recognised by the application supporting documents which acknowledge that the proposal is a ‘departure’ from the Development Plan and the applicant does not seek to justify the proposal against Policy SP2. The application has been advertised as a ‘departure’ from the Development Plan and no representations have been received in relation to the principle of the development (site specific concerns only).

Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that “*where in making any determination under the planning Acts, regard is to be had to the development plan, the determination shall be made in accordance with the plan unless material consideration indicates otherwise*”. The application seeks to demonstrate that there are sufficient material considerations to weigh in favour of the development of the site as five self-build plots, when carrying out an assessment as part of the overall ‘planning balance’.

A significant material consideration in the decision-taking process is the National Planning Policy Framework (2019) which contains policies on delivering a sufficient supply of homes. At paragraph 61 it explains that within this context *'the size, type and tenure of housing needed for different groups in the community should be assessed and reflected in planning policies (including, but not limited to, those who require affordable housing, families with children, older people, students, people with disabilities, service families, travellers, people who rent their homes and people wishing to commission or build their own homes'*. It is the latter part of the policy which is relevant in this case and this is an element of national policy which post-dates the adoption of the Development Plan.

In terms of the specific type of housing development proposed it is the Self-build and Custom Housebuilding Act 2015 (as amended by the Housing and Planning Act 2016) which provides a legal definition of self-build and custom housebuilding. The Act does not distinguish between self-build and custom housebuilding and provides that both are where an individual, an association of individuals, or persons working with or for individuals or associations of individuals, build or complete houses to be occupied as homes by those individuals.

The Act places a duty on LPA's to keep a register of individuals and associations of individuals who are seeking to acquire serviced plots of land in the authority's area for their own self-build and custom housebuilding. In numerical terms the LPA has granted permissions for a good supply of self-build developments (evidenced through Self-Build CIL exemptions) which largely arise from individual 'windfall' plots. However, there is no supply of grouped, 'purpose provided' self-build plots and demand exists but is reliant on a willing landowner /developer.

Whilst the Development Plan does not include a specific policy on this form of development nor identify self-build land in its allocations, it does aim to deliver increased choice and variety in the housing market (Policy SP4).

Returning to Policy SP1, which identifies Malton and Norton as the principal town within the District where the majority of new development and growth should be focused, it is relevant that the application site is on the edge of the town in a location where services and facilities can be easily accessed by walking or use of public transport. This was explored in detail by the Planning Inspector in relation to the adjacent appeal sites who noted the relative close proximity to the sites to transport links, services and facilities within the town. In terms of locational sustainability this site is broadly in conformity with Policy SP1. Furthermore the supporting text for Policy SP1 identifies opportunity for growth in Malton and Norton and includes *'Greenfield sites on the edges of the towns for low/medium density family housing'* of which the proposed development under consideration is an example.

Impact on visual amenity, landscape character and form of the settlement including the VIUA

The site does not sit within any nationally protected or designated landscape. The application site forms part of the locally designated VIUA which runs between Langton Road and Welham Road as identified in Policy SD16. Policy SP16(to which Policy SD16 refers) states that development proposals on land designated as a VIUA will only be permitted where the benefits of the development proposed significantly outweigh the loss or damage to the character of the settlement.

In terms of the site context the new housing development granted on appeal (ref's 15/00098/MOUT and 15/00099/MOUT) which is being progressed on land immediately east and south east of the application site has altered the character of the southern edge of Norton. The application site no longer forms part of the wider open space on the southern approach into town as the land surrounding the application site has been urbanised. The application site is now an undeveloped parcel of land set back from Langton Road with existing and new housing development on three sides.

The application site benefits from the containment provided by the existing natural features (woodland and tree lined beck) which delineate the site boundary to the west and south. In addition the change in topography north to south and the new housing development to the east combine to restrict views towards the application site from Langton Road. Due to the existing woodland there would be very

limited views of the application site from elevated positions on the eastern side of Scott's Hill to the south east of the application site and from those positions the view is dominated by the roofscape of new dwellings forming the Keepmoat housing development.

With regard to the design of the proposed development the owner of each self-build plot would have primary input into its final appearance and layout but within the design intent parameters secured by the outline planning permission which are summarised in the 'Proposal' section of this report. It is considered that the proposed slate roofs would soften the appearance of this site in contrast to the stark appearance of new red pantiles of the adjacent housing development.

In terms of the indicative landscape design the proposed native tree planting would create an attractive setting for the proposed dwellings. The existing streamside trees along Mill Beck and the woodland adjacent to Sutton Grange provides good screening and a mature backdrop as noted by the Council's Tree and Landscape Officer. The Tree and Landscape Officer recommends conditions to cover landscape planting, a tree survey and tree protection measures which is also referred to in the comments made by the Town Council.

It is considered that the contribution the application site makes to the wider VIUA has been eroded by the urbanising effect of the volume house building which is progressing on neighbouring land. The proposed development site is visually discreet and would not extend the settlement in the same way as the adjacent site which has been built to a higher density. In this case the proposed low-density housing would not overdevelop the field and is arguably a logical infill development within this growing settlement. The existing beck and associated woodland form a strong boundary and it is not unreasonable to conclude that in visual terms it marks the edge of the settlement. In this regard, the development of this part of the VIUA alone would result in minimal loss or damage to the character and setting of the settlement, and way the wider VIUA is experienced. It is considered that the development of the site for housing would be sympathetic to the grain of the settlement and the context provided by the surroundings. It would not detract from the landscape character and visual amenity nor depart from the form and setting of the town in accordance with policies SP16 and SP20.

Impact on heritage assets

The two heritage assets within relatively close proximity of the application site are Sutton Barn, which is Grade II Listed, and the applicant's property at Sutton Grange, which has previously been identified as a non-designated heritage asset.

The heritage significance of these heritage assets was considered in detail in the 2015 planning appeals which resulted in permission being granted for the adjacent housing development. In weighing up the harm the inspector decided that the loss of long distance views would not affect the significance of the assets and in the case of Sutton Grange would be replaced by shorter distance views from within the new housing development site which allow closer appreciation of the heritage asset.

Any potential harmful impact must be viewed in light of the adjacent housing development. It is considered that the development would not result in harm to the Grade II listed Sutton Barn which stands beyond Sutton Grange approximately 110 metres north west of the application site.

The proposed development would be closer to Sutton Grange (non-designated heritage asset) than the new housing development on Spring Beck Avenue to the east. However, the application site boundary has been drawn so to leave an undeveloped paddock to the front (east) of Sutton Grange which would provide an open setting for the existing dwelling. The proposed self-build dwellings would be positioned down the slope of the field and would not interrupt any views towards the front of Sutton Grange from within the adjacent housing development. In addition the new dwellings would be limited to two storeys in height and would be set against the existing, well established woodland backdrop. The design intent would reference the architectural features and building materials of Sutton Grange and the spacing of the plots is sympathetic and the scale and massing would not dominate or adversely affect the significance of Sutton Grange.

There are no objections from the Building Conservation Officer and it is considered that the proposed

low density housing in the lower part of the field would not result in any more harm than the adjacent housing development and complies with the requirements of Policy SP12 and the NPPF.

Impact on local amenity

As required by Policy SP20 (Generic Development Management Issues) the development should respect the character of the area without having a material adverse impact on the amenity of present or future occupants, the users or occupants of neighbouring land and buildings or the wider community.

The application site is set back from the public highway at the lower end of the existing paddock. The individual plots are generous and allow for ample private amenity space and 'in curtilage' parking. At the closest point the self-build dwellings (plot 5) would be approximately 20 metres west of the nearest new dwellings on Spring Beck Avenue and a 5-10 metre landscape buffer would be established on the eastern boundary of the application site. It is noted that a concern has been raised that new tree planting would result in the loss of natural daylight to the houses on Spring Beck Avenue. The new planting would not be immediate to the dwellings on Spring Beck Avenue as a 3 metre wide footpath/cycleway runs between. It is considered that as part of the reserved matters a landscaping scheme of mixed native species can be agreed which provides the necessary screening buffer and ecological enhancement without detriment to residential amenity. There shall be conditions imposed to control the external lighting. The low density development would not result in any detrimental impacts in terms of noise, loss of privacy/overlooking or natural daylight or an overbearing presence.

It is considered that the development of five self-build plots in this location is compatible with the adjacent land use and the existing ambience of the immediate locality and it is not anticipated that the proposed development would give rise to any unacceptable visual intrusion or any pollution or disturbance and as a result there would not be an adverse impact upon residential amenity in compliance with Policy SP20.

Highways impacts

Policy SP20 seeks to ensure that new development does not have a detrimental impact on road safety.

The proposed development would use the existing, single car width access which extends from the entrance off Langton Road to the private parking and turning area to the front of Sutton Grange. At the site entrance there is a wide vehicle crossover onto Langton Road which incorporates a footpath as well as a horse lane within the verge. At the pre-application stage it was established through correspondence with highways officers that the number of units within the application site would be limited to 5, otherwise, the existing driveway serving Sutton Grange would need to be upgraded to adoptable standards.

The existing entrance off Langton Road would be reconfigured with the stone gatepost and gates being repositioned further west nearer to Sutton Grange and the access widened to double car width to create a holding area where vehicles entering and leaving the site can wait clear of the footpath and horse lane. A passing place will be created on the southern side of the driveway, approximately half way along.

The entrance to the application site would be a new spur off the driveway beginning at the existing field gate into the paddock at the north end of the site. The new driveway would run along the northern and eastern sides of the site and would include a branch to the north of plot 2 and a turning head at the southern end of the site adjacent to plot 4. The large plots would have sufficient space for 'in curtilage' parking in accordance with adopted parking standards.

The Local Highway Authority has no objection to the proposed development. The highway officer notes that the improvements by widening of the sole access and introduction of a passing place serves to enable the traffic to move on and off site without causing congestion at the junction with Langton Road.

The Local Highway Authority recommends conditions are imposed in relation to the highway verge crossing; the provision of parking and turning areas; and a construction phase management plan.

It is considered that, taking account of anticipated traffic movements associated with the proposed development and access improvements, the proposed development would not give rise to a materially significant adverse impact on highway safety either individually or cumulatively and there would be no conflict with Policy SP20.

Drainage

The site is within Flood Zone 1 (low probability of flooding) and less than 1 hectare in area and as a result does not require a site specific Flood Risk Assessment. A drainage assessment has been submitted with the application which illustrates how the bank of Mill Beck is of a height which means the application site is not at risk of flooding.

In terms of surface water drainage arrangements it is understood that percolation testing relating to the adjacent development site indicated that the soil profiles are not receptive to infiltration drainage and therefore the proposed drainage strategy is based on discharge to the adjacent watercourse (Mill Beck).

The proposed landscape buffer on the eastern edge of the site will incorporate a swale to channel surface water run-off from the internal access road. To the rear of the proposed dwellings on the western side of the site a narrow ditch would capture surface water from the individual plots. Both the swale and the ditch would discharge to Mill Beck at the existing run-off rate of 3.3 lps.

Foul water would be directed to a small subterranean pumping station adjacent to the new driveway from where it would be pumped to a gravity sewer on the existing driveway which links to the sewer in Langton Road.

Yorkshire Water have raised no objection and request that standard drainage conditions are imposed in order to protect the local aquatic environment and Yorkshire Water infrastructure.

In light of the above it is considered that the development would not be at risk from flooding or increase flood risk elsewhere and subject to detailed design of the drainage scheme being approved as part of the reserved matters the development complies with the NPPF and Policy SP17.

Archaeological impact

The County Archaeologist notes that the development site forms part of the shrunken medieval settlement of Sutton which was partly excavated to the south in advance of housing construction.

Excavations revealed a complex of ditches, trackways, waste disposal pits, wells and buildings dating from the 12th century onwards. The County Archaeologist states that these deposits almost certainly continue into the current development site, particularly in the south-west corner of the development. The County Archaeologist supports the recommendations of the applicant's archaeological desk based assessment which are that an archaeological strip, map and record takes place prior to the development. The County Archaeologist supports this approach as the types of deposits anticipated are likely to add to current understanding of the former village without being of such significance as to preclude development.

The County Archaeologist advises that a scheme of archaeological mitigation recording is undertaken in response to the ground disturbing works associated with this development proposal in accordance with Policy SP12 and the NPPF. This should comprise an archaeological strip, map and record to be undertaken in advance of development, including site preparation works, top soil stripping, excavations for new foundations and new drainage or services, to be followed by appropriate analyses, reporting and archive preparation and this shall be secured by conditions in compliance with Policy SP12.

Ecological impact

The County Ecologist notes that the application site is agriculturally-improved grassland of little intrinsic nature conservation, but it does border Mill Beck, a tributary of the River Derwent Special

Area of Conservation (SAC). Due to the proximity of the site to the SAC and its connectivity via Mill Beck, a Habitat Regulations Assessment under the Conservation of Habitats & Species Regulations 2017 was necessary to determine whether there would be likely significant effects on SAC features.

The County Ecologist acknowledged that there was no evidence of badgers or great crested newts but requested further information in relation to otters and their use of this section of Mill Beck. Following further surveys it was confirmed that no signs of otter have been found. This allowed a Stage 1 screening assessment to be completed under the Conservation of Habitats & Species Regulations 2017 which concluded no significant effect is likely, and no further screening is needed.

The submitted Ecological Impact Assessment confirms that there will be negligible impact from any loss of improved grassland and no loss of hedgerow or trees is anticipated. There are no works proposed within the vicinity of Mill Beck and a 5 metre wide buffer strip to be retained along Mill Beck would ensure no impact on aquatic or riparian fauna. Additional ecological enhancements would take the form of integral bird and bat boxes and tree and shrub planting using native species which would result in an overall net biodiversity gain.

The County Ecologist has no objections and recommends a condition to secure a further updated Ecological Impact Assessment at the detailed design stage of the development to confirm the specific mitigation and enhancements measures proposed to be incorporated. In light of this it is considered that the proposed development complies with the requirements of Policy SP14 and the NPPF.

Conclusion

The starting point for the consideration of any proposal is the adopted Development Plan. Policies SP1 and SP2 set out the spatial strategy for the District and seek to limit new housing development to specific locations and circumstances, to ensure the sustainability.

The application site is beyond the development limit and within the open countryside and the residential development does not represent one of specific circumstances identified for support in Policy SP2. The proposal fails to comply with the adopted Development Plan in this regard.

The proposal would provide a small supply of self-build plots which is consistent with national policy and which would increase housing choice locally, in accordance with Policy SP4. In this respect, national policy relating to the provision of self- build housing post- dates the adoption of the Development Plan and this weighs in favour of the proposal.

The application site is on the edge of a Principal Town in a location where services and facilities can be easily accessed by walking or the use of public transport. The site is considered to be in a sustainable location and would not disrupt the settlement hierarchy set out by the Development Plan and is not considered to conflict with the broad aims of Policy SP1.

The proposed development would utilise a discrete parcel of land in an edge of town location. It is considered that the site fits with the evolved form of this part of the town and would not appear as encroachment or urban creep into the open countryside nor a site that has been 'bolted on' or 'wedged in' to the existing settlement.

Taking account of the topography of the land, the adjacent housing development, the existing and proposed landscape buffers and the indicative siting, scale, design and materials it is considered that the development site presents an opportunity for a small grouping of 'purpose- provided' self-build plots which can be accommodated without having an unacceptable impact on the appearance of the landscape, visual amenity or the character and form of this part of the settlement.

It is considered that the site lends itself to this type of low density of development within a landscaped setting in that it is visually contained and given the well-defined boundary features to the west and the adjacent housing development to the south-east would not push the outer edge of the settlement further into the open countryside.

The development of the site for 5no. two storey, detached dwellings would not have an overbearing impact or result in harm to the setting of the nearby heritage assets. The development would involve part of a VIUA but the loss of this detached part of the locally designated land would not undermine the overall, wider purpose of the VIUA between Langton Road and Welham Road which is to provide a buffer from the built edge of Norton. It is considered that the development of this site to meet a specific need significantly outweighs the loss of part of the VIUA.

The site would be served by an improved access and 'in-curtilage' parking provision and the development would not create adverse highway safety conditions and associated traffic can be accommodated by the local highway network.

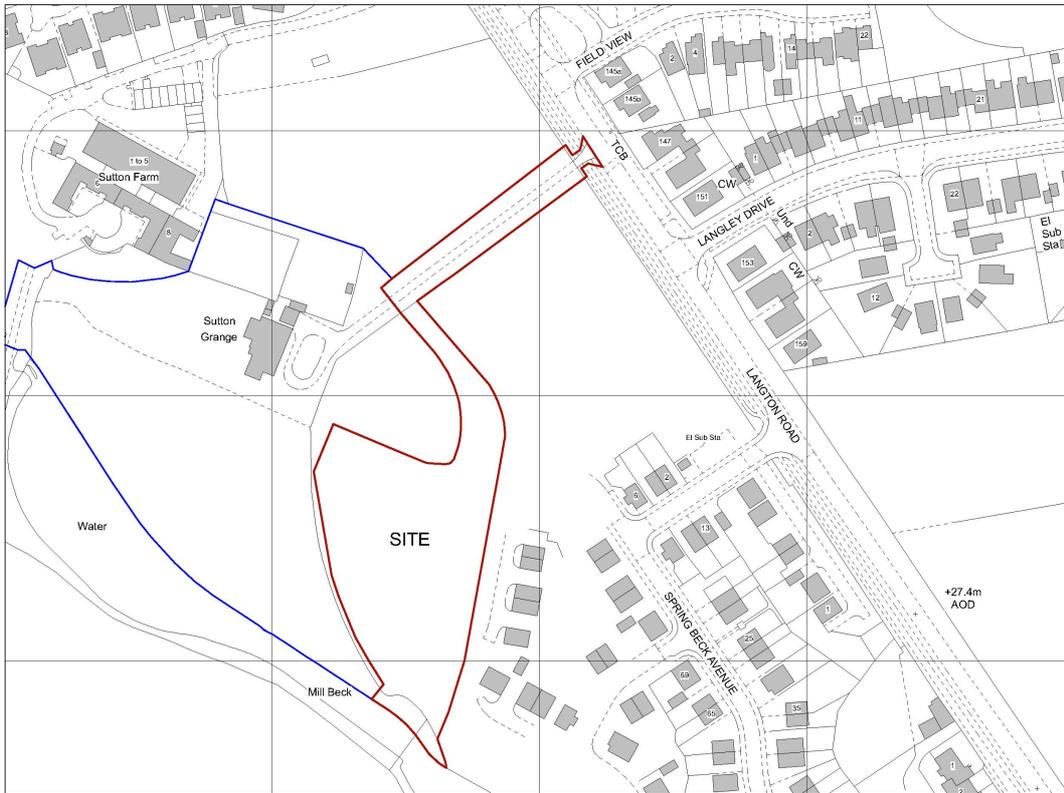
In light of the above assessment, it is considered that, on balance, whilst the site is outside of development limits, the type of housing proposed ('purpose provided' self-build plots) and the specific locational factors and increasingly urbanised setting of this edge of settlement site are significant material considerations in favour of granting permission for the development which outweigh the disbenefits of departing from Policy SP2 of the Development Plan in relation to the local of new housing development. The proposed development complies with Policies SP1, SP4, SP12, SP14, SP16, SP17, SP18, SP19 and SP20 of the adopted Ryedale Plan - Local Plan Strategy and the National Planning Policy Framework. The recommendation to Members is one of conditional approval.

If permission is granted a significant number of conditions that, inter alia, seek to establish the design principles and development parameters are required to steer and guide the reserved matter process and the future the development of both wider site infrastructure and the individual self-build plots. In light of the relatively limited detail that forms the outline planning application an extensive list of the conditions is necessary to afford the LPA comfort and confidence that a high quality residential development can be achieved.

RECOMMENDATION: **Approval** (conditions to follow in Late Pages)

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PLANNING ISSUE

Rev	Date	Drawn	Checked	Description
01				Issue for Planning

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Client: Mr P Sedman & Mrs L Burr

Drawing: OS Location Map

Scale	Date	Sheet	Total
1:1250	01.07.20	BS	1
Index	4420	EX10	04
Drawn by	Checked by	Issue by	Scale
			A3

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Key:	
CL	Contour
DL	Drainage
FL	Footpath
GL	Gravel
HL	Hardstanding
IL	Impervious material
KL	Keystone
LL	Level
OL	Overhead
PL	Proposed
SL	Setback
TL	Tree



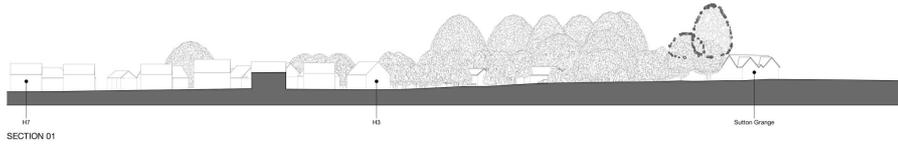
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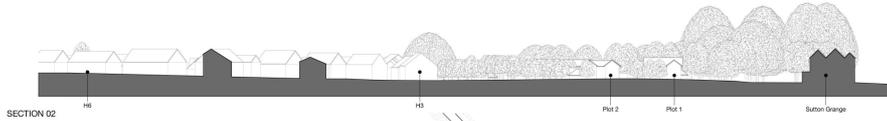
Mr P Sedman & Mrs L Burr

**Existing Site Plan
and Topographic Survey**
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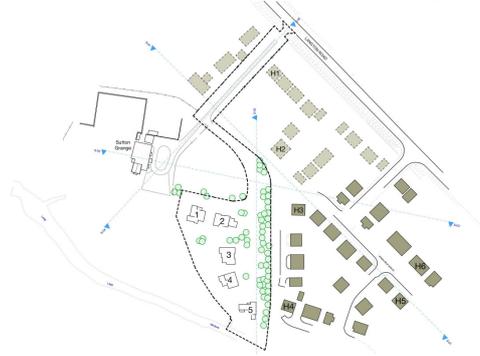
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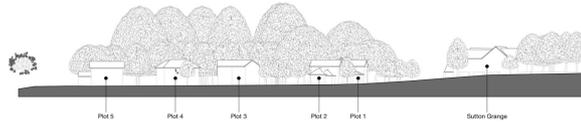
SECTION 01



SECTION 02



Section Key Plan (1:1250)



SECTION 03



SECTION 04



Key

- Plot boundary
- Existing Tree / woodland
- Proposed Tree / Woodland
- New Houses on adjacent plots
- Houses not completed with planning consent on adjacent plots

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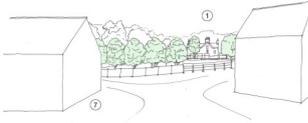
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Client: Mr P Sedman & Mrs L Burr

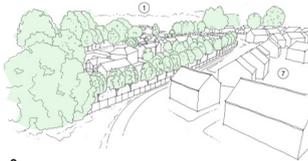
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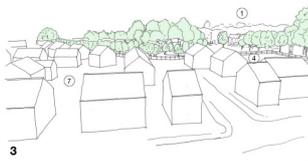
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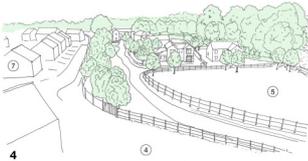
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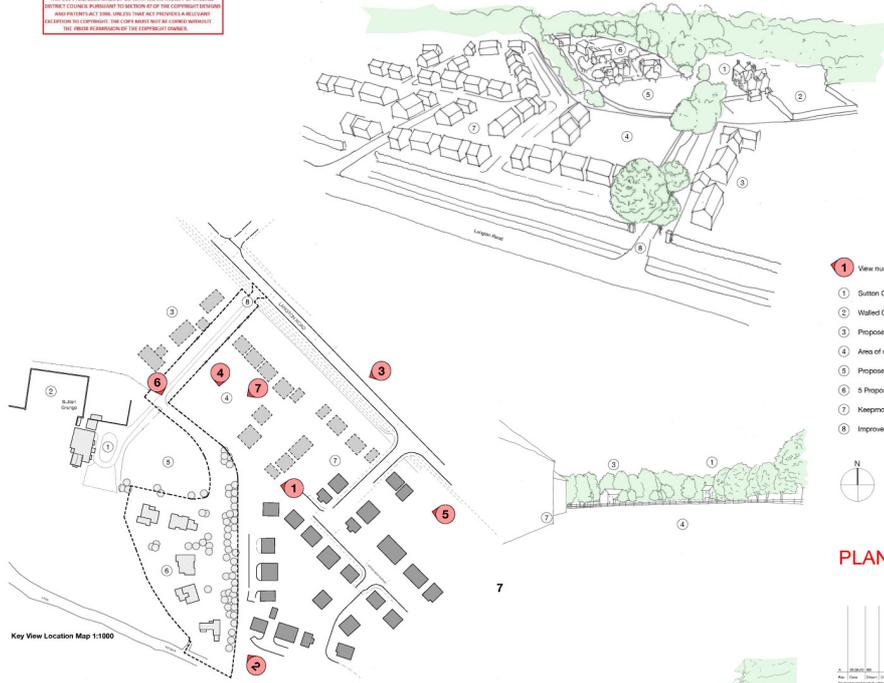
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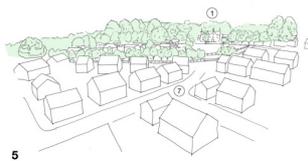
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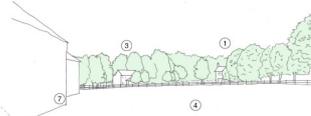
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Key View Location Map 1:1000



5



7



6

- 1 View number and direction
- 1 Sutton Grange
- 2 Walled Garden
- 3 Proposed development
- 4 Area of undeveloped visually important Land
- 5 Proposed Paddock
- 6 5 Proposed new dwellings
- 7 Keepmoat Site
- 8 Improved access to Langton Road

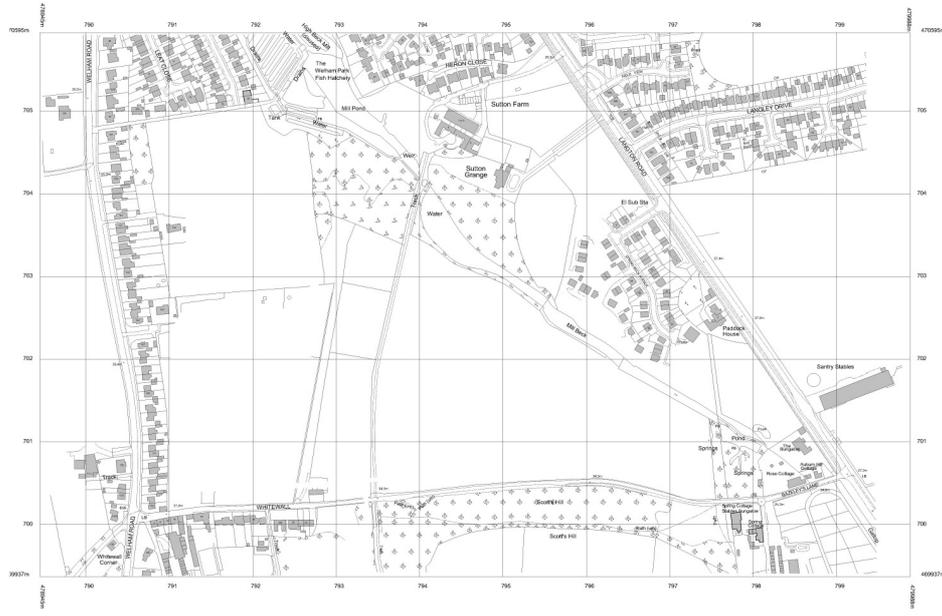


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 Proposed perspective views
 NTS 03/08/2020 BS
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SITE PLAN 1:2000




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 Client: Mrs L Burr
 Drawing: Site Plan

Scale	1:2000	Date	17/05/2020	Drawn	ER	Checked	RS
File No.	4420	Drawn By	EXB	Date	05	Sheet	A1

OUTLINE PLANNING APPLICATION FOR THE PROVISION
OF 5 NO. SELF BUILD PLOTS WITH ASSOCIATED ACCESS

LAND AT SUTTON GRANGE, LANGTON ROAD,
NORTON

PLANNING STATEMENT

AUGUST 2020



Chartered Town Planning Consultants

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- 7.0 Conclusion

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- 2. Design Strategy
- 3. Key Views Analysis
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August 2020
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INTRODUCTION

- 1.1 This Statement is provided in support of an outline planning application for the creation of 5 no. self-build housing plots on a small (0.7ha) horse paddock to the south of Sutton Grange, a 19th century villa set within generous grounds at the southern edge of Norton. The house lies on the northern side of a single-lane track, which connects to Langton Road approximately 120m to the east. The paddock lies on the southern side of this track, which will serve as a private drive to both Sutton Grange and the proposed housing plots.
- 1.2 The application seeks to establish the principle of development along with the proposed means of access. All other matters (layout, scale, appearance and landscaping) are reserved for a future reserved matters application although some illustrative material is provided in support of the outline proposals. This includes:
- Stone Associates Drawing PL20 06 Proposed Site Plan
 - Stone Associates Drawing PL40 01 Proposed Sectional Site Elevations
 - Stone Associates Drawing PL20 07 Proposed Landscape Plan
 - Design Intent
 - Assessment of Key Views
- 1.3 The purpose of the above drawings is to demonstrate that the site is capable of accommodating the level of development proposed and also, to establish some broad parameters / principles in order to assess the environmental impacts of the scheme. The following reports are included as part of the application and consider the impact of development on the local landscape, ecological, archaeological and drainage systems:
- Landscape and Visual Impact Assessment
 - Ecological Impact Assessment
 - Archaeology and Heritage Desk Based Assessment

- Outline Drainage Strategy

1.4 This Planning Statement provides a precis of the above reports. It also includes an assessment of the site and its surroundings and a description of the development. The planning policy context for the site is set out in Section 4, and Section 6 considers how the proposal responds to the key policy issues. The application has been compiled following pre-application discussions with officers at the Council, which first commenced in early 2017 and concluded in March 2020. Section 5 of the Statement explains the pre-application process.

2.0 THE SITE AND ITS SURROUNDINGS

2.1 The application site comprises 0.7ha of land on the southern edge of Norton. The paddock is roughly kite shaped – it extends out from the driveway at Sutton Grange, reaching a maximum width of around 75m a third of the way into the site. The boundaries then narrow to a point where they meet with Mill Beck at the southern tip of the paddock. The drive is included within the red edged site - at the moment, it is single lane access track, with mature trees on both sides and no passing places. The track terminates 80m to the east of the paddock at a gated entrance into Sutton Grange. Here, there is a wide vehicle crossover onto Langton Road due to the significant grass verge on the western side of the highway, which incorporates a footpath as well as a horse lane.

2.2 The paddock previously formed part of a much wider landholding, comprising the agricultural fields associated with Sutton Farm. However, the Grade II listed Sutton Barn, which lies beyond Sutton Grange to the north-west of the site, has now been converted into 5 homes with a further three properties in its grounds. To the east of the barn, planning permission has been obtained for the erection of 6 large detached properties as part of the Mill Beck Court development. To the south of Mill Beck court, the intervening field between the application site and Langton Road

is being developed by Keepmoat for 79 new homes. The release of this land for development has effectively pushed the settlement limits for Norton further to the south, meaning Sutton Grange and its associated paddock will soon be surrounded by housing on three sides.

- 2.3 To the west of the paddock, there is a dense woodland area with a watercourse (Mill Beck) running through the centre. The woodland and a small section of the Beck both fall within the ownership boundary of the applicant, as shown on the site location plan at Appendix 1. There is a post and rail fence along the northern boundary adjacent to the access road and a timber lapped fence to the developed area of the Keepmoat site (east). The general topography of the paddock falls towards the Beck, from 26.80 AOD at its most easterly point to 23.00 AOD at the southern tip.
- 2.4 The site lies within 1km of a range of local shops and services within Norton town centre. These include a Post Office, a Costcutter supermarket, a Doctor's surgery and leisure facilities at Derwent swimming baths. Additional shops and services are located within Malton town centre, including Malton train station, which lies within 1.5km of the application site. Hourly train services run from here to York, Leeds, Manchester and Scarborough. The nearest bus stop is at the Field View bus lay-by, 100m east of the application site. An hourly bus service runs between here and Norton and Malton.

3.0 PROPOSALS FOR DEVELOPMENT

- 3.1 The proposed development is for the creation of 5 no. self-build plots across the 0.7ha paddock, with the area to the north being retained for the occupiers of Sutton Grange. The illustrative layout is shown on the proposed site plan at Appendix 1.

- 3.2 The site plan is accompanied by Design Strategy in order to establish some design principles / development parameters in which future reserved matters applications are expected to comply. Although footprints of the individual dwellings are shown, these are not intended to be prescriptive and merely give a flavour for the size and style of development envisaged by the design guide.
- 3.3 At this stage, the only thing that is being 'fixed' by the outline application is the proposed means of access. The proposal is to utilise the existing private drive serving Sutton Grange, but to upgrade it in order to install a passing place roughly half-way (45m) along the driveway and to reconfigure the entrance. At the moment, the gateposts with electric gates sit tight up against the footpath along Langton Road. This means that vehicles entering the site need to stop on the vehicle crossover whilst waiting for the gates to open, thus blocking the footpath or the horse track. The provision of 5 additional dwellings will increase the use of the private drive and will exacerbate the issue. Therefore, it is proposed to widen the drive for a short length of it in order to create a holding area for vehicles entering the site. The existing gateposts and gate will be relocated further east, at the new private entrance to Sutton Grange, beyond the shared driveway. The entrance into the paddock will be at the point of the existing field gate. Here, a new spur of the drive will extend to the south and run along with eastern boundary of the site. Plot 1, which is shown at the rear of plot 2 will be served by a short branch to the main vehicular route. There will also be a turning head outside plots 4 and 5.
- 3.4 Along the western boundary of the site, within the slither of land between the new access road and the timber slatted fence of the neighbouring Keepmoat site, it is proposed to install a 5 to 10m landscape buffer in order to soften the impact of the development but also to create an attractive setting for the new houses. This buffer zone will also accommodate a small swale, to capture surface water run-off from the road. For the individual houses, surface water attenuation will be provided in the form of a narrow ditch along the western boundary of the plots. Both the roadside

swale and the ditch will run into Mill Beck at the southern tip of the site, where the outfall will be limited to 3.3 lps to reflect the current greenfield run off rate. Foul water from the plots will be pumped from a small pumping station positioned along the access road and will enter a gravity sewer at the point of connection with the existing private drive. From here, the new sewer will run the length of the drive and link up with the established sewer network in Langton Road.

- 3.5 The foul pumping station is subterranean, so to avoid any visual impact of the proposed infrastructure. It is sited within a shelter belt of new tree cover, which is intended to create a high-quality setting for the development and will also soften the impact of the proposed houses when viewed from surrounding vantage points. It is envisaged that this landscape buffer will incorporate a broad species to reflect the landscape character of the site's eastern boundary. The illustrative landscape plan specifies a range of Hawthorn, Cherry, Sycamore, Beech, Hazel and Maple trees to heights that will achieve a high impact at low density. A copy of the drawing is provided at Appendix 1.

4.0 PLANNING CONTEXT

Planning History

- 4.1 There is no recent planning history to the application site itself although the surrounding area has been subject to a substantial amount of change over the last 10 years which has altered the planning context for this application. Specifically:

- In June 2008 planning permission and listed building consent was granted for the change of use and alteration of the Sutton Barn to form 4 dwellings (including the retention of an existing cottage in its west pavilion), the change of use of an adjacent joinery shop to form a dwelling house and the erection of 2 new build dwellings with associated garages and store

- In July 2016, outline planning permission was granted for the development of 6 no. dwellings on land east of Sutton Barn. This was as a result a successful appeal by Gladman Developments following the Council's decision to refuse the application
- As part of a concurrent appeal, Gladman Developments subsequently obtained outline planning permission to develop the land to the south of Sutton Grange for 79 new homes. Both sites were then sold to Keepmoat Homes, who have progressed the respective reserved matters applications and commenced development.

4.2 The impact of these developments has been to pull the settlement limits of Malton and Norton further to the south, leaving Sutton Grange as an undeveloped island of land that is surrounded by new housing. This change to the settlement limits was recently formalised through the adoption of the Ryedale Local Plan Sites Document in 2019. The planning policy context for the site is set out in further detail below.

Planning Policy Context

4.3 Determination of this application is to be made under Section 38(6) of the Planning and Compulsory Purchase Act 2004, which requires that applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise.

4.4 The Development Plan for Ryedale comprises the Local Plan Strategy (2013) and the recently adopted Local Plan Sites Document (2018). The National Planning Policy Framework (2018) is a material consideration in the decision-making process, as are the range of documents that make up the evidence base for the Local Plan.

Ryedale Local Plan Strategy (2013)

4.5 The Local Plan Strategy for Ryedale sets out the spatial vision for the District and outlines the policy objectives for the delivery and distribution of housing

development over the next 15 years. Policy SP1 identifies Malton and Norton as the principal town within the District where the majority of new development and growth should be focused. It highlights a number of opportunities for growth, which include greenfield sites on the edges of the towns for low / medium density family housing and accommodation to address the needs of a local ageing population. Paragraph 4.16 (housing) acknowledges that although brownfield land will be prioritised, greenfield sites will be required. It states that there are limited opportunities that exist to provide new development within the current built up areas of the main towns in the District and those opportunities that do exist are constrained for a number of reasons.

4.6 Within the open countryside, Policy SP1 states that development will be restricted to that:

- which is necessary to support a sustainable, vibrant and healthy rural economy and communities, or
- which can be justified in order to secure significant improvements to the environment or conservation of significant heritage assets or
- which is justified through the Neighbourhood Planning process

4.7 Policy SP2 sets out the approach to the deliverability and distribution of new housing. It states that sufficient land will be allocated to provide for 200 homes per annum and the release of sites will be phased and managed in conjunction with other sources of supply to facilitate a continuous delivery of 200 homes per annum. Housing completions which exceed the planned annual build target by up to 25% (i.e. 50 units) will not be deducted from the overall number of homes to be provided across the plan period. In effect, this introduces a 'zone of tolerance' for house completions. It is designed as a positive, flexible and plan led approach which is responsive to delivery. The policy targets at least 50% of all new housing development to be provided in Malton and Norton with new build housing taking place within

development limits and on small, medium and large extension sites around the towns.

Due to the constraints associated with brownfield sites within development limits, the supporting text to the policy recognises that the vast majority of land needed to accommodate the planned rate of housing will come from greenfield sites on the edges of the main settlements and this will involve some harm to landscape and biodiversity.

- 4.8 Policy SP4 advises on the type and mix of new housing that will be required to retain a balanced housing stock and provide choice in the housing market.
- 4.9 Policies SP12 and SP16 relate to Heritage and Design. SP12 explains that distinctive elements of Ryedale's historic past will be conserved and, where appropriate, enhanced. It seeks to ensure the sensitive expansion, growth and land use change in and around the Market Towns and villages, safeguarding elements of the historic character and value within their built-up areas, including Visually Important Undeveloped Areas, as well as surrounding historic landscape character and setting of individual settlements. In considering and negotiating development proposals, the policy seeks to protect other features of local historic value and interest throughout Ryedale having regard to the scale of any harm or loss and the significance of the heritage asset.
- 4.10 In considering the design of specific sites, SP16 explains that development proposals will be expected to create high quality durable places that are accessible, well integrated with their surroundings and which reinforce local distinctiveness. This means that the location, siting, form, layout, scale and detailed design of new development should respect the context provided by its surroundings including:
- Topography and landform that shape the form and structure of settlements in the landscape
 - The structure of towns and villages formed by street patterns, routes, public spaces, rivers and becks.

- The grain of the settlements, influenced by street blocks, plot sizes, the orientation of buildings, boundaries, spaces between buildings and the density, size and scale of buildings
- The character and appearance of open space and green spaces including existing Visually Important Undeveloped Areas (VIUAs) or further VIUAs which may be designated in the Local Plan Sites Document or in a Neighbourhood Plan. Development proposals on land designated as a VIUA will only be permitted where the benefits of the development proposed significantly outweigh the loss or damage to the character of the settlement
- Views, vistas and skylines that are provided and framed by the above and/or influenced by the position of key historic or landmark buildings and structures
- The type, texture and colour of materials, quality and type of building techniques and elements of architectural detail

Ryedale Local Plan Sites Document

4.11 The Local Plan Strategy provides a strategic planning policy framework for the development and growth of different settlements within the district and against this background, the Sites Document has been produced to comply with and to deliver the strategy. In relation to the application site, the most significant changes from the 2002 Local Plan are:

- The Keepmoat site to the north and south east of Sutton Grange has been identified as a housing commitment, effectively extending the settlement limits of Malton and Norton to the north and south east of Sutton Grange
- The land between Welham Road and Langton Road, including the paddock and woodland area at Sutton Grange has been designated a Visually Important Undeveloped Area

4.12 The previous Local Plan for Ryedale defined 'Visually Important Undeveloped Areas' (VIUA's) as a policy designation to protect specific open sites in or on the edge of settlements. Sites are identified as VIUA's for one or more of the following reasons:

- a site makes a significant contribution to the character or setting of the settlement;
- a site provides an attractive setting for buildings within a settlement and/or;
- a site makes an important contribution to the historical form and layout of a settlement.

4.13 The preparation of the Sites Document provided the opportunity to identify further VIUA sites in the context of the current strategy of the plan, which places greater emphasis on the expansion of the market towns than previous development plans for Ryedale. The land between Welham Road and Langton Road was identified as a potential VIUA in earlier draft versions of the Site Document, on the basis that:

"This collection of fields allows the ability of both Malton and Norton to be viewed. They provide a buffer between the built edge of Norton, with an aligned use of horse grazing with the Listed 'Whitewall' and Whitewall Cottages. The field patterns are more diverse than those which surround the rest of Norton, and the fields afford views of Norton and Malton, and the important area of Mill Beck"

4.14 However, the consultation divided the VIUA into two parts. The first part is the land to the south of Mill Beck extending along to Welham Road to the west. The second part of the designation, which includes the subject site and the land granted planning permission under approvals 15/00098/MOUT and 15/00099/MOUT was only to be implemented should the planning permissions expire. Now that they have been implemented, this land should not have been included within the designation.

National Planning Policy Framework

- 4.15 The National Planning Policy Framework (February 2019) is a material consideration in determining planning applications; it sets out the Government's planning policies for England and outlines how they are expected to be applied.
- 4.16 Paragraph 7 advises that the purpose of the planning system is to contribute to the achievement of sustainable development. In order to be sustainable, development must perform an economic, social and environmental role. The first element includes contributing to a strong economy and ensuring sufficient land of the right type in the right places to support growth. The second includes supporting strong, vibrant and healthy communities and creating a high-quality built environment with access to local services. The third includes protecting and enhancing the natural and historic environment.
- 4.17 Section 5 of the NPPF sets out the policies for delivering a sufficient supply of homes. To support the Government's objective of significantly boosting supply, it highlights the importance that a sufficient amount and variety of land comes forward where it is needed, that the needs of groups with specific housing requirements are addressed and that land with permission is developed without unnecessary delay.
- 4.18 Within this context, paragraph 61 explains that the size, type and tenure of housing needed for different groups in the community should be assessed and reflected in planning policies (including, but not limited to, those who require affordable housing, families with children, older people, students, people with disabilities, service families, travellers, people who rent their homes and **people wishing to commission or build their own homes (my emphasis)**).

Self Build and Custom Housebuilding Act 2015 (As amended)

- 4.19 Under section 1 of the Self Build and Custom Housebuilding Act 2015, local authorities are required to keep a register of those seeking to acquire serviced plots

in the area for their own self-build and custom house building. They are also subject to duties under sections 2 and 2A of the Act to have regard to this and to give enough suitable development permissions to meet the identified demand.

- 4.20 The 2016 Housing and Planning Act sets out the legal definition of self-build or custom housing as the building or completion by (a) individuals, (b) associations of individuals, or (c) persons working with or for individuals or associations of individuals of houses to be occupied as homes by those individuals. But it does not include the building of a house on a plot acquired from a person who builds the house wholly or mainly to plans or specifications decided or offered by that person
- 4.21 A serviced plot of land is a plot of land that either has access to a public highway and has connections for electricity, water and waste water, or, in the opinion of a relevant authority, can be provided with access to those things within the duration of a development permission granted in relation to that land.
- 4.22 Access to a public highway can include sections of private or unadopted road, it does not mean that the plot has to be immediately adjacent to the public highway just that there is the guaranteed right of access to the public highway.
- 4.23 Connections for electricity, water and waste water means that the services must either be provided to the boundary of the plot so that connections can be made as appropriate during construction or adequate alternative arrangements must be possible such as the use of a cesspit rather than mains drainage.

Strategic Housing Market Assessment (2016) for Ryedale

- 4.24 In 2016, a SHMA for Ryedale was carried out by the property consultants GL Hearn. It forms part of the evidence base for the Local Plan. The primary purpose of the SHMA was to develop a robust understanding of housing market dynamics, to provide an assessment of future needs for both market and affordable housing and the housing needs of different groups within the population.

4.25 Section 8 of the document seeks to investigate the contribution that self-build housing makes toward the local supply chain. It explains that the Government aspires to make self-build a 'mainstream housing option' by making funding available to support self-builders and by asking local authorities to champion the sector. At the time of the survey, GL Hearn reported that within Ryedale local authority area, 154 people had registered their details on the Custom Build register and there were 60 active members on their Plotsearch register. Through consultation with local developers and agents, GL Hearn also found anecdotal evidence of significant potential demand for custom building. There is evidence of the lack of supply of plots coming to the market although agents believe that many plots are sold privately. There was little awareness amongst sales agents of the government's policy initiative in this area.

5.0 PRE-APPLICATION DISCUSSIONS

5.1 Over the course of the last three years, a series of pre-application discussions have been held with officers at the Council over the proposals to develop the paddock at Sutton Grange for housing.

5.2 In 2017 (17/00082/PREAPP), officers commented that they were likely to be supportive of the site's development on the basis that:

- The planning permissions obtained by Gladmans, once implemented, will urbanise the surrounding landscape to a large degree.
- The development would not cause harm to the significance of Sutton Barn
- The impact of development on the significance of Sutton Grange would be similar to that of the Keepmoat site to the west in that the grand effect of its approach through open fields would largely be lost, reducing the contribution of that the house's open setting makes to its significance as a prestigious country residence. However, the level of harm would be at the

lower end of less than substantial and no greater than has already been caused by the Keepmoat development

- Any development, through appropriate scale and layout, respects the views of Sutton Barn and Sutton Grange that are to be created from open spaces within the Keepmoat development

5.3 A follow up meeting was held in May 2019 but by this time the Council was in the later stages of adopting its Local Plan Sites document. In this context, the advice from officers was that the development of the site would represent a departure from the Local Plan and any case would therefore rely on being able to demonstrate material considerations that tip the planning balance in favour of development. One of the examples given was to deliver a form of housing that is targeted at a currently unmet demand. For instance, the provision of older persons housing, zero-carbon homes, self-build plots or high-quality housing of a bespoke design.

5.4 Further discussions took place towards the back end of 2019 and in early 2020 around the concept of developing the site for one (or more) of these housing types. A site visit was held with officers, after which the advice was:

- To bolster up the landscaping/screening of the paddock in order to provide a strong visual separation between it and the Keepmoat site to the west
- to leave an undeveloped area towards the northern end of the paddock, which is very much part of the setting of both Sutton Grange and the Grade II Listed Sutton Barn
- any distant views of the site from higher ground on Scott's Hill and the public footpath were very limited – it could only be seen from a couple of vantage points even at this time of the year when existing vegetation is not in leaf

5.5 In addition, a separate site meeting was held with highways officers at NYCC to discuss the level of improvement that would be required to the existing track in order to facilitate development of the paddock. Here, it was agreed that a maximum

of 6 properties could be accessed from this private drive as any more would require the vehicular route to meet adoptable standards. Provided that the development was kept under 5 units (with Sutton Grange being unit no. 6), the only improvements that would be required would be to install a passing place along the route. It was also suggested that moving the gated entrance back from the Langton Road frontage would be beneficial as it would allow a vehicle to pull off the main road in a holding area if another vehicle was exiting.

6.0 APPRAISAL

Principle of Development

- 6.1 The application site lies outside of the settlement limits for Malton and Norton as defined on the Proposals Map, which accompanies the Local Plan Sites Document. It falls within the open countryside, where development is restricted in accordance with Policy SP1 of the Local Plan Strategy. In addition, the site was recently designated as part of the Visually Important Undeveloped Area between Langton Road and Welham Road. Here, development will only be permitted where the benefits of the scheme significantly outweigh the loss or damage to the character of the settlement.
- 6.2 In this context, the development of the site for housing is contrary to some of the key policies of the Local Plan. The case for development therefore becomes heavily reliant on being able to demonstrate that there are sufficient material considerations to weigh in favour of the proposal, when carrying out an assessment as part of the overall 'planning balance'.
- 6.3 In Sections 4 and 5 of this statement, we have already highlighted some of the material considerations that should be taken into account in justifying a departure from the policies of the development plan and these have also been discussed with

officers during the course of a lengthy pre-application process in the lead up to the submission. They include:

1. **The pattern of recent development** – the development of land to the north and south east of the application site, originally granted under outline planning permissions 15/00098/MOUT and 15/00099/MOUT and subsequently followed by the approval of reserved matters has effectively shifted the settlement limits of Malton and Norton further to the south along Langton Road. The development of these sites by Keepmoat Homes has left the paddock at Sutton Grange as an island of open space in an otherwise built up area to the east of Mill Beck 15/00098/MOUT and 15/00099/MOUT and its associated woodland. The woodland provides a more natural boundary to the town's newly established development limits. The role that the site once played as part of a wider area of open space on the southern approach into Norton has now been compromised. This was acknowledged by officers in their pre-application response of 17 March 2017, which notes that *"The recent planning applications 15/00098/MOUT and 15/00099/MOUT are a significant material consideration when considering your proposal. This is because these two sites surround your land on the northern, eastern and southern boundary. Therefore the landscape character of the surrounding area has already been urbanised to a large degree, if the approvals are implemented"*.
2. **The weight to be afforded to the Visually Important Undeveloped Area designation** - Whereas the paddock forms part of the VIUA, which runs between Langton Road and Welham Road, it is not considered to make a significant contribution to the character of the settlement or its setting. Justification for the VIUA designation explains that the collection of fields in this area afford views of Malton and Norton from the south and provide a buffer between the built edge of Norton and the aligned use of horse grazing. However, it correctly points to the *"land south of Mill Beck, and the beck, with*

the trees providing a significant end-stop to the settlement.” The application site lies beyond the tree line. As already explained within paragraphs 5.11 and 5.12, it was only included as a ‘second part’ of the VIUA designation, should the planning permission for development of the Keepmoat site expire. This approach was based on the logic that should the land be developed in line with the approval, both this site and the paddock would no longer have a role to play as a VIUA with the woodland around the Beck being the important visual feature in marking the edge of the settlement. Whereas the designation is now in place, the weight that can be assigned to it (and therefore the need to demonstrate significant benefits) is considered to be substantially diluted in relation to the paddock.

3. **The proposal to provide plots for custom / self build housing** – The need to provide sufficient amounts of land to cater for groups with specific housing requirements is a common theme running through planning policies at the local and national level. The NPPF explains the need for planning policies to cater for people wishing to commission or build their own homes. Whereas the Local Plan Strategy does not include a specific policy on this form of development, it does aspire to deliver choice and variety in the housing market. Furthermore, in accordance with the Self Build and Custom Housebuilding Act 2015 (As amended), the Council maintains a register of those seeking to acquire serviced plots in the area for their own self-build and custom house building. Evidence contained within the SHMA 2016 shows that the demand for self-build plots in Ryedale significantly outstrips supply and to our knowledge, the Council are not in a position to give enough suitable development permissions to meet the identified demand as this relies on a willing landowner / developer. The land at Sutton Grange paddock offers the opportunity to contribute towards the provision of self-build plots within the District, helping the Council to fulfil its duty under Section 2A of the Act.

In fact, the limitation of the private drive (meaning only 5 units can be accessed) and the desire of the owner to promote only low-density housing to reduce the impact on the main residence actually lends itself to this form of development.

6.4 So, whereas the proposed development of this site would not comply with certain criteria of policies SP1 and SP16 relating to development within the open countryside and the VIUA, it is clear that there are material considerations to be taken into account which could justify a departure from these policies. The most significant one, in our view, is the delivery of self-build plots in order to meet an established housing need in the District and officers have been supportive of this approach.

6.5 Notwithstanding the above commentary on the principle of the development, in order for the scheme to be considered 'in the round' it is also necessary to look at the potential impacts. The outline application is supported by a series of technical reports, comprising a Desk Based Archaeological Assessment, a Phase 1 Ecological Survey, a Flood Risk Assessment and Drainage Strategy, a Landscape and Visual Impact Appraisal and a Design Strategy. A precis of each of these reports, within the context of the policies of the plan, is provided below.

Heritage, Design and Visual Impact

6.6 Amongst the headline messages of policy SP16 is the expectation to create high quality durable places that are well integrated with their surroundings. The detailed criteria of policy also set out the need to respect views that are provided by historic buildings and structures, respond to the topography of the landscape and to reinforce local distinctiveness.

6.7 There are two heritage assets within fairly close proximity of the subject site – Sutton Barn, which is Grade II Listed and the applicant's property at Sutton Grange, which is a non-designated asset of only local importance. The recent planning history of the surrounding area means that the significance of these heritage assets and factors which contribute to their significance has already been carefully assessed by officers at the Council, as well as the Inspector for the 2015 Public Enquiry (15/00098/MOUT and 15/00099/MOUT). Here, it was determined that:

- The heritage significance of the barn could be experienced in two ways – 1) from private property at close range and 2) from views of the impressive impact of its large scale and dominance
- The views of Sutton Barn from Langton Road do not tell one much, if anything, about the barn's significance
- The heritage significance of Sutton Grange could be experienced in two ways 1) Through close scrutiny of the fabric of the house and 2) by its contribution in the landscape as a cottage ornee gained from long distance views

6.8 In weighing up the identified harm of applications 15/00098/MOUT and 15/00099/MOUT with the potential heritage benefits, the Inspector considered it necessary to provide areas of public open space within the appeal sites which enabled the nearby heritage assets to be viewed at close quarters. He stated that:

"The loss of longer distance views of the house would not in any way affect the appreciation of its heritage significance as a much altered country house, which can only be understood by a forensic examination of its fabric at close quarters, principally from within the grounds of the house itself. Furthermore.....the development of appeal site B would allow longer distance views to be replaced by a closer public appreciation of the heritage asset. The scale of any harm to this aspect of its significance is therefore minimal."

6.9 On appeal site B, which is now under construction, the optimal view of Sutton Grange is at the rear of dwellings 73 – 79 on the land directly adjacent to the

paddock. In developing the outline proposals, the retention of these views has therefore been one of most important design parameters. It is the reason that the northern part of the site is being retained as a small paddock for use by the owners of Sutton Grange. By keeping this area free from development, the view towards Sutton Grange from the adjacent Keepmoat site is retained and this is demonstrated on the assessment of key views at Appendix 3. Furthermore, the retention of the paddock will provide some 'breathing space' for the existing house, enabling the grand approach along its driveway and the open setting of the property to be retained. Whereas the proposals will bring development closer to the house, the plots are located in the lower part of the site, will be restricted to 2 storeys in height and are set against a backdrop of established woodland. The design strategy at Appendix 2 provides a framework to which future reserved matters applications will be expected to adhere. The fundamental aim of the strategy is for the five plots to accommodate houses of high architectural merit, which take a steer from the architectural features and building materials of Sutton Grange. This includes:

- The creation of interesting roofscapes where the roof pitches are of a similar design and angle to Sutton Grange with intersecting roof lines being subservient to the main ridge line.
- The use of overdrawn eaves and verge details.
- The provision of traditional chimney stacks, whether function or non-function.
- Windows to be of traditional proportions to complement Sutton Grange.
- The use of traditional building materials such as stone and brick for the external walls and slate roofs
- The new houses to be built to lifetime home standards

6.10 The approach follows the advice provided by the District's conservation officer at the pre-application stage on how to mitigate any additional harm to Sutton Grange,

beyond that which has already been caused through the development of appeal site B.

- 6.11 Turning to the long-distance views, the Inspector for the 2015 Inquiry pointed out that “Despite the low-lying position of the house, its ornate bargeboards, prominent gables, and chimneys mean that it is now experienced as a “cottage ornde” forming a picturesque element in an open landscape seen in views from Langton Road”. He accepted that the development of appeal site B would considerably reduce the contribution which the open setting of the house makes to its modern-day significance as a prestigious country residence and this would be contrary to policy SP12 of the Local Plan Strategy (the policy seeks to safeguard elements of the historic character and value within the Districts built-up areas, including Visually Important Undeveloped Areas, as well as surrounding historic landscape character and setting of individual settlements). Nevertheless, the matter was not considered to be of great consequence, having regard to the scale of the harm (less than significant) and the significance of the heritage asset (less than statutory). Now that the scheme has been substantially built out, it is clear that views towards Sutton Grange from Langton Road have already been obscured and therefore, the proposal for 5 additional houses on the paddock is not considered to result in any greater degree of harm. This opinion was shared by the Council’s conservation officer during pre-application discussions on the development. Here, it was also agreed that based on the Inspectors analysis of the Sutton Barn (i.e. that views from Langton Road are not considered to be significant), the proposal would not cause harm to the significance of that asset.
- 6.12 From further afield, the views that are available from Scotts Hill and surrounding vantage points have also been considered as part of the visual impact assessment (Appendix 4). The photographs demonstrate that:

- The presence of existing vegetation cover along Langton Road (hedge boundary and intermittent trees) limits views of the application site anyway but as the developments on either side of the Sutton Grange access track are built out, these views will be filtered further and almost eliminated all together once the proposed shelter belt of trees has become established.
- The impact of the developed part of the Keepmoat site becomes clearer in views back towards the application site from the southern end of Langton Road, which will be heavily filtered with only glimpse views available
- From the higher vantage point of Scotts Hill, intervening tree cover means that there are limited opportunities to see either Sutton Barn or Sutton Grange and even when not in leaf, the harsh roofscape of the Keepmoat development (on appeal site B) is the dominant feature in the landscape. It withdraws from any contribution that the open fields at Sutton Farm (east of Mill Beck) once made to the setting of the town and in this context, the proposed development is not considered to have any greater impact. The use of duller tones, slate roofs for example, will ensure that the proposed houses blend more easily into the landscape.
- The views from Whitewall and Welham Road to the south and west of the site will be effectively screened by the mature planting along Mill Beck, ensuring that the development will have no visual impact from these vantage points. This is also the case when travelling along the existing track which runs almost in a straight line from the southern edge of Sutton Barn and intersects with Whitewall / Scotts Hill 500m further south.

6.13 In this context of the above assessment, the proposed development is considered to conform to the criteria of Local Plan policies SP12 and SP16 relating to heritage, design and visual impact

Archaeology

- 6.14 To support the application, an Archaeological Desk Based Assessment was undertaken by MAP Archaeology and is included at Appendix 6. The practice has already carried out extensive field investigations in the vicinity of the site due to their involvement in the Keepmoat developments to the north and east. They therefore have a good understanding of the Designated and Non-Designated Heritage assets, previous archaeological finds, historical references and cartographic information. Given the wealth of archaeological finds, features and deposits recorded in the vicinity of the paddock, the archaeological potential of the site is considered to be high and of local to regional importance. The desk-based report suggests that it is likely for features to be encountered from the Romano-British period, the medieval period and possibly earlier. The recommendation is for an archaeological strip, map and record, which is to be focussed on the main areas of disturbance in order to mitigate the impact of development.

Highways

The access arrangements for the site have been developed in liaison with officers at NYCC as part of a formal pre-application process. The advice from officers is set out in paragraph 6.5 – it was to limit the number of units on the proposed paddock to a maximum of 5, otherwise, the existing driveway serving Sutton Grange would need to be upgraded to adoptable standards. The proposed development is consistent with this advice. A new spur will be added to the existing private drive in order to serve the proposed housing plots, meaning it will provide access to six dwellings in total. In order to facilitate two-way movements along the route, a passing place will be added on the southern side approximately half way along. Where the drive meets Langton Road, the electric gates and stone gateposts will be removed and the entrance will be widened to a double car-width, enabling vehicles to pull off the public highway and rest in a holding area if they encounter another car travelling

along the route. The gateposts, which are a modern replacement, will be relocated to the new entrance to Sutton Grange.

Ecological Issues

- 6.15 An Ecological Assessment of the application site and its surroundings, including Mill Beck and the adjacent woodland was undertaken by MAB Ecology. A copy of the report is provided at Appendix 5. It identifies that the land within the red line boundary as an area of improved grassland. There is no evidence of invertebrates on the site and the likelihood of great crested newts and reptiles utilising the site were both considered to be negligible. The majority of ecological potential exists beyond the site boundaries, within the adjacent woodland and Mill Beck.
- 6.16 Here, the trees are likely to support a range of breeding and foraging birds and some include features that are suitable for bat roosting as well as providing good quality foraging habitat. There may also be some movement across the site by badgers utilising nearby woodland areas although there are no recorded setts within a 2km area. The Beck itself is considered to provide a suitable habitat for otters and watervole although no signs were detected during the walkover survey. The watercourse lies downstream from the River Derwent, a designated SAC and SSSI so works that impact on the Beck also carry the potential to affect these designated sites. Furthermore, the presence of Himalayan Balsam along the banks of the watercourse means that measures are required to avoid the spread of this invasive species. An appropriate mitigation strategy has therefore been put forward, which focuses on limiting the impact of development on the ecological habitat along the western boundary of the site. This includes:
- Avoiding any direct lighting of the western and southern boundaries
 - Assessing any trees or hedgerows to be removed for the presence of breeding birds or roosting bats

- Maintaining a 5m buffer strip along Mill Beck to ensure no impact on aquatic or riparian fauna.
 - The provision of integral bird and bat boxes on either buildings or trees
 - New tree and shrub planting using native species.
- 6.17 The above steps will ensure a net biodiversity gain from the development, satisfying Paragraphs 170 and 175 of the NPPF and LPS Policy SP14.

Drainage

- 6.18 The application site is under 1 hectare in size and falls within flood zone 1 (low risk). In accordance with the criteria of the NPPF, a Flood Risk Assessment is not therefore required to support the application although a Drainage Assessment has been prepared by EWE Associates and is included at Appendix 7. The study confirms that the bank of the watercourse to the west of the site (Mill Beck) is at a high enough level (22m AOD) that the site itself is not at risk of flooding in the 1 in 100 year plus 50% climate change (21.3m AOD) and 1 in 1000 year (21.5m AOD) flooding scenarios. Surface water from the development is to be discharged into Mill Beck at the existing run-off rate of 3.3 lps. This is achieved by creating a network of swales, which run along the proposed access road and at the rear (western) boundary of the new housing plots to attenuate the flows. A broad calculation for the level of required water storage is included within the drainage assessment although this will need to be repeated at the detailed design stage. Percolation testing could also be conducted although the soil profiles and the information from surrounding sites indicates that infiltration drainage is not a practical solution for this site and hence, the strategy is based on discharge to watercourse.
- 6.19 In terms of foul drainage, the proposal is to connect the site into the existing combined sewer in Langton Road. Due to the land levels, foul drainage will need to be pumped from a private pumping station within the confines of the site. This will lead into a new gravity sewer, which is to be installed along the route of the existing

private drive, before connecting into the established sewer network. The drainage strategy, whilst illustrative at this stage, sets the principles for providing serviceable housing plots.

7.0 CONCLUSION

7.1 This outline planning application is for the creation of 5 no. 'self build' housing plots on the southern paddock at Sutton Grange. The site lies within the open countryside, where new development is generally restricted in accordance with the policies of the Local Plan Strategy for Ryedale. However, this statement has shown that there are sufficient material considerations to justify a departure from the policies of the plan in this case when the proposal is considered 'in the round'. Specifically:

- The provision of serviced self-build plots, to accommodate homes that will be built to the 'lifetime homes' standard will satisfy an un-met demand for this type of housing within the District, helping the Council to meet the requirements of its self-build register
- The site is surrounded by development on 3 sides. The role it once played in providing an open setting for the built-up area of Malton and Norton has already been compromised. The layout of the site has been arranged to retain the open setting of Sutton Grange and preserve the close-up views of the house and Sutton Barn from nearby public open space, as sought by the Planning Inspector in his assessment of applications 15/00098/MOUT and 15/00099/MOUT
- Whereas the site falls within a VIUA, it is considered that this designation should only apply to the woodland area to the west of the site and the fields beyond. This was the basis on which consultation was carried out on the Local Plan Sites Document. The woodland represents a natural boundary to the development limits of the town.

- 7.2 Overall, it is considered that the application will facilitate a development of high architectural quality, which truly embodies the concept of 'placemaking' on this unique site at the edge of Norton. There are no environmental constraints that cannot be suitably mitigated. The proposal has been supported by both planning and conservation officers at the Council and highways officers at NYCC during the course of the pre-application process and for these reasons, we respectfully request that outline planning permission is granted for the development.

Appendix 1

Planning Application Drawings



UPLOADED AS SEPARATE ATTACHMENT

Appendix 2

Design Strategy



UPLOADED AS SEPARATE ATTACHMENT

Appendix 3

Analysis of Key Views

UPLOADED AS SEPARATE ATTACHMENT

Appendix 4

Visual Impact Assessment

UPLOADED AS SEPARATE ATTACHMENT

Appendix 5

Ecological Impact Assessment

UPLOADED AS SEPARATE ATTACHMENT

Appendix 6

Archaeological Assessment



UPLOADED AS SEPARATE ATTACHMENT

Appendix 7

Outline Drainage Strategy



UPLOADED AS SEPARATE ATTACHMENT

Parish comments

Sent: 15 September 2020 09:18

To: Development Management

Subject: Consultee Comments for Planning Application 20/00770/OUT

A consultee has commented on a Planning Application. A summary of the comments is provided below.

Comments were submitted at 9:17 AM on 15 Sep 2020 from Mrs Rosalind Tierney on behalf of Norton Town Council.

Application Summary

Reference: 20/00770/OUT

Address: Land At Sutton Grange Langton Road Norton Malton YO17 9PU

Proposal: Residential development of 5no.dwellings (site area 0.72ha) - access to be considered

Case Officer: Alan Goforth

[Click for further information](#)

Comments Details

Comments: Recommend approval, subject to tree retention and protection over entrance way and main site.