EAST PARK ENERGY

East Park Energy

EN010141

Environmental Statement
Volume 2 – Technical Appendices

Appendix 8-1: Flood Risk Assessment

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Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009: Regulation 5(2)(e)

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EAST PARK ENERGY

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Environmental Statement
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Appendix 8-1: Flood Risk Assessment

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1.0 INTRODUCTION

1.1 Background

1.1.1 Wallingford HydroSolutions Ltd (WHS) has been commissioned by BSSL Cambsbed 1 Ltd (the 'Applicant') to undertake this Flood Risk Assessment ('FRA') for the East Park Energy project (the 'Scheme').

1.1.2 The Site is located on land to the north-west of St Neots on the border between Bedford Borough and Huntingdonshire District, as shown on Figure 1.

1.2 Scope

1.2.1 This report provides a review of flood risk to the Scheme and presents mitigation to manage any identified flood risk to the Site. The report should be read in conjunction with the **outline Surface Water Management Plan (oSWMP) [EN010141/DR/7.13]**, which addresses the management of surface water runoff on-site during the construction and operation phases of the Scheme in accordance with Sustainable Urban Drainage Systems (SuDS) design philosophies.

1.2.2 National scale fluvial flood maps held by the Environment Agency (EA) indicate that sections of the Site are located within Flood Zones 2 and 3, and are therefore at moderate to high risk of fluvial flooding from rivers. National scale pluvial maps also indicate a 0.1% chance of surface water flooding in a given year along the northern boundary and across a drain at the access route.

1.2.3 A FRA is required in accordance with paragraph 5.8.13 of the National Policy Statement for Energy[1] (NPS EN-1) for projects in Flood Zones 2 and 3 in

1 Department for Energy Security and Net Zero (2023). Overarching National Policy Statement for Energy (EN-1).

England. The purpose of the FRA is to demonstrate that flood risks to the Site can be managed. In summary, this FRA:

- Introduces the Site in terms of its location, topography and the proposed development; and
- Assesses the flood risk to the Site using available data.

1.3 Sources of Information

1.3.1 The following sources of information have been used to prepare this report:

- LiDAR data[2];
- **Works Plan [EN010141/DR/2.3]**;
- **ES Vol 3 Figure 2-1: Illustrative Environmental Masterplan [EN010141/DR/6.3]**;
- EA National Flood Maps[3]; and
- The British Geological Survey (BGS) Geology of Britain viewer[4] to identify groundwater flood risk to the Site.

[2] *Defra LiDAR Programme. 1m LiDAR Composite DTM, 2022. Available at: https://environment.data.gov.uk/DefraDataDownload/?Mode=survey. Accessed February 2024.*
[3] *Environment Agency. Available at: https://flood-map-for-planning.service.gov.uk/ Accessed February 2024*
[4] *BGS Geology of Britain viewer (2021), mapapps.bgs.ac.uk/geologyofbritain/home.html*

2.0 THE SCHEME

2.1 Order Limits

2.1.1 The area of land required for the construction, operation and maintenance of the Scheme, which includes land required for permanent and temporary purposes, is shown on **ES Vol 3 Figure 1-1: Site Location [EN010141/DR/6.3]**. This is referred to as the 'Order Limits' or the 'Site'.

2.2 The Site

2.2.1 The Site is located to the north-west of the town of St Neots and is across two administrative areas; Bedford Borough Council (BBC) (a unitary authority) and Huntingdonshire District Council (HDC) (a two-tier authority with Cambridgeshire County Council). The Site location is shown on **ES Vol 3 Figure 1-1: Site Location [EN010141/DR/6.3]**. The Site area extends to approximately 773 hectares (ha).

2.2.2 With reference to **ES Vol 3 Figure 1-2: Site References [EN010141/DR/6.3]**, for ease of reference the Order Limits have been sub-divided into East Park Sites A to D, in which all of the above ground infrastructure proposed as part of the operational Scheme would be located (excluding works to the Eaton Socon Substation). The Order Limits also cover land outside of East Park Sites A to D which will be required for access, cabling, and the grid connection to the Eaton Socon Substation. East Park Sites A to D can be described as follows:

- **East Park Site A** – covering land west of the B660 between Pertenhall and Swineshead at the western end of the Site. East Park Site A comprises arable fields located to the north, west and east side of a small hill that lies between Pertenhall and Riseley. East Park Site A lies either side of the Pertenhall Brook, with access proposed from the B660 to the east.
- **East Park Site B** – covering land between Pertenhall, Keysoe, and Little Staughton. East Park Site B comprises arable fields located north of an

elevated ridgeline which runs between Keysoe and Little Staughton. East Park Site B is crossed by a number of small watercourses, with access proposed from the B660, Great Staughton Road, Little Staughton Road, and an unnamed road between Little Staughton and Great Staughton Road.

- **East Park Site C** – covering land south of Great Staughton. East Park Site C comprises arable fields located south of the River Kym, with access proposed from Moor Road to its south-eastern boundary, and from Little Staughton Road to the north-west.
- **East Park Site D** – covering land around Pastures Farm between Great Staughton and Hail Weston. East Park Site D comprises arable fields with access proposed via a new access from the B645.

2.2.3 With reference to **ES Vol 3 Figure 1-2: Site References [EN010141/DR/6.3]**, there are three linear corridors proposed for underground cabling that connect the different parts of the Site and provide a grid connection to the Eaton Socon Substation. These are also shown on **Figure 1-2** and identified as:

- **Cable Corridor – Site B to Site C** – which connects Site B to Site C across an unnamed road and arable fields.
- **Cable Corridor – Site C to Site D** – which connects Site C to Site D across Moor Road and an arable field.
- **Grid Connection** – Site D to Eaton Socon Substation – which connects Site D to the Eaton Socon Substation and crosses open arable fields, the Duloe Brook, and Duloe Road and Bushmead Road.

Site Topography

2.2.4 The topography of the Site slopes north-easterly draining towards the Pertenhall Brook and River Kym to the north and River Great Ouse to the east of the Site, see Figure 2. Ground levels within the Site range between 17.1 and 75.6m above ordnance datum (AOD) with areas of lower topography draining into the smaller watercourses running through the Site.

2.3 The Scheme

2.3.1 The Scheme comprises a new ground-mounted solar photovoltaic energy generating station and an associated on-site battery energy storage system (BESS) on land to the north-west of St Neots. The Scheme also includes the associated infrastructure for connection to the national grid at the Eaton Socon National Grid Substation.

2.3.2 The Scheme would allow for the generation and export of 400 megawatts (MW) of renewable electricity, as well as the storage of 100 MW of electricity in the BESS. The precise generating capacity and storage capacity will be subject to detailed design, but it should be noted that the Applicant presently has a grid connection agreement with National Grid for 400 MW export and 100 MW import.

2.3.3 Subject to the Scheme securing Development Consent in winter 2026/27 it is anticipated that works would start on site in early 2028 and be completed by mid-to late 2030 (although initial energisation of the Scheme is likely to commence prior to 2030). The Scheme comprises a temporary development with an operational phase of 40 years; decommissioning activities would therefore likely commence in 2070, 40 years after commissioning.

2.3.4 A more detailed description of the Scheme is provided within **ES Vol 1 Chapter 2: The Scheme [EN010141/DR/6.1]**.

2.3.5 An illustrative layout for the Scheme is presented on **ES Vol 3 Figure 2-1: Illustrative Environmental Masterplan [EN010141/DR/6.3]**.

3.0 SOURCES OF FLOOD RISK

3.1 Historic Flooding

3.1.1 The EA historic flood map shown in Figure 3 indicates a recorded flood event from the River Kym in March 1947 slightly encroaching onto the northern section of East Park Site C. The map also shows historical flood events close to sections of the site from:

- A drain along the Pertenhall Road in October 1987 just outside the south-western boundary of East Park Site B;
- The Pertenhall Brook exceeding the channel capacity in October 1987 and September 1992 approximately 120m and 232m, respectively, north-east of East Park Site A; and
- The Colmworth Brook in October 1987 and May 1988 approximately 40m and 82m, respectively, east of the Point of Connection.

3.2 Existing Flood Defences

3.2.1 The Site is not shown to be in an area benefiting from existing flood defences.

3.3 Fluvial Flood Risk

EA Flood Data

3.3.1 The EA's Flood Zones from the Flood Map for Planning have been reviewed to assess the risk of fluvial flooding to the Site. The flood maps indicate flood risks associated with undefended events, i.e., the possibility of fluvial or tidal flooding without considering reductions in risk of flooding due to the presence of flood defence structures.

3.3.2 The EA flood map, attached in Figures 4a-4c, indicates that sections of the Site are located within Flood Zones 2, 3a and 3b, the flood extents for the 0.1%, 1.0% and 3.3% (defended) Annual Exceedance Probability (AEP) events, associated with:

- The Pertenhall Brook and River Kym in the northern sections of East Park Site A, B and C;
- The smaller watercourses running through East Park Site B and C;
- The Duloe Brook flowing across a section of the Grid Connection corridor; and
- The Honeydon Brook and Colmworth Brook flowing along the western and southern boundaries, respectively, of the Eaton Socon Substation land.

Note that whilst the 3.3% AEP flood extent is often taken to represent Flood Zone 3b (functional floodplain) and is shown in the figures for completeness, it is not officially presented as Flood Zone 3b in the EA mapping.

3.3.3 At the locations at risk, the 0.1% AEP flood extents from the Pertenhall Brook and River Kym reach the 39m AOD and 24.5m AOD contours, respectively. The flood extents at these locations are relatively small and only affect very limited sections of the Site. Additionally, a sequential approach has been undertaken to ensure infrastructure proposed as part of the Scheme is in areas at the lowest risk of fluvial flooding, i.e., outside the Flood Zones. As such, the Scheme is not considered to be at significant risk of fluvial flooding.

3.3.4 It should be noted that the northern section of East Park Site B around The Kangaroo (NGR: 509833, 264493), which is shown to be within the EA Flood Zones, is not considered to be at risk of flooding from the River Kym. In its response to the East Park flood zone maps enquiry (as presented in Annex A), the EA has confirmed that this localised mapped flood extent originates from surface water outputs that have been erroneously included in the Flood Map for Planning (FMfP) flood zones.

Modelled Flood Data

3.3.5 A more detailed assessment of the fluvial flood risks was carried out using the existing 1D/2D Lower Ouse River Kym Catchment Model and Lower Great Ouse Model for smaller watercourses, which was received from the EA in May 2025. The model data confirmed the fluvial flood risks to sections of the Site, and that the critical infrastructure is located outside Flood Zones 2 and 3. The

maximum modelled flood depth for the Kym/Pertenhall Brook is 2.2m and 0.6m for the areas at risk in East Park Site A and Site C, respectively.

3.3.6 The Lower Great Ouse Flood Model also includes minor (ordinary) watercourses i.e. tributaries of the Great Ouse and the River Kym/Pertenhall Brook. This includes the Riseley tributary, which runs through Site B, an unnamed River Kym tributary through Site C, and Duloe Brook (Bushmead), which crosses the grid route near to St Neots. Model results have been provided for the 0.1% AEP event for all the above minor watercourses, confirming the critical infrastructure and panelling is located outside Flood Zones 2 and 3. No climate change scenarios were provided within these modelling results. However, this is not an issue as the results for the extreme 0.1% AEP event indicate that areas of flood risk relate only to the grid connection and not to any above-ground infrastructure.

3.3.7 The flood depths and extent for the modelled 0.1% AEP event for the main and ordinary watercourses are attached as Figure 5a-5c.

3.4 Pluvial Flood Risk

3.4.1 The EA's Risk of Flooding from Surface Water (RoFSW) mapping and the associated flood risk to the Site are shown on Figure 6. The map indicates that parts of the Site are at low to high risk of surface water flooding, where the low likelihood is associated with the 0.1% AEP assessment event. The typical flood depths for the 0.1% AEP event range from 0mm to 600mm, however there are isolated areas with deeper flood depths up to 900mm, as shown in Figures 6a-6c. These higher pluvial flood depths are generally located close to the watercourses running nearby and through the Site. Though these risks are shown on the pluvial flood map, they are mostly fluvial in nature, resulting from the watercourses around and within the Site. However, there are some localised areas with high flood depths due to pooling in topographic depressions, such as in East Park Site D.

3.4.2 Some of the solar panels and sections of the access tracks are impacted by the 0.1% AEP pluvial flood extents (low likelihood RoFSW). In these areas,

the associated maximum flood depth is up to 600mm in the northern section of East Park A and D, and the southern section of East Park Site C, while in East Park Site B the maximum flood depth is up to 900mm in the western and central areas, see Figures 6a-6c.

3.4.3 While parts of the site are susceptible to pluvial flooding, the proposed layout adopts a sequential approach to risk management. This ensures all critical infrastructure remains outside the 0.1% AEP flood extents. In the few instances where PV panels and access tracks encroach on these pluvial flood zones, specific mitigation measures have been integrated into the design, as outlined in Section 4.3

3.5 Climate Change Scenarios

3.5.1 The EA's Flood Map for Planning (FMfP) Flood Zones, risk of flooding from rivers and the sea (RoFRS) and risk of flooding from surface water (RoFSW) online flood maps, including climate change scenarios, were reviewed to assess flood risk over the 40-year design life of the Scheme. These datasets represent a central estimate of future flood risk by applying moderate climate change allowances for the Ouse Upper and Bedford Management Catchment, which covers the Site. The peak river flow and rainfall allowances for the Ouse Upper and Bedford Management Catchment are shown in Table 1 below.

Table 1 – Central climate change allowances for the Bedford Ouse Management Catchment[5]

Epochs	Central Peak River Flow Allowances	Central Peak Rainfall Allowances
2050s	4%	20%
2070s	-	25%
2080s	19%	-

[5] *Flood risk assessments: climate change allowances. Environment Agency. May 2022.*

3.5.2 The RoFRS map, including climate change scenarios, attached as Figure 7a-7c, shows that no critical infrastructure, except for the panels, is within the climate change flood extents. The affected panels are shown to be at low risk of flooding during the most extreme 0.1% AEP event, including the applied climate change allowance.

3.5.3 The FMfP Flood Zones plus climate change show how the combined extent of Flood Zones 2 and 3 could increase with climate change over the next century. The map uses the Central allowance for the 2080s epoch (2070-2125) for risk of flooding from rivers and the Upper End allowance for risk of flooding from the sea, accounting for cumulative sea level rise to 2125. The map (see Figure 8a-8c) shows similar extents to the RoFRS + climate change map shown in Figure 7a-7c. It indicates that all critical infrastructure is sited outside the Flood Zone 3 plus climate change extent. However, it indicates that some panels in East Park B and C are within the Flood Zone 2 plus climate change extent, i.e., are at low risk of flooding during the most extreme 0.1% AEP event, including the applied Central allowance for the 2080s epoch.

3.5.4 The RoFSW map for the 0.1% AEP event, including climate change scenarios, attached as Figure 9a-9c, indicates that parts of the Site will remain at low risk of surface water flooding; with typical depths ranging between 0mm to 600mm. It also shows that additional panel areas will be at low risk of flooding during this most extreme event (i.e., 0.1% AEP plus a central climate change allowance for the 2050s epoch). Although parts of the site are at risk of pluvial flooding, the RoFSW climate change flood maps show that the batteries and electrical equipment are flood-free in this event. For the RoFSW climate change scenario, only the 2050s epoch (2040-2060) was assessed, as this is the only epoch publicly available in the EA flood map dataset for surface water.

3.6 Groundwater Flooding

3.6.1 Groundwater flooding is defined as the emergence of groundwater at ground level. A review of the BGS Geology of Britain mapping[4] indicates that the Site is underlain by sedimentary bedrocks comprising of mudstone. Superficial deposits of sand, gravel, silt and diamicton are also present within the Site.

3.6.2 In addition to the Site's geology, the BGS Borehole Records[6] were also used to assess groundwater flood risk. The borehole records indicate groundwater levels are relatively shallow, between 1.5m and 5.4m below the ground surface for the southeastern section of the Site at the Eaton Socon Substation. Groundwater levels for the rest of the Site could not be determined due to unavailable borehole records.

3.6.3 Based on the available borehole records and the geology of the Site, with bedrock permeability being poorly draining with a low permeability range, the risk of groundwater flooding is low across the Site.

3.7 Reservoir Flooding

3.7.1 According to the EA's online flood maps, the Site is generally not at risk of flooding due to reservoir failure, attached in Figure 10 . Though not generally at risk, the mapping shows flood extents from both the dry-day and wet-day (i.e., when the river is already in spate) scenarios slightly encroaching onto the southern boundary of the Eaton Socon Substation land, however, it should be noted that there are no works within this area. Furthermore, due to the design specifications and criteria for reservoirs, the probability of failure is minimal.

[6] *British Geological Survey Borehole Records. https://mapapps2.bgs.ac.uk/geoindex/home.html. Accessed February 2024.*

4.0 FLOOD RISK ASSESSMENT

4.1 Sequential Test and Exception Test

Sequential Assessment

Introduction

4.1.1 This section of the report represents a sequential assessment which provides the process through which the site location for the Scheme has been assessed in accordance with relevant flood risk policy. NPS EN-1 requires the Secretary of State to be satisfied that the sequential test has been applied and satisfied as part of site selection. The sequential test is intended to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk, and where this is not possible that the applicant has considered other reasonably available sites when deciding to proceed with the development of a site in a medium or high risk area.

4.1.2 This assessment determines whether there is sequentially preferable land on which to develop the Scheme when considered against the requirements of the National Policy Statements, National Planning Policy Framework and Planning Practice Guidance.

Policy Context

4.1.3 NPS EN-1 states at paragraph 5.8.6 that the aims of planning policy on development and flood risk are to ensure that flood risk from all sources is considered at all stages in the planning process to avoid inappropriate development in areas at risk of flooding. It states (paragraph 5.8.9) that:

> *"If following application of the Sequential Test[213], it is not possible (**taking into account wider sustainable objectives**), for the project to be located in areas of lower flood risk the Exception Test can be applied as defined in https://www.gov.uk/guidance/flood-risk-and-costal-change#table2."* [our emphasis].

4.1.4 Footnote 213 refers to the Planning Practice Guidance (PPG) on Flood Risk and Coastal Change – The sequential approach to the locations of development. It states (paragraph 024 Reference ID: 7-024-20220825) that:

> *"The Sequential Test ensures that a sequential, risk-based approach is followed to steer new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account. Where it is not possible to locate development in low-risk areas, the Sequential Test should be used to compare* ***reasonably available*** *sites within medium risk areas, and then only when there are* ***no reasonably available*** *sites in low and medium risk areas, within high-risk areas."* [our emphasis].

4.1.5 Paragraph 027 of the PPG on Flood Risk and Coastal Change states that when applying the sequential test for surface water flood risk, "*…a proportionate approach should be taken. Where a site-specific flood risk assessment demonstrates clearly that the proposed layout, design, and mitigation measures would ensure that occupiers and users would remain safe from current and future surface water flood risk for the lifetime of the development (therefore addressing the risks identified e.g. by Environment Agency flood risk mapping), without increasing flood risk elsewhere, then the sequential test need not be applied.*"

Fluvial Flood Risk

4.1.6 The vast majority of the Site is not at risk of fluvial flooding, with areas of flood risk limited to:

- The Pertenhall Brook and River Kym in the northern sections of East Park Site A, B and C;
- The smaller watercourses running through East Park Site B and C;
- The Duloe Brook flowing across a section of the grid connection corridor; and
- The Honeydon Brook and Colmworth Brook flowing along the western and southern boundaries, respectively, of the Eaton Socon Substation land.

4.1.7 The process by which the Applicant selected the Site for the Scheme is summarised within **ES Vol 1 Chapter 3: Alternatives and Design Evolution [EN010141/DR/6.1]** and set out in greater detail within the supporting appendices to ES Chapter 3, specifically **ES Vol 2 Appendix 3-1: Site Identification Report [EN010141/DR/6.2]**.

4.1.8 The starting point for any renewable energy generation project is identifying a part of the electricity transmission or distribution network where there is available grid capacity to connect a renewable energy project. To identify suitable sites for solar farms, two principal criteria must both be satisfied:

- Firstly, and most importantly, any solar scheme must be located proximate to an existing substation which has the available capacity to import the required amount of power into the network, either directly into the substation or via a point of connection into the nearby transmission or distribution network;
- Secondly, solar schemes must be located close enough to the identified substation or transmission line to remain viable both in terms of cable deployment for the grid connection, and to ensure that minimum transmission losses occur.

4.1.9 A search for a point of connection (PoC) was undertaken by the Applicant in 2021, which involved analysis of the National Grid to identify parts of the network with potential available capacity to connect a commercial solar farm. Following an application to National Grid it was established that the Eaton Socon substation had significant capacity to connect a commercial solar farm, and that this could be achieved within a commercially viable timeframe and cost (i.e. the connection would not be dependent on significant upgrades to the transmission or distribution network, including the Eaton Socon substation).

4.1.10 As set out in **ES Vol 2 Appendix 3-1: Site Identification Report [EN010141/DR/6.2]**, the Applicant proceeded to identify the most appropriate location for a large-scale solar NSIP capable of utilising the available grid

capacity within the Eaton Socon Substation. A 15km area of search around the Eaton Socon Substation was taken as a starting point, with the land in this area of search reviewed against known planning and environmental constraints including:

- Designated landscapes;
- Designated international and national ecological and geological sites;
- Designated heritage sites;
- **Areas of high and medium flood risk**;
- Green Belt;
- Urban areas; and
- Land allocated for other uses in an adopted Local Plan.

4.1.11 Following the guidance set out in NPS EN-3, the site selection process then identified and ruled out possible brownfield or previously developed land, before establishing that agricultural land would be required to deliver the Scheme. As agricultural land was required, a desk-based review of published agricultural land classification datasets was undertaken to try and identify a 'Search Zone' that was deliverable and of a lesser environmental value.

4.1.12 The Search Zones were reviewed in line with the 'Factors Influencing Site Selection' set out in the September 2021 consultation draft of NPS EN-3 (which was the most contemporary emerging policy at the time). These factors were:

- **Irradiance and site topography** – was the topography of the area a constraint to solar development;
- **Proximity of a site to dwellings** – how densely populated was the search zone, and would there be opportunities to mitigate impacts on nearby dwellings;
- **Capacity of a site** – was the Search Zone large enough to meet the Scheme's anticipated land requirements;

- **Grid connection** – how proximate was the Search Zone to the point of connection, and what are the nature of the constraints to providing a grid connection between the Search Zone and the Eaton Socon substation;
- **Agriculture land classification and land type** – what was the likelihood of best and most versatile agricultural land being present in the Search Zone; and
- **Accessibility** – how would the land be accessed during the construction phase and were there any constraints to providing safe access.

4.1.13 The conclusion of this exercise was that there was no Search Zone not constrained in some way, and that only by taking a balanced consideration of the above factors was it possible to make a recommendation as to which of the Search Zones to take forward for detailed site identification. The key determining factor in determining the final Search Zone for more detailed assessment was that it was likely to have the most straightforward grid connection, which should in turn avoid and reduce environmental impacts, affect less landowners, ensure that the Scheme remains commercially viable and can be delivered in the quickest timeframe to meet Net Zero commitments of the Government. In this way, and of relevance to the sequential test, the Applicant has taken into account '*wider sustainable objectives*' in selecting the Search Zone for the Site to identify reasonably available sites (as per paragraph 5.8.9 of NPS EN-1).

4.1.14 Following identification of a broad Search Zone, the Applicant approached landowners and identified a number of interested landowners to take forward the Scheme. This land was reviewed in order to establish constraints to the development of the Scheme and refine the overall landholding to be taken forward as part of the Site, again taking into account '*wider sustainable objectives*' to establish the most suitable and sustainable location for the Scheme, including the risk of flooding from all sources.

4.1.15 In applying the above approach, the Applicant has considered a series of factors that, to a greater or lesser extent, are important in determining whether alternative sites exist that represent '*reasonably available'* alternatives. The

conclusion is that when taking into account wider sustainable objectives there are compelling reasons that there are no alternative sites in areas of lower flood risk that are suitable for the type of development proposed, able to meet the same development needs and that have a reasonable prospect of being developed at the same time as the proposal.

Pluvial Flood Risk

4.1.16 As set out in Section 3.4, the Site includes areas at risk of surface water flooding.

4.1.17 Paragraph 027 of the PPG for Flood Risk and Coastal Change states that a proportionate approach should be taken to the application of the sequential test, and that where a FRA demonstrates that a development would remain safe from current and future surface water flood risk for the lifetime of the development (without increasing flood risk elsewhere), then the sequential test does not need to be applied.

~~4.1.18~~ Although all critical infrastructure is located outside of Flood Zones 2 and 3, some solar arrays are required to be located in areas at risk of pluvial flooding to maximise the generating capacity of the Scheme and therefore the sustainable development objectives derived from the Scheme. Where solar arrays are to be located in pluvial flood extents, they will be installed such that the underside of the panels will be above the maximum predicted flood levels (see Section 4.3), with only supporting legs of the mounting tables within the flood extent. Indicative engineering drawings for the Solar Mounting Structure (Figure 2-2a provided in **EN010141/DR/6.3**) show that the upright posts are formed from 3 mm sheet steel in an open hollow profile. The section is not fully enclosed and does not seal the internal void to flood water, therefore the only volume loss within the flood extents would be the 3 mm steel sheet. This is a negligible volume ~~The supporting legs have a small cross-sectional area~~ and would have a negligible impact on pluvial flood risk. Further integrated mitigation measures are also set out in Section 4.3 below. Post-development

modelling has been carried out to quantify the impact of the panels on flood risk, presented in Section 4.4 below.

~~4.1.19~~4.1.18

~~4.1.20~~4.1.19 On this basis, and in accordance with the PPG, the sequential test need not be applied with regard to surface water flood risk.

Sequential Approach to On-Site Design

~~4.1.21~~4.1.20 In addition to the sequential test, a sequential approach to the location of a development should also be undertaken to ensure that development is steered towards areas at little or no risk of flooding from any source (as required by NPS EN-1 Paragraph 5.8.23). It is preferable that infrastructure is sited in areas of low risk instead of medium and high risk areas.

~~4.1.22~~4.1.21 Within the Site, a sequential approach has been used for the layout and placement of infrastructure to avoid medium and high flood risk areas. This has been informed by the data assessed in Sections 3.3 to 3.7, including the EA's flood map for planning, surface water flood risk maps and reservoir flood risk maps. This approach resulted in:

- No electrical infrastructure being placed within a 10m buffer of any watercourses;
- No solar PV panels and no sensitive electrical infrastructure including transformers, switchgear, batteries and substation being placed within Flood Zone 2 and 3 (the anomalous fluvial flood mapping around The Kangaroo discussed in 3.3.4, is not considered applicable).

~~4.1.23~~4.1.22 Although all critical infrastructure is located outside of Flood Zones 2 and 3, some solar arrays are required to be located in areas at risk of pluvial flooding to maintain the required generating capacity of the Scheme. Where solar arrays are to be located in pluvial flood extents, they will be installed such that the underside of the panels will be above the maximum predicted flood levels (see Section 4.3), with only supporting legs of the mounting tables

within the flood extent. The supporting legs have a small cross-sectional area and would have a negligible impact on pluvial flood risk.

~~4.1.24~~4.1.23 Cable routes within the Flood Zones are not affected by flooding as they will be buried. Any new access tracks will be constructed at grade, matching adjacent ground levels. Based on the above it is concluded that a sequential approach to the placement of infrastructure has been adopted throughout the development process in reference to the assessed flood risk data. Where parts of the Scheme have been sited in fluvial or surface water flood risk zones, it has been demonstrated how it is either not impacted by flood risk or how it has been mitigated.

Exception Test

~~4.1.25~~4.1.24 The development of a solar farm is classified as "Essential Infrastructure" i.e. "*Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations*" (NPPF Annex 3). Table 2 of the government Flood Risk and Coastal Change guidance (paragraph 079) states that where essential infrastructure is in Flood Zone 3, the 'Exception Test' is required to be met.

~~4.1.26~~4.1.25 The approach to the Exception Test, and specifically its relationship to the Sequential Test, is set out at Paragraph 5.8.10 of NPS EN-1 which states that: "*It would only be appropriate to move onto the Exception Test when the Sequential Test has identified reasonably available, lower risk sites appropriate for the proposed development where, accounting for wider sustainable development objectives, application of relevant policies would provide a clear reason for refusing development in any alternative locations identified*."

~~4.1.27~~4.1.26 The Exception Test is designed to allow appropriate and safe development to proceed in scenarios where the Sequential Test has been passed (i.e. where it has been shown that suitable sites at a lower risk of

flooding are not available). In terms of the Exception Test, NPS EN-1 states at paragraph 5.8.11 that:

"To pass the exception test it should be demonstrated that:

- *the development would provide wider sustainability benefits to the community that outweigh the flood risk; and*
- *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."*

Wider sustainability benefits to the community that outweigh the flood risk

~~4.1.28~~4.1.27 The NPSs are clear and unequivocal that there is an urgent need for new renewable electricity generating capacity to meet our energy objectives, transition to net zero, and meet our statutory carbon budgets. This is manifest most notably in section 3.2.6 of EN-1 where it is confirmed that the Secretary of State should assess all development covered by the NPS on the basis that the government has demonstrated there is need for it which is urgent, and that substantial weight should be given for this need.

~~4.1.29~~4.1.28 Section 2.0 of the **Planning Statement [EN010141/DR/5.3]** provides further detail on legislative and government policy in relation to the need for additional renewable energy capacity. The Scheme would provide a significant supply of renewable energy to the national grid. Consequently, the wider sustainability benefits that outweigh the flood risk have been appropriately demonstrated. Nonetheless, it remains a prerequisite on applicants to ensure that new energy infrastructure is designed to ensure it can remain operational and will be safe for its lifetime and will not increase flood risk elsewhere (NPS EN-1 paragraph 5.8.7 and NPS EN-3 paragraph 2.4.11).

Safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere

~~4.1.30~~4.1.29 The potential vulnerability of the Scheme is laid out within the Flood Risk Vulnerability Classification set out in Annex 3 of the NPPF, and there are no 'users' of the development per se. This confirms that solar farms are essential infrastructure. Table 2 of the government Flood Risk and Classification guidance (paragraph 079), confirms that for essential infrastructure in flood zone 3a the exception test is required in so far as it should be designed and constructed to remain operational and safe in times of flooding.

~~4.1.31~~4.1.30 All critical infrastructure has been sited in areas at the lowest risk of flooding (i.e., within Flood Zone 1) and the Scheme would remain operational and safe in times of flooding, without increasing flood risk elsewhere.

~~4.1.32~~4.1.31 Accordingly, the Scheme is considered to have passed the requirements of the Exception Test.

4.2 Justification for Development

4.2.1 It is set out within the PPG for Flood Risk and Climate Change that an FRA should demonstrate that development will be safe for its users for the intended lifetime of the development, without increasing flood risk elsewhere, and be sufficiently flood resistant and resilient to the level and nature of the flood risk.

4.2.2 Addressing this test, it has been shown in this FRA that:

- All critical infrastructure will be located within Flood Zone 1, and therefore is at little or no risk of fluvial flooding.
- For surface water flood risk, there are small parts of the Scheme within pluvial flood risk zones. To mitigate this, the PV panels will be raised above maximum flood levels (see Section 4.3).
- To ensure that the development doesn't increase offsite flood risk, the design will incorporate a SuDS scheme to manage surface water runoff, this is detailed in the **outline Surface Water Management Plan [EN010141/DR/7.13]**.

4.3 Integrated Mitigation Measures

PV Panels

4.3.1 To maintain existing overland flow routes, the PV panels will be elevated to a minimum height ensuring a 300 mm freeboard above the design flood event (1.0% AEP +40% CC) depth.

4.3.2 As the national scale surface water depth mapping does not provide results for the 2070s climate change epoch, a site-specific 2D pluvial model was developed using TUFLOW software using 1m LiDAR topographic data. Two model domains were defined to cover panel areas A and B in the west, and areas C and D in the east.

4.3.3 Figure 11a shows the standard panel height of 800 mm is sufficient to provide this freeboard across most panels at the Site. The panels that require further raising are concentrated within the northern section of East Park Site B and are shown in Figure 11b and 11c. The maximum required panel height is 1300 mm above ground level.

~~4.3.1 The solar panels will be fixed at an angle and mounted on piled supports with a maximum height of 3m and a minimum height of 0.8m above existing ground levels along the top (northern) edge and along the bottom (southern) edge of the array, respectively. This will allow surface water to flow under the panels similar to pre-development/baseline conditions.~~

~~4.3.2 Where solar arrays are located within the pluvial flood extent, the minimum panel level will be set to ensure a suitable freeboard above the maximum pluvial flood depth. A summary of the minimum freeboard for each pluvial flood depth band is provided in Table 2 and a plan showing the location of the PV panels and their minimum freeboard is shown in Figure 11a to 11d.~~

~~Table 2 – Summary of PV Panel Freeboard~~

~~Pluvial Flood Depth Bands~~	~~Minimum freeboard (mm)~~	~~Mitigation Measure~~	~~Area of Panels Affected (ha)~~
~~Areas of no pluvial flooding~~	~~n/a~~	~~n/a~~	~~192.3~~
~~<0.3m~~	~~500~~	~~Minimum panel height of 0.8m provides sufficient freeboard.~~	~~6.2~~
~~0.3m – 0.6m~~	~~200~~	~~Minimum panel height of 0.8m provides sufficient freeboard.~~	~~9.5~~
~~0.6m – 0.9m~~	~~200~~	~~Minimum panel height increased to 1.1m to provide sufficient freeboard~~	~~0.6~~
~~>0.9m~~	~~n/a~~	~~Panels not located in these areas.~~	~~-~~

~~4.3.3 The flood depths and the proposed panel heights are based on the available 2050s depth bands, conservatively taking the upper limit of each depth band. Therefore, the proposed mitigation measure is conservative based on available mapping and includes a 200 mm freeboard. Given that these depths are informed by the RoFSW plus a 2050s epoch (2040-2069) climate change allowance, moving to a higher epoch to account for the decommissioning phase is not significant in the context of the uncertainties around climate change impacts. However, if required, during the detailed design phase modelling could be undertaken to refine the flood depths, which will likely be lower given the current conservative estimates. The mitigation would remain the same, the depths and extents may change.~~

BESS Compound

4.3.4 The flood extents encroaching onto the BESS compound are less than the 0.2m pluvial depth band. The **outline Surface Water Management Plan [EN010141/DR/7.13]** sets out that bunding would be provided at the perimeter of the compound to contain any fire water runoff within the area.

Similarly, this bunding would protect internal infrastructure against pluvial flood risk emanating from outside the compound area.

4.3.5 The principle of bunding around the BESS compound was discussed with the EA and Lead Local Flood Authority (LLFA) on the 22nd July 2025. During this meeting it was agreed that the drainage strategy and bunding was acceptable in principle, and that no additional pluvial modelling would be required. Furthermore, it was discussed that any potential impact that the bunding would have on overland flow routes would be negligible. This is due to the upslope location of the BESS compound and any overland flow would ultimately enter the receiving water body at the same location.

Access Tracks

4.3.6 Where access tracks cross areas of pluvial flooding, the access track will be at grade to ensure that they have no impact on flood mechanisms.

4.3.7 Due to the site not being manned, the access tracks will be infrequently used. Furthermore, planned activities will not be scheduled during times of flood.

4.4 Residual Risk and Flood Resilience

4.4.1 To ensure that surface water runoff rates are not increased, which could affect both on and off-site flooding, an outline drainage strategy for surface water is presented in the **outline Surface Water Management Plan [EN010141/DR/7.13]**.

4.4.2 To assess the impact of the development on third party flood risk, specifically the flow constrictions caused by the panel mounting structure legs, a post-development model scenario was produced using the site-specific 2D pluvial model. A layered flow constriction line along each longitudinal edge of the solar arrays was applied to the baseline model with a conservative flow constriction coefficient.

~~4.4.1~~4.4.3 The post development and baseline modelled flood depths for the design event are compared within Figures 12a and 12b. They show the change in

depth caused by the flow constrictions is less than +/- 0.01 m (10 mm) across most of the Site. The maximum depth change is an increase of 0.032 m (32 mm) within the west of East Park Site B. The results show no change in flood depth greater than +/- 0.01 m outside of the Order limits.

4.5 Access/Egress

4.5.1 The following access/egress routes have been proposed for the sub-divided areas of the development:

- Access available from B660 for East Park Site A;
- Access available from B660, Great Staughton Road and an unnamed road between Little Staughton and Great Staughton Road for East Park Site B;
- Access available from Moor Road for East Park Site C;
- Access via a new track from the B645 for East Park Site D, and;
- The development will be served by a new network of on-site access tracks to enable construction and maintenance once operational.

4.5.2 Small areas of the existing access routes, including the main site access at East Park Site D and the internal tracks are at risk of surface water flooding. For the most part, flood depths are typically in the range of 200mm to 600mm, with localised peaks between 600-900mm.

4.5.3 However, as site operations are intermittent due to no staff being permanently based on site, safe access and egress is achieved as site access is planned in advance and it can be managed to avoid hazardous conditions, where access will not be attempted during a flood event.

4.5.4 Justification for safe access and egress is on the basis that no staff will be permanently based on site and that access is not required during flood conditions.

5.0 CONCLUSION

5.1.1 Though very small areas of the Site within the Order Limits are located within fluvial Flood Zones 2 and 3, all critical infrastructure has been sequentially located in areas at the lowest possible risk of fluvial flooding, i.e., in Flood Zone 1.

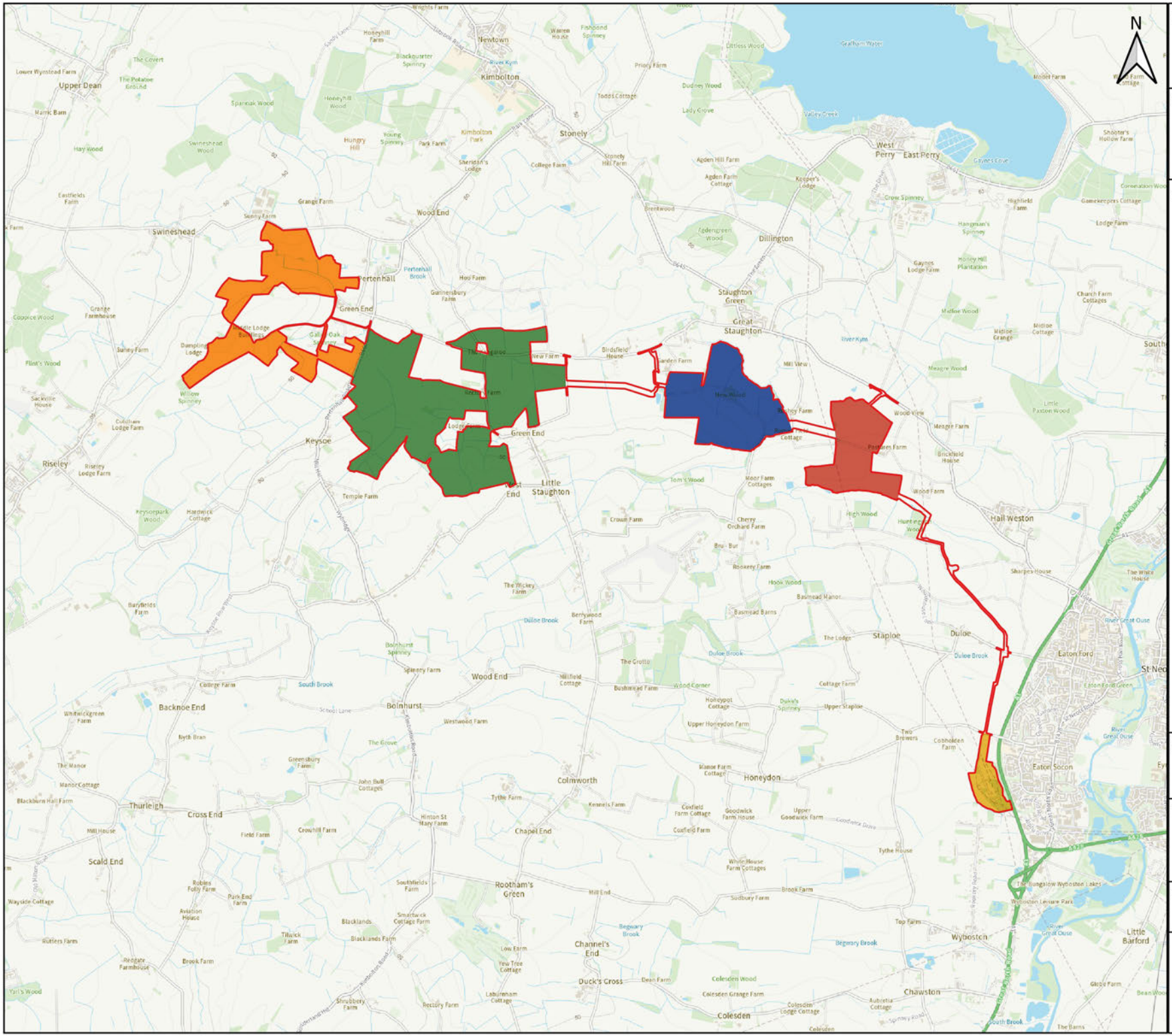
5.1.2 Small areas of solar arrays are within pluvial flood zones according to national scale pluvial flood mapping. Bespoke pluvial modelling was carried out to determine appropriate panel heights above the 1.0% AEP +40% CC pluvial depths, including , a 300 mm freeboard. Panels will be raised between 800 mm and 1300 mm above ground level~~However, it is proposed that all panels are elevated above predicted flood levels, including a 200 mm freeboard, on piled supports~~. This will allow flow under the panels, maintaining the overland flow routes similar to predevelopment conditions~~, as the supports will offer negligible flow obstruction~~.

~~5.1.2~~5.1.3 Post-development modelling has also been carried out to represent the impact of the panel mounting structures on pluvial flow routes. This modelling scenario shows no off-site impacts (depth change greater than +/- 0.01 m) due to flow constrictions from the panel legs during the design event.

~~5.1.3~~5.1.4 To manage the risk of surface water flooding across the Site and to ensure that runoff rates are not increased, which could affect both on and off-site flooding, an **outline Surface Water Management Plan [EN010141/DR/7.13]** has been developed. The oSWMP will ensure a neutral or beneficial effect on on-site and third-party surface water flood risks.

~~5.1.4~~5.1.5 The Scheme is not at risk of flooding from reservoir failure events and is at low risk of flooding from groundwater based on the available borehole records and its geology.

Figures



Project :

East Park Energy

Client :

axis

Legend :

- Order Limits

Site Subdivisions

- East Park A
- East Park B
- East Park C
- East Park D
- Connection Point
- Access Routes/Internal Cabling & Grid Connection Corridors

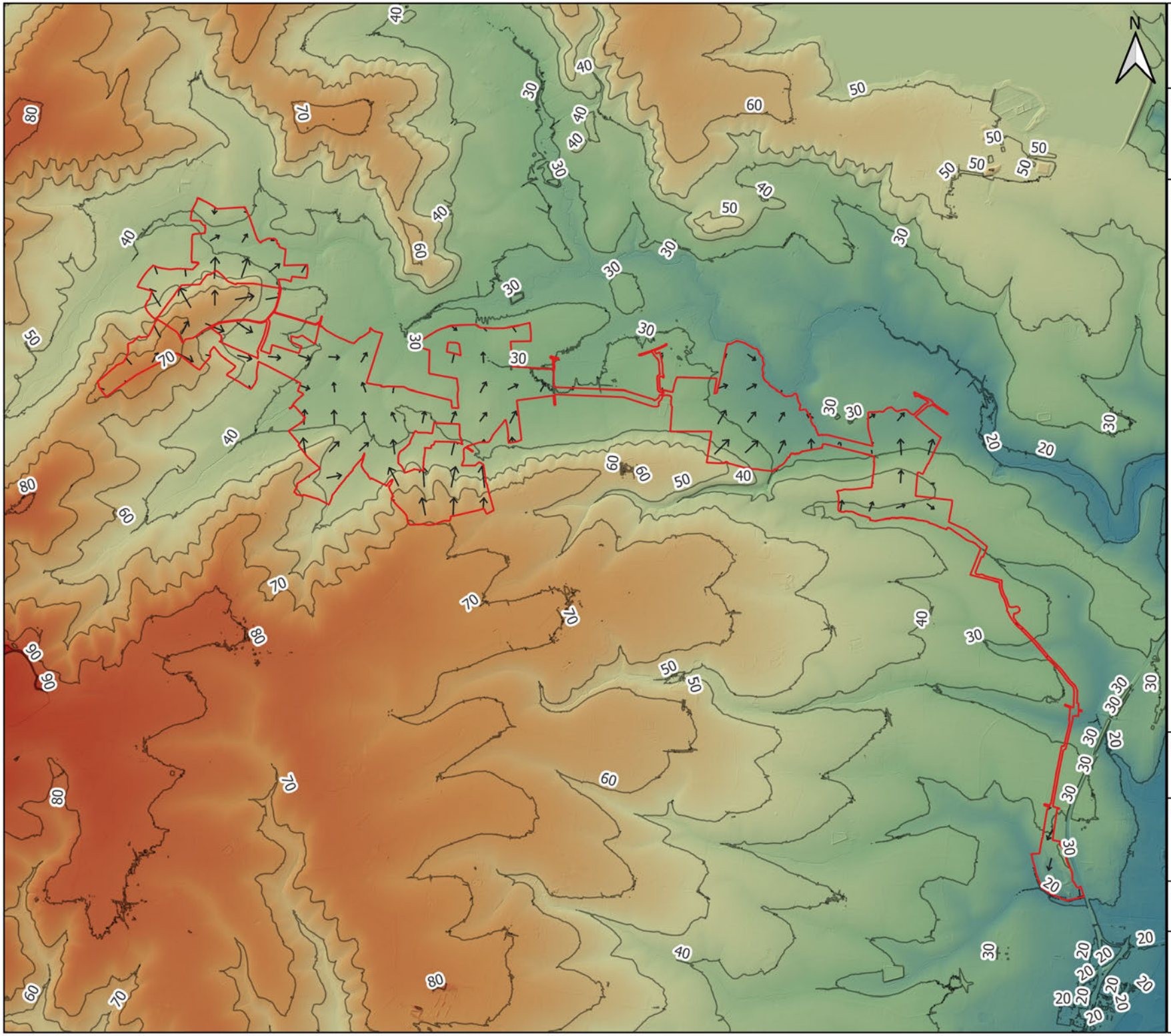
Scale : 0 1,000 2,000 m

Title :

Figure 1: Site Location and Subdivisions

Drawing :	Rev :
WHS1967-T01-0001	3

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

Contours

Flow Directions

Ground Levels (m)

94

9

Scale : 0 1,000 2,000 m

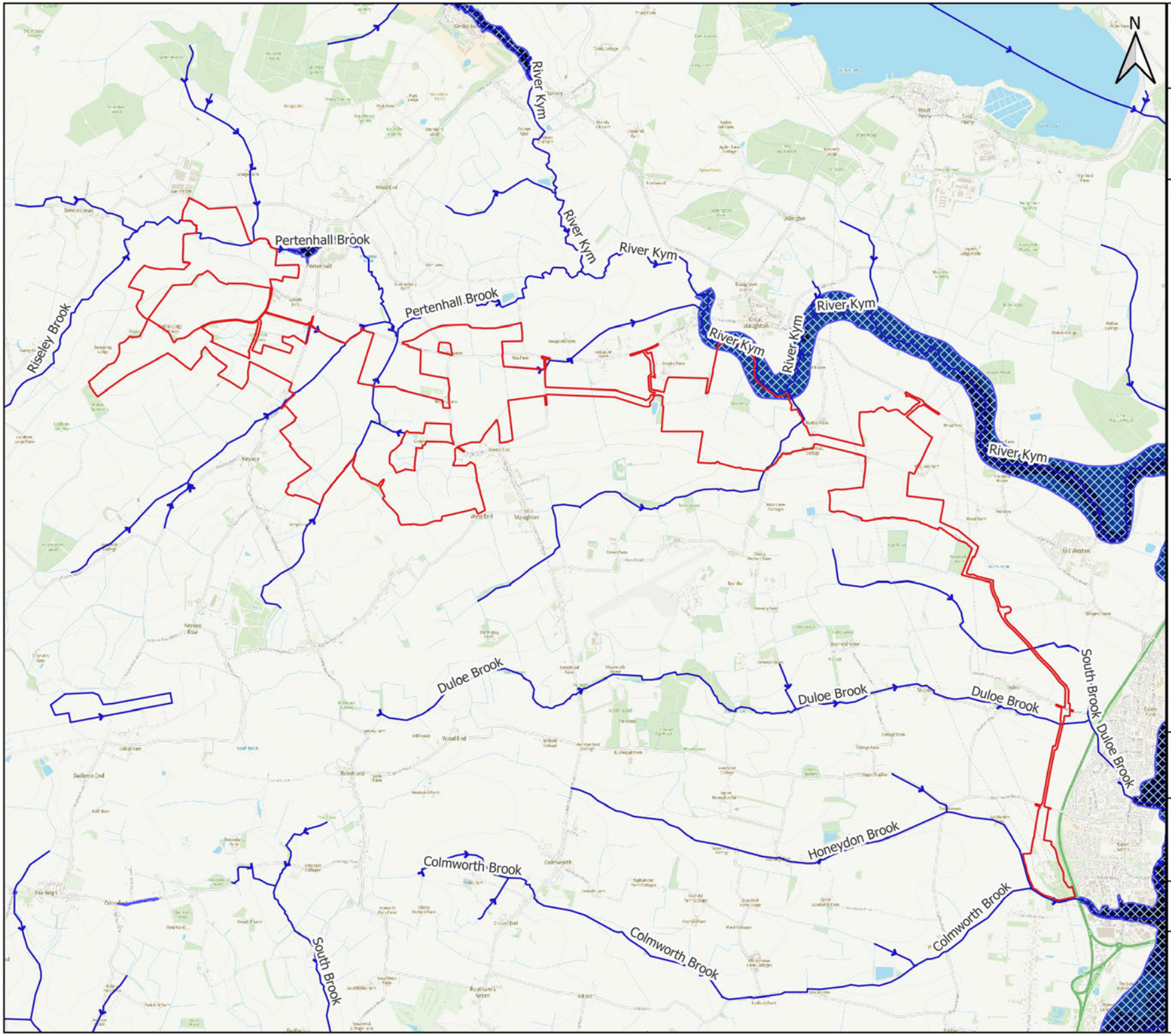
Title :

Figure 2: Site Topography

Drawing : WHS1967-T01-0002

Rev : 3

WHS



Project :

East Park Energy

Client :

axis

Legend :

- Order Limits
- Historic Flood Map
- Recorded Flood Outlines
- Watercourses

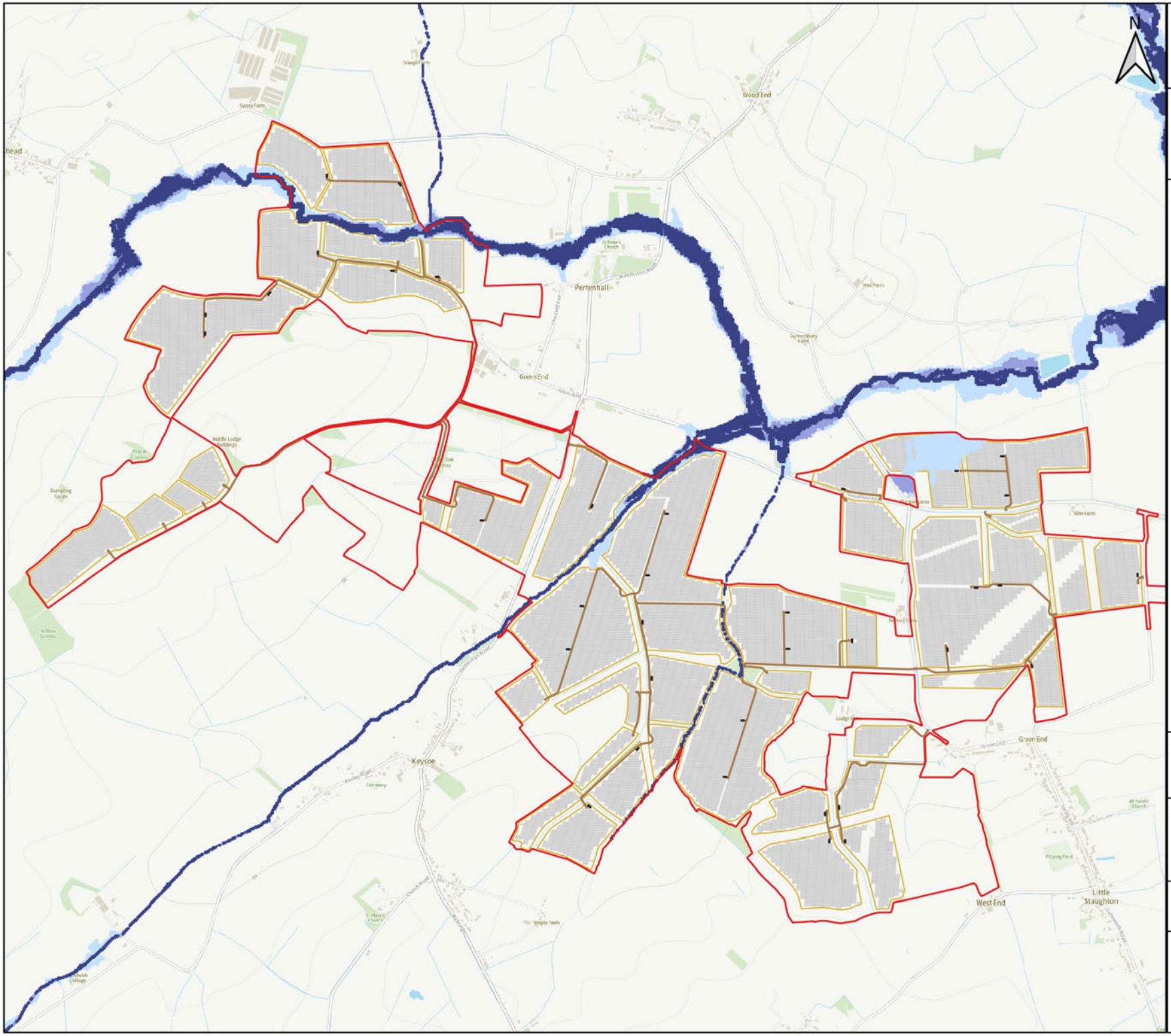
Scale : 0 1,000 2,000 m

Title :

Figure 3: Historic Flood Map

Drawing :	Rev :
WHS1967-T01-0003	3

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

EA Flood Zones

Flood Zone 3b

Flood Zone 3a

Flood Zone 2

Scale :

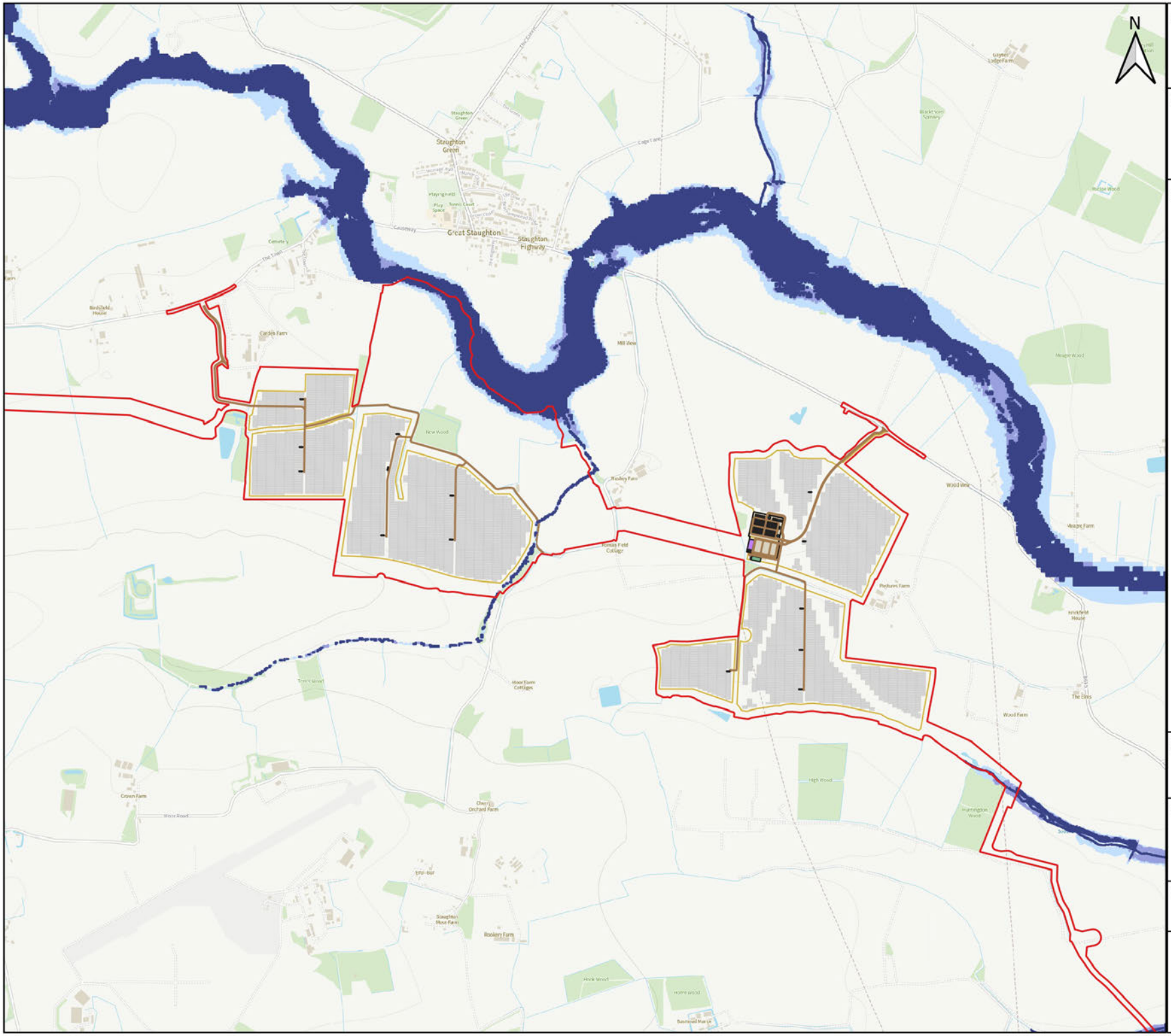
0 500 1,000 m

Title :

Figure 4a: Fluvial Flood Map (East Park Sites A & B)

Drawing :	Rev :
WHS1967-T01-0004	4

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

EA Flood Zones

Flood Zone 3b

Flood Zone 3a

Flood Zone 2

Scale :

0 500 1,000 m

Title :

Figure 4b: Fluvial Flood Map (East Park Sites C & D)

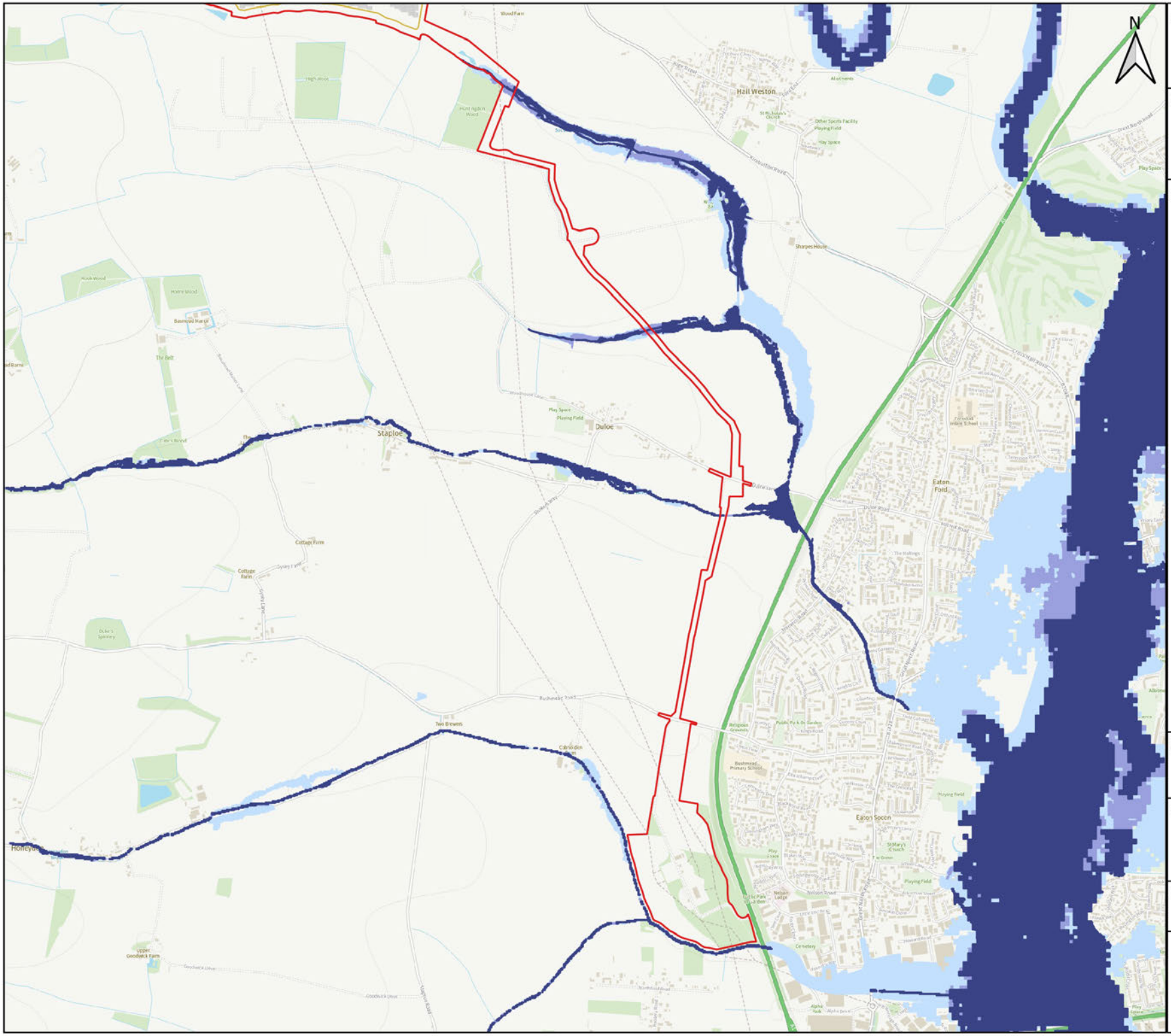
Drawing :

WHS1967-T01-0004

Rev :

4

WHS



Project :

East Park Energy

Client :

axis

Legend :

- Order Limits

EA Flood Zones

- Flood Zone 3b
- Flood Zone 3a
- Flood Zone 2

Scale :

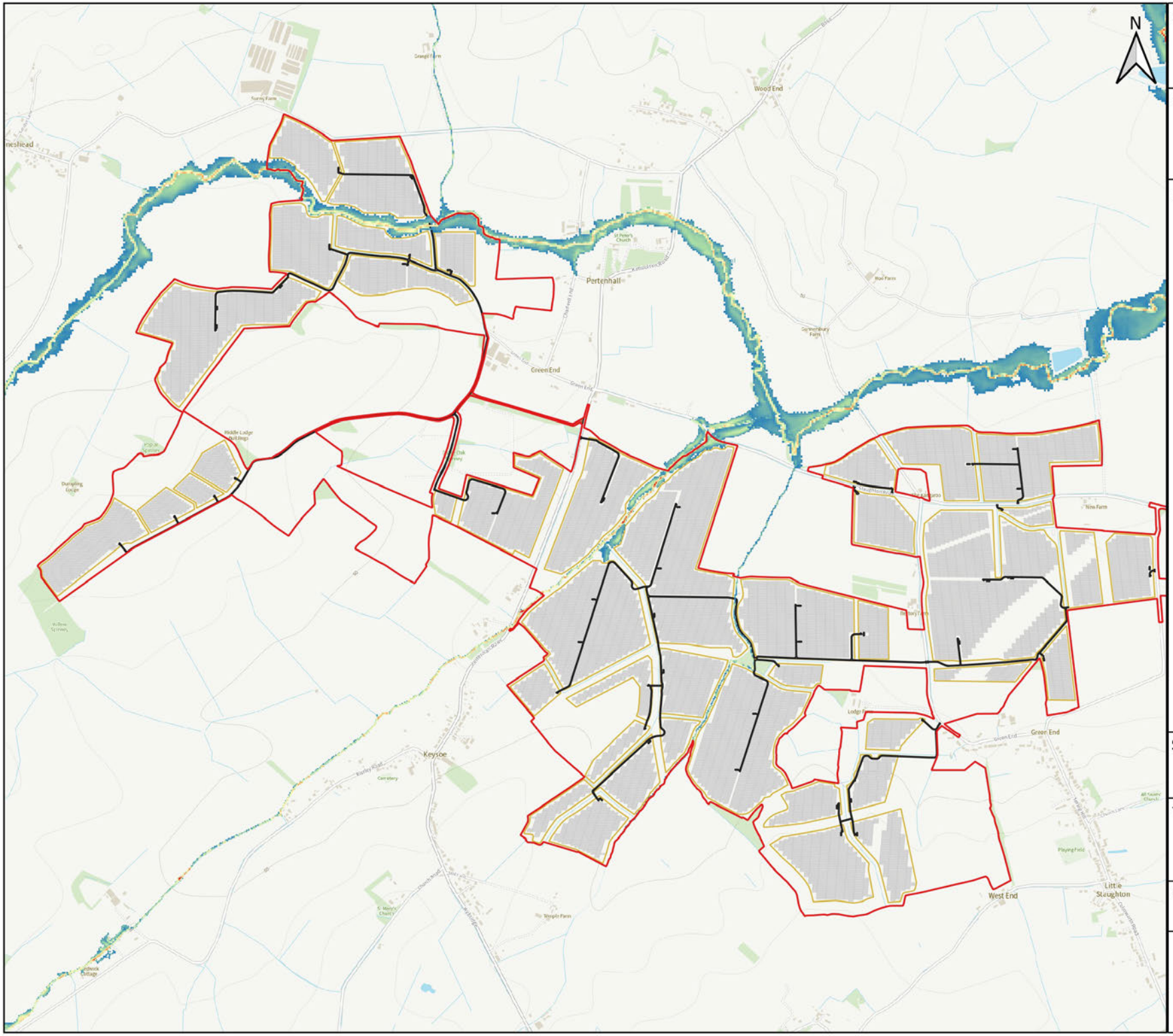
0 500 1,000 m

Title :

Figure 4c: Fluvial Flood Map (Grid Connection Corridor & Point)

Drawing :	Rev :
WHS1967-T01-0004	4

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

0.1% AEP Modelled Flood Depths (m)
for main and ordinary watercourses

4.4

0

Scale :

0 500 1,000 m

Title :

Figure 5a: Modelled flood extent and depths for the 0.1% AEP event (East Park Site A & B)

Drawing :	Rev :
WHS1967-T01-0005	3

WHS

Project :

East Park Energy

Client :

axis

Legend :

Order Limits

0.1% AEP Modelled Flood Depths (m) for main and ordinary watercourses

4.4

0

Scale :

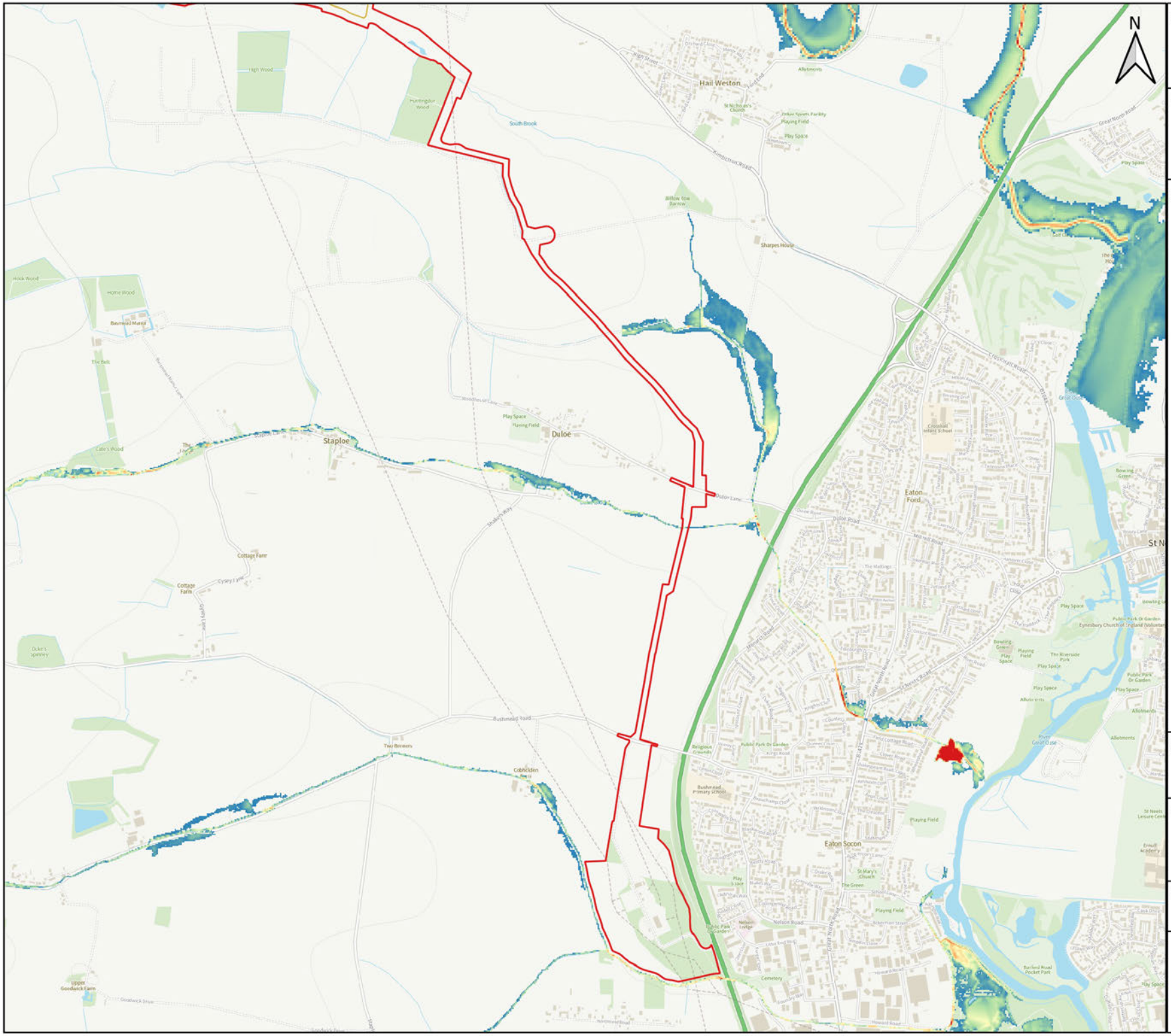
0 500 1,000 m

Title :

Figure 5b: Modelled flood extent and depths for the 0.1% AEP event (East Park Site C & D)

Drawing :	Rev :
WHS1967-T01-0005	3

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

0.1% AEP Modelled Flood Depths (m)
for main and ordinary watercourses

4.4

0

Scale :

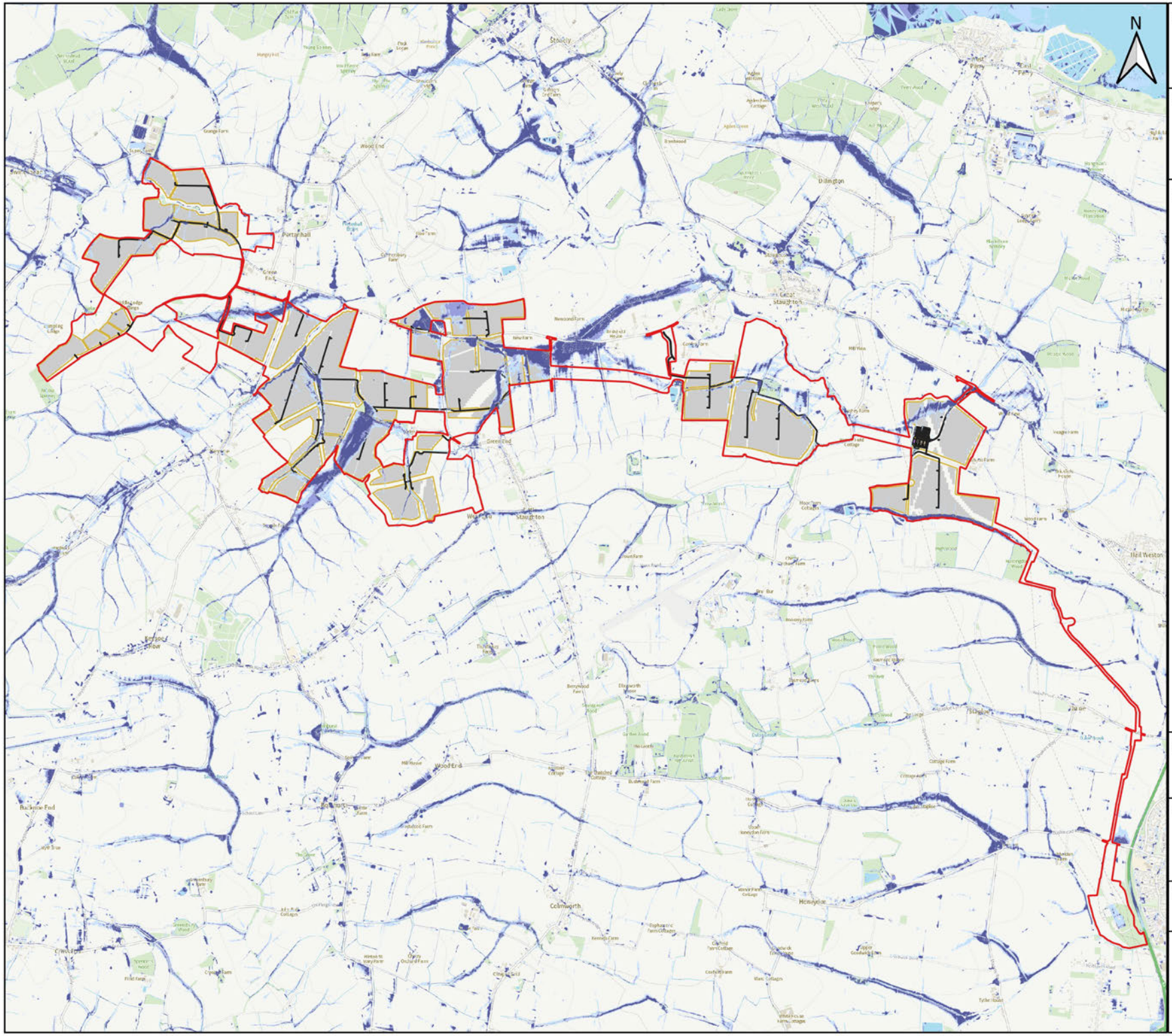
0 500 1,000 m

Title :

Figure 5c: Modelled flood extent and depths for the 0.1% AEP event (Grid Connection Corridor & Point)

Drawing :	Rev :
WHS1967-T01-0005	3

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

RoFSW

High (3.33% AEP event)

Medium (1.0% AEP event)

Low (0.1% AEP event)

Scale : 0 1,000 2,000 m

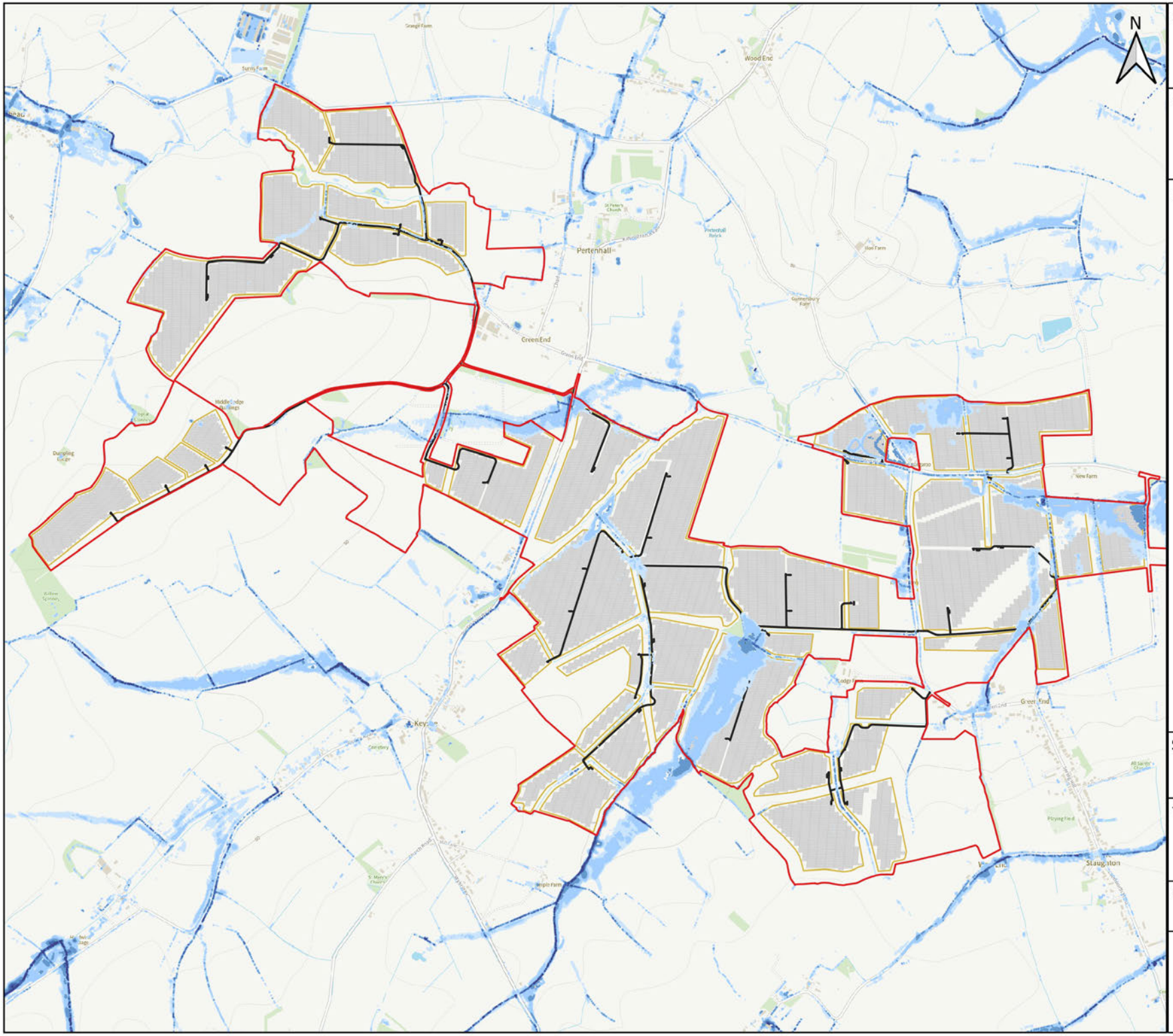
Title :

Fiugre 6: Pluvial Flood Map

Drawing : WHS1967-T01-0006

Rev : 4

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

Flood Depths (mm) for 0.1% AEP event

- > 1200mm
- 900-1200mm
- 600-900mm
- 300-600mm
- 200-300mm

Scale :

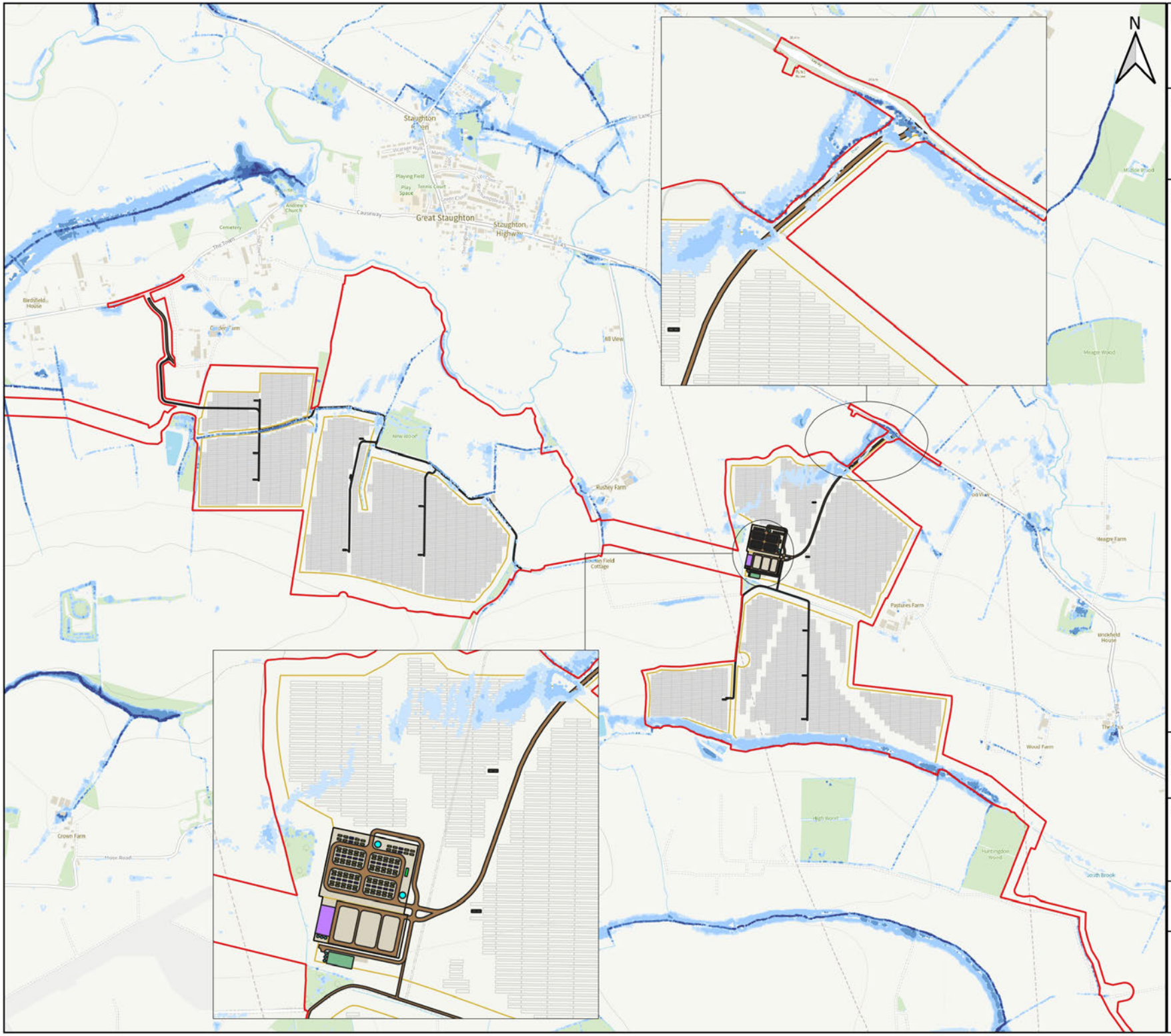
0 500 1,000 m

Title :

Figure 6a: 0.1% AEP Pluvial Flood Depths (East Park Site A & B)

Drawing :	Rev :
WHS1967-T01-0006	4

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

Flood Depths (mm) for 0.1% AEP event

- > 1200mm
- 900-1200mm
- 600-900mm
- 300-600mm
- 200-300mm

Scale :

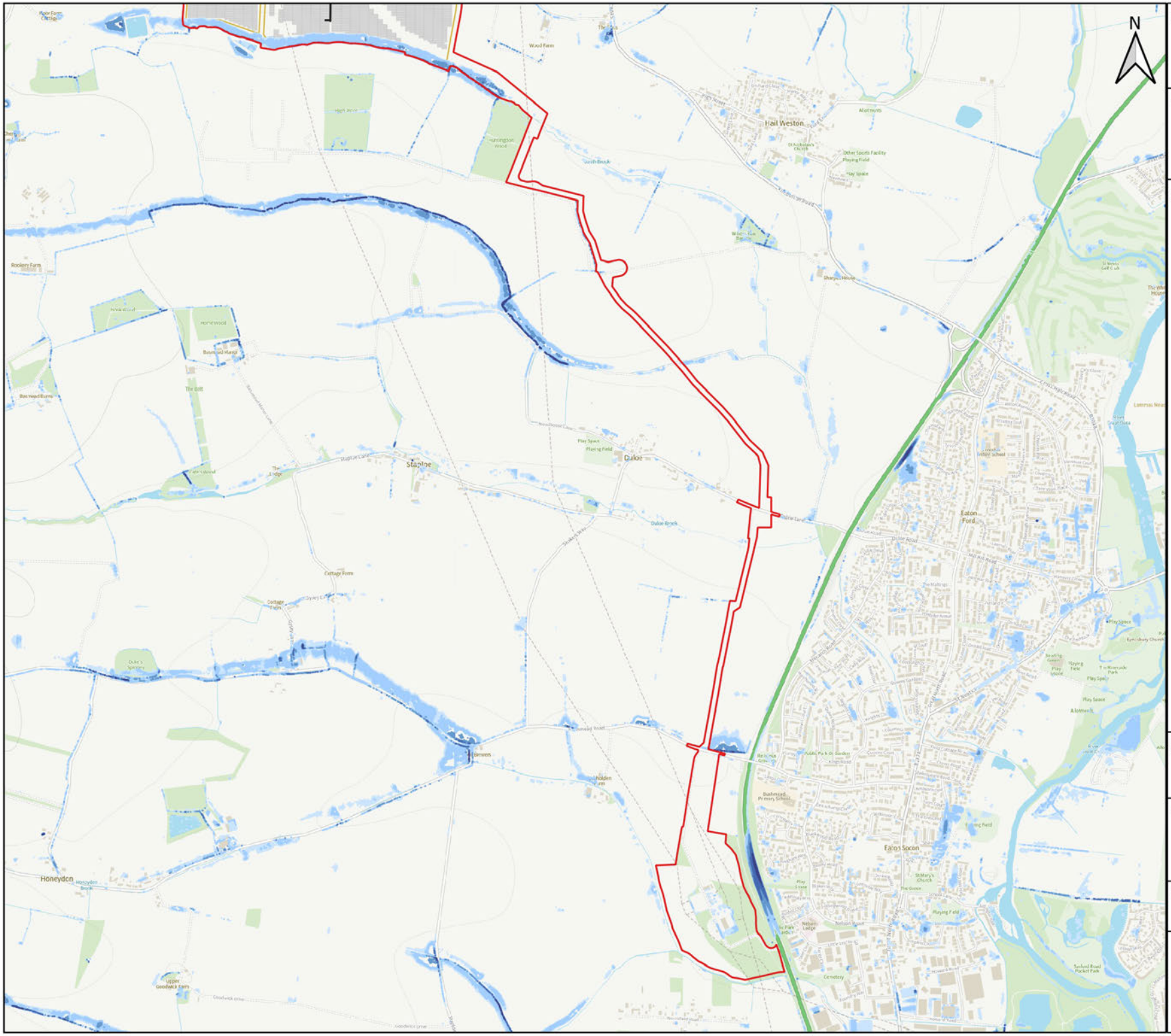
0 500 1,000 m

Title :

Figure 6b: 0.1% AEP Pluvial Flood Depths (East Park Site C & D)

Drawing :	Rev :
WHS1967-T01-0006	4

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

Flood Depths (mm) for 0.1% AEP event

- > 1200mm
- 900-1200mm
- 600-900mm
- 300-600mm
- 200-300mm

Scale :

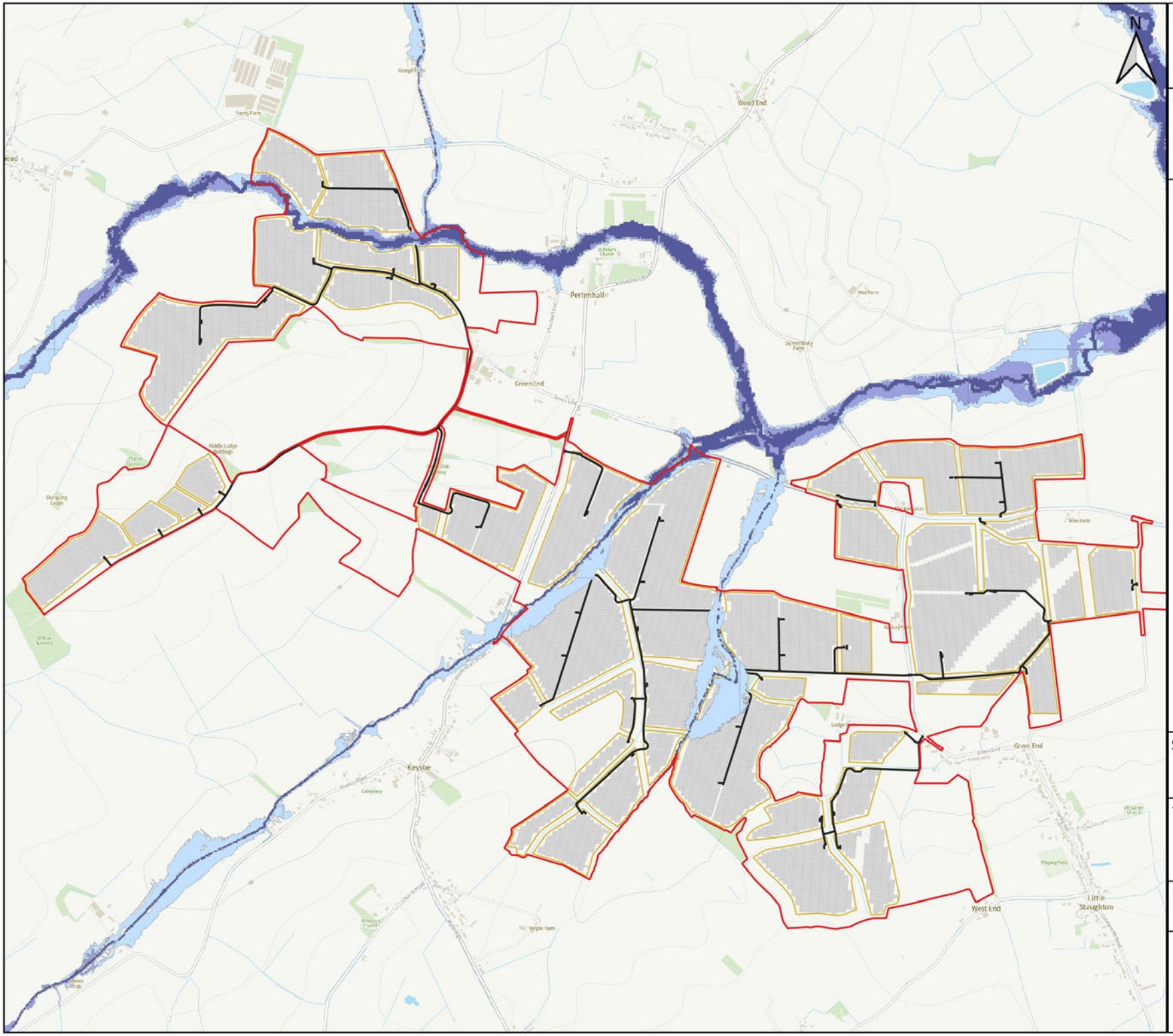
0 500 1,000 m

Title :

Figure 6c: 0.1% AEP Pluvial Flood Depths (Grid Connection Corridor & Point)

Drawing :	Rev :
WHS1967-T01-0006	4

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

RoFRS + Central climate change allowance for the 2050s epoch

High

Medium

Low

Very Low

Scale :

0 500 1,000 m

Title :

Figure 7a: Risk of Flooding from Rivers and the Sea - Climate Change (East Park Site A & B)

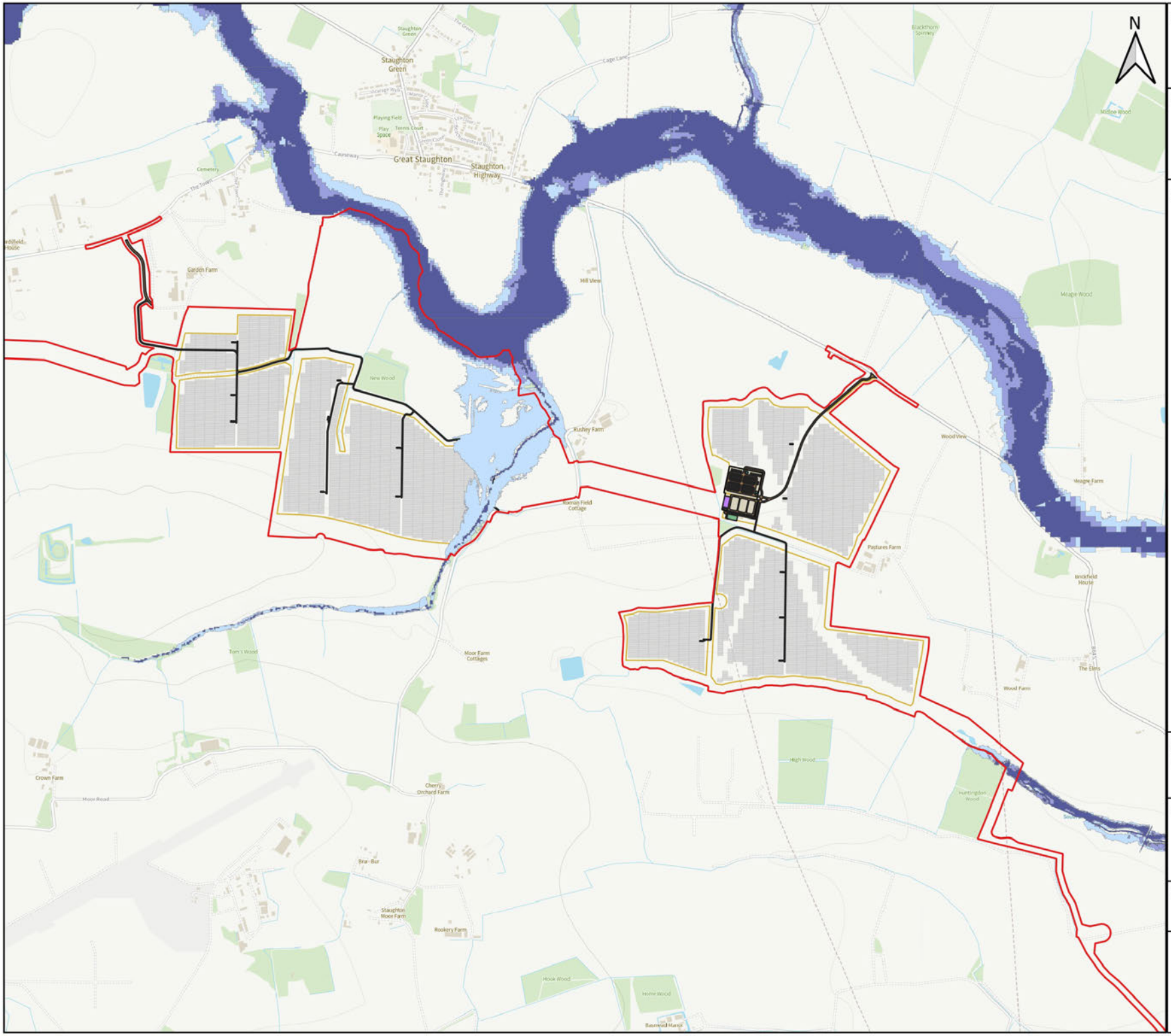
Drawing :

WHS1967-T01-0008

Rev :

2

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

RoFRS + Central climate change allowance for the 2050s epoch

- High
- Medium
- Low
- Very Low

Scale :

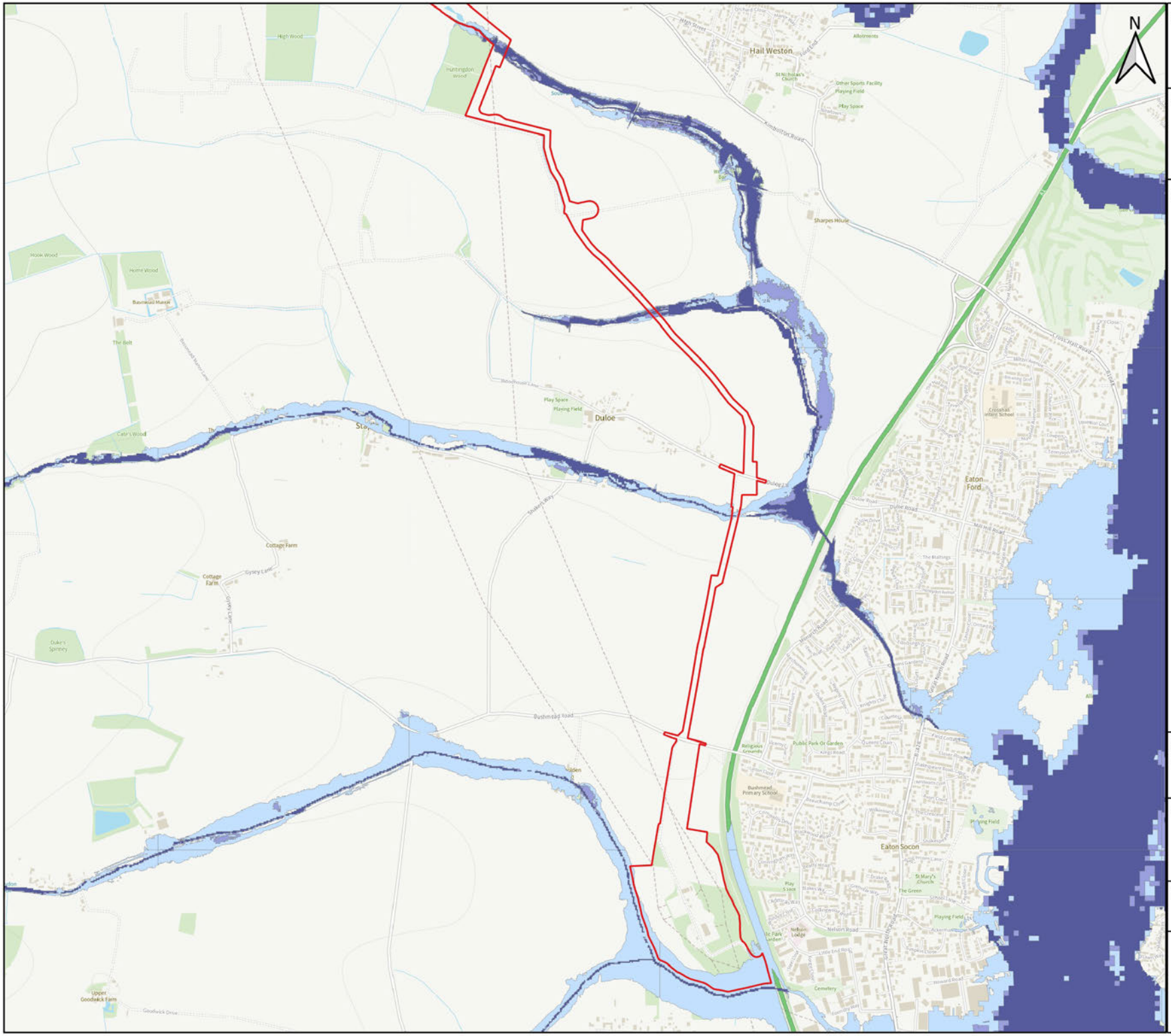
0 500 1,000 m

Title :

Figure 7b: Risk of Flooding from Rivers and the Sea - Climate Change (East Park Site C & D)

Drawing :	Rev :
WHS1967-T01-0008	2

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

RoFRS + Central climate change allowance for the 2050s epoch

High

Medium

Low

Very Low

Scale :

0 500 1,000 m

Title :

Figure 7c: Risk of Flooding from Rivers and the Sea - Climate Change (Grid Connection)

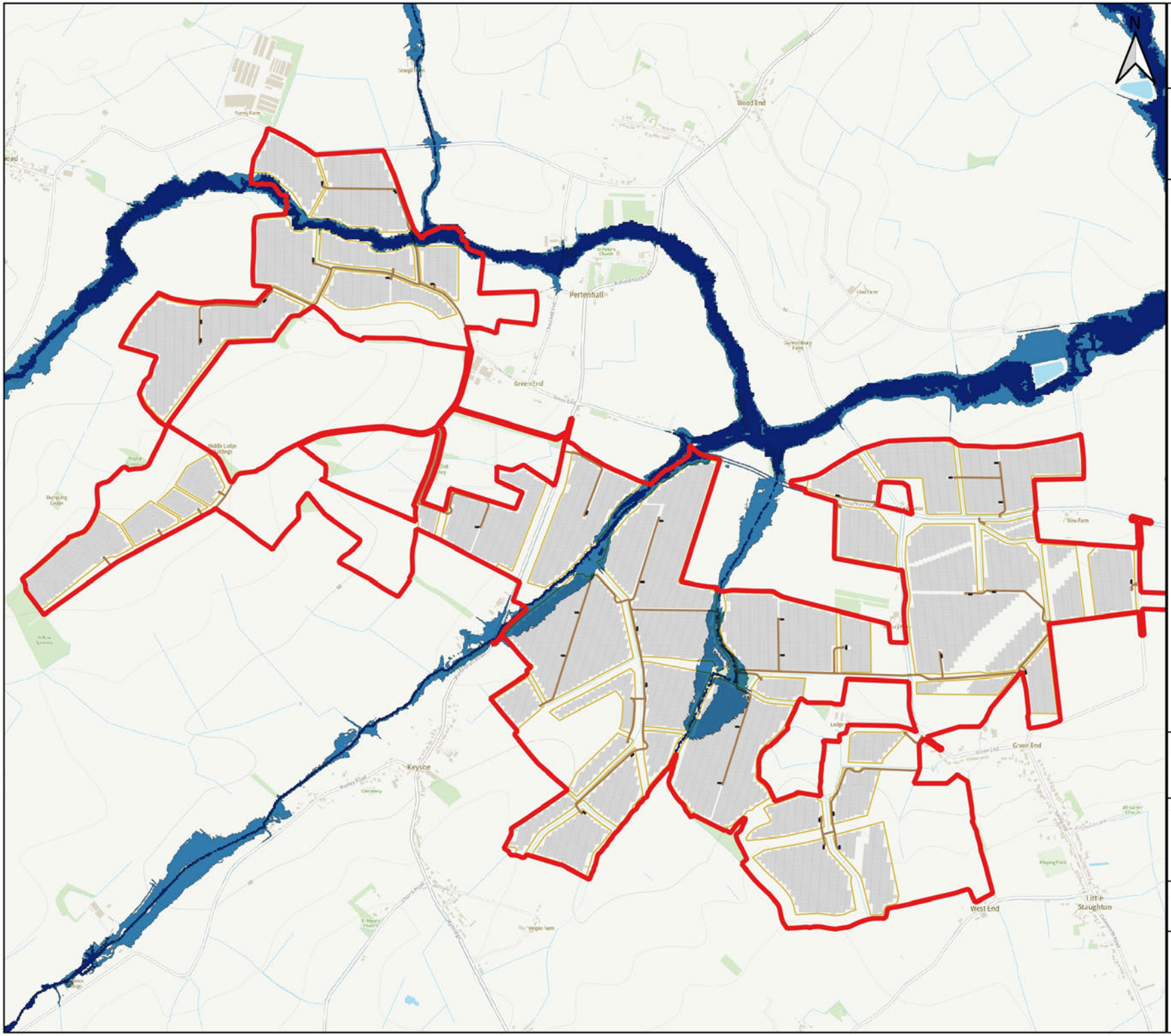
Drawing :

WHS1967-T01-0008

Rev :

2

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

FMfP - Flood Zones plus Climate Change Extents

Flood Zone 3 (1.0% AEP + CC)

Flood Zone 2 (0.1% AEP + CC)

Scale :

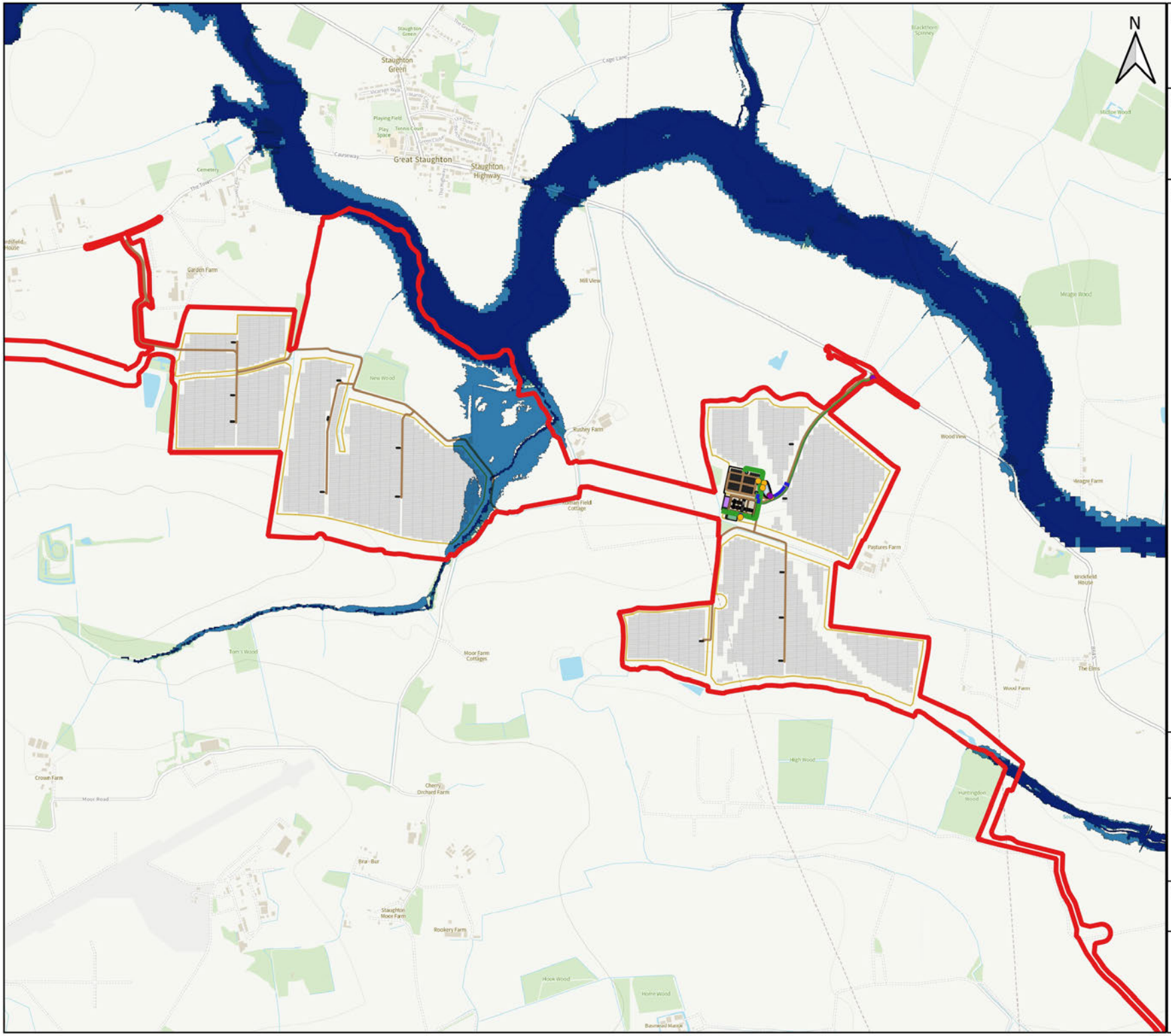
0 500 1,000 m

Title :

Figure 8a: Flood Map for Planning Flood Zones plus Climate Change for 2080s epoch (East Park Site A & B)

Drawing :	Rev :
WHS1967-T01-0014	1

WHS



Project :

East Park Energy

Client :

axis

Legend :

- Order Limits
- FMfP - Flood Zones plus Climate Change Extents
- Flood Zone 3 (1.0% AEP + CC)
- Flood Zone 2 (0.1% AEP + CC)

Scale :

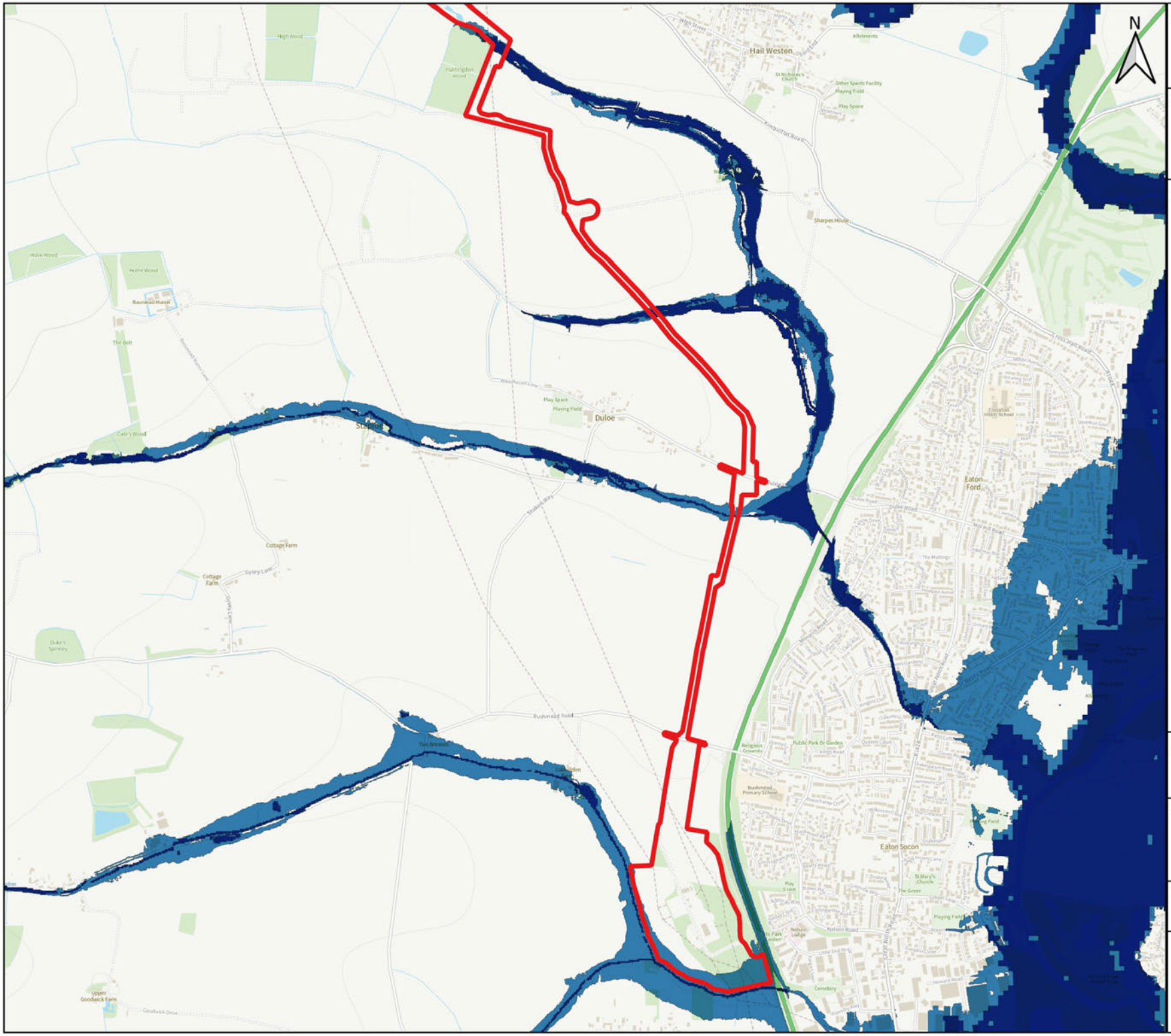
0 500 1,000 m

Title :

Figure 8b: Flood Map for Planning Flood Zones plus Climate Change for 2080s epoch (East Park Site C & D)

Drawing :	Rev :
WHS1967-T01-0014	1

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

FMfP - Flood Zones plus Climate Change Extents

Flood Zone 3 (1.0% AEP + CC)

Flood Zone 2 (0.1% AEP + CC)

Scale :

0 500 1,000 m

Title :

Figure 8c: Flood Map for Planning Flood Zones plus Climate Change for 2080s epoch (Grid Connection)

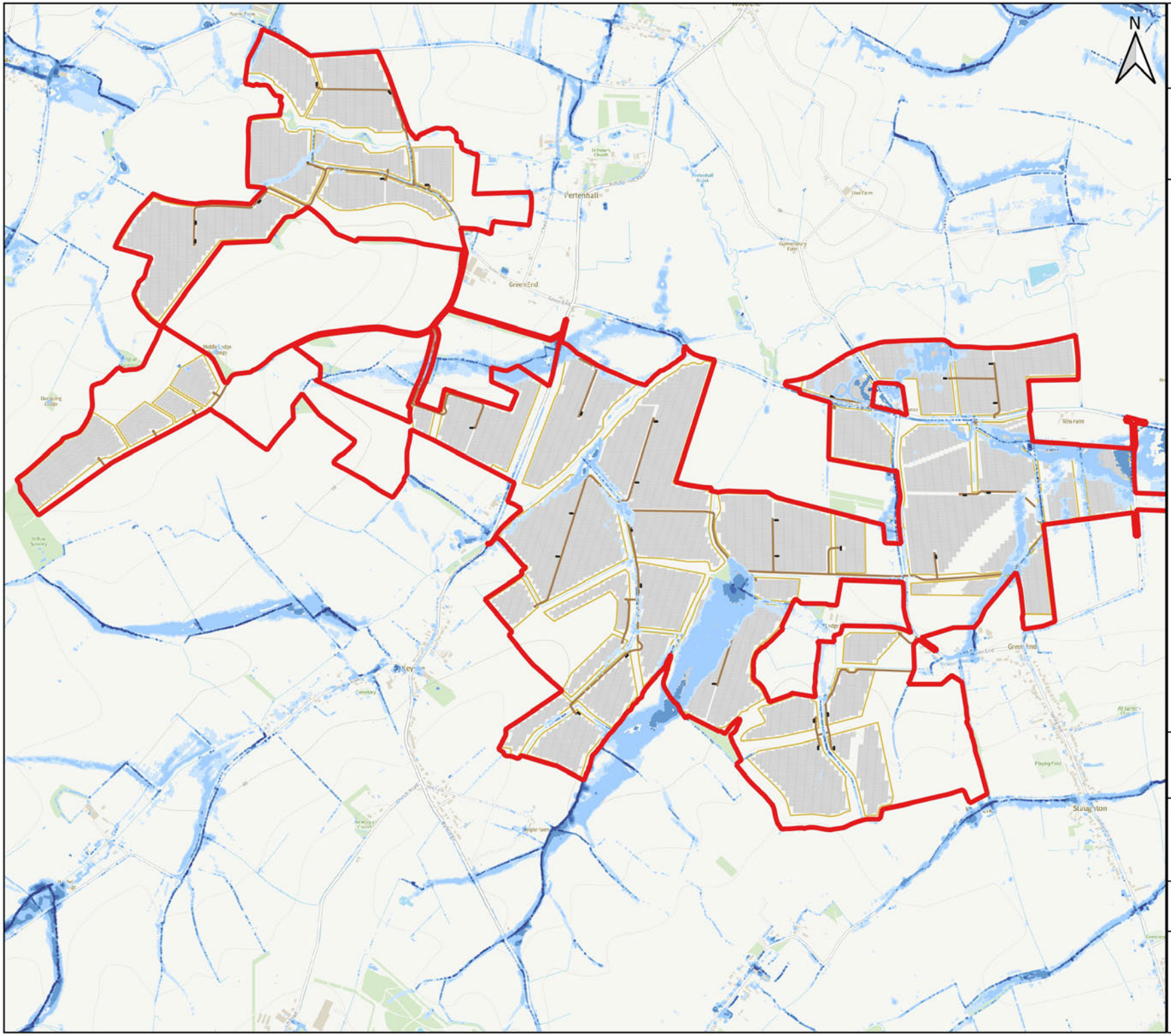
Drawing :

WHS1967-T01-0014

Rev :

1

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

0.1% AEP RoFSW + Central climate change allowance for the 2050s epoch

- > 1200mm
- 900-1200mm
- 600-900mm
- 300-600mm
- 200-300mm

Scale :

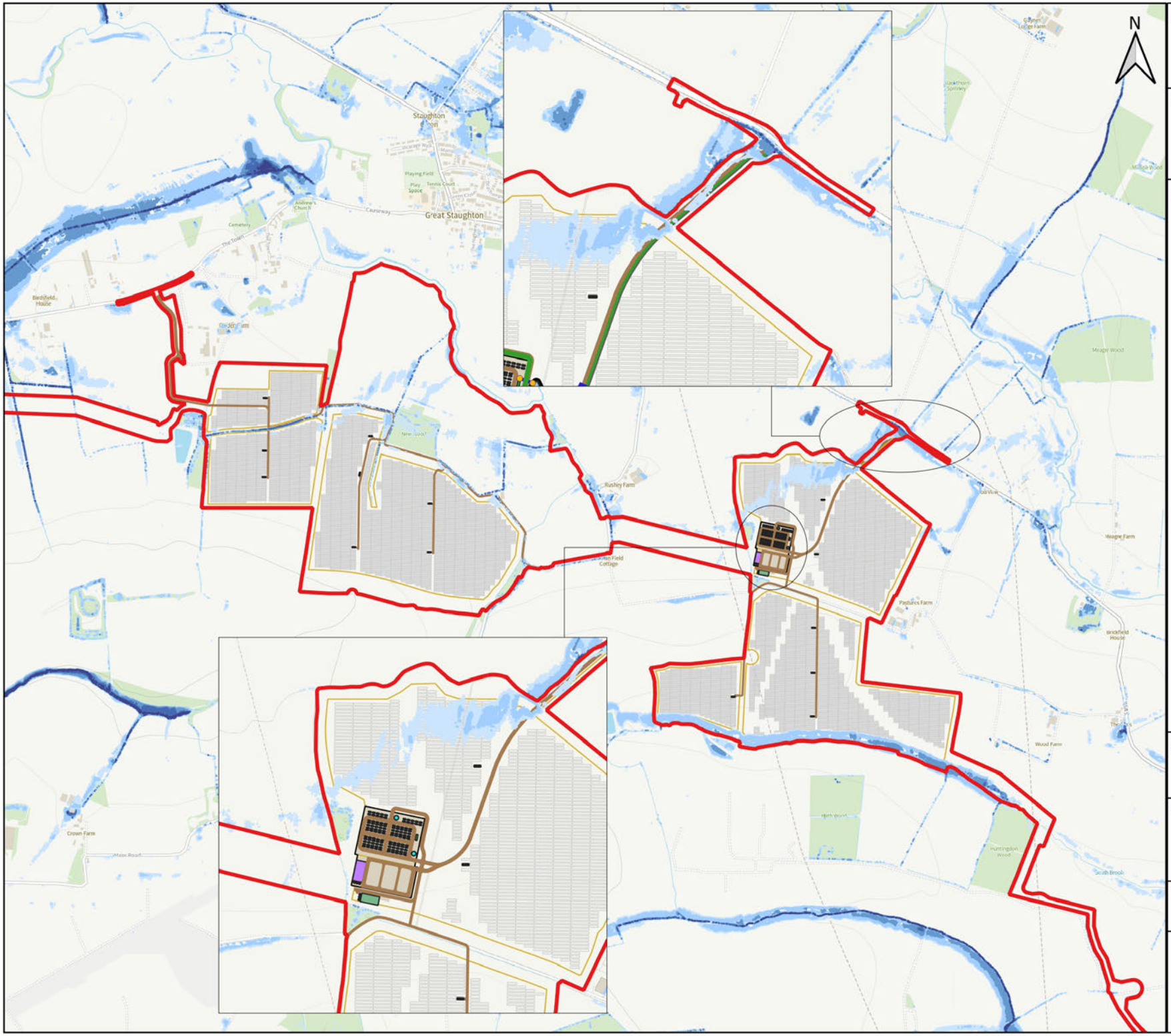
0 500 1,000 m

Title :

Figure 9a: Risk of Flooding from Surface Water - Climate Change (East Park Site A & B)

Drawing :	Rev :
WHS1967-T01-0009	2

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

0.1% AEP RoFSW + Central climate change allowance for the 2050s epoch

- > 1200mm
- 900-1200mm
- 600-900mm
- 300-600mm
- 200-300mm

Scale :

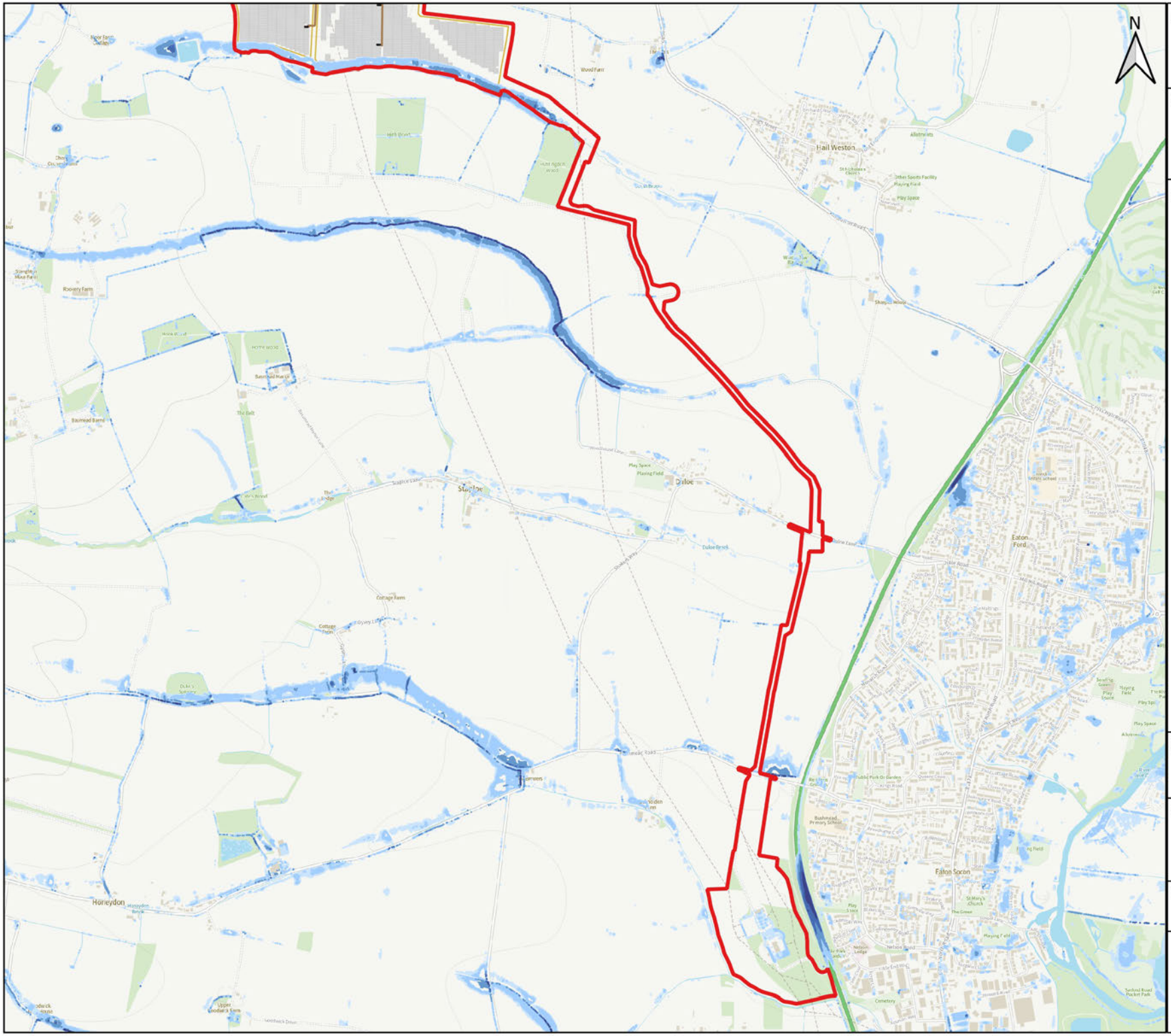
0 500 1,000 m

Title :

Figure 9b: Risk of Flooding from Surface Water - Climate Change (East Park Site C & D)

Drawing :	Rev :
WHS1967-T01-0009	2

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

0.1% AEP RoFSW + Central climate change allowance for the 2050s epoch

- > 1200mm
- 900-1200mm
- 600-900mm
- 300-600mm
- 200-300mm

Scale :

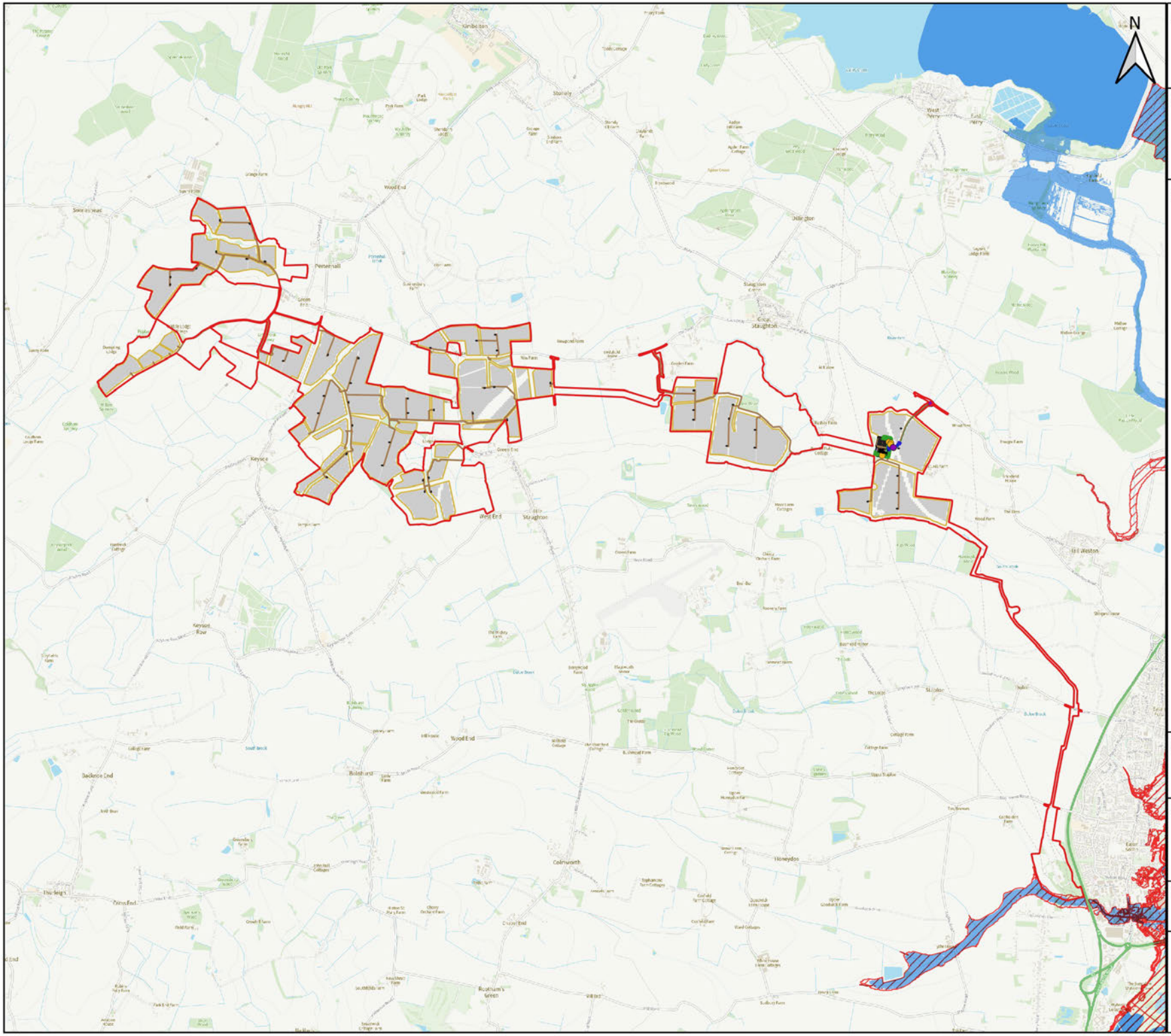
0 500 1,000 m

Title :

Figure 9c: Risk of Flooding from Surface Water - Climate Change (Grid Connection)

Drawing :	Rev :
WHS1967-T01-0009	2

WHS



Project :

East Park Energy

Client :

axis

Legend :

- Order Limits
- Flood Extent - Dry Day
- Flood Extent - Wet Day

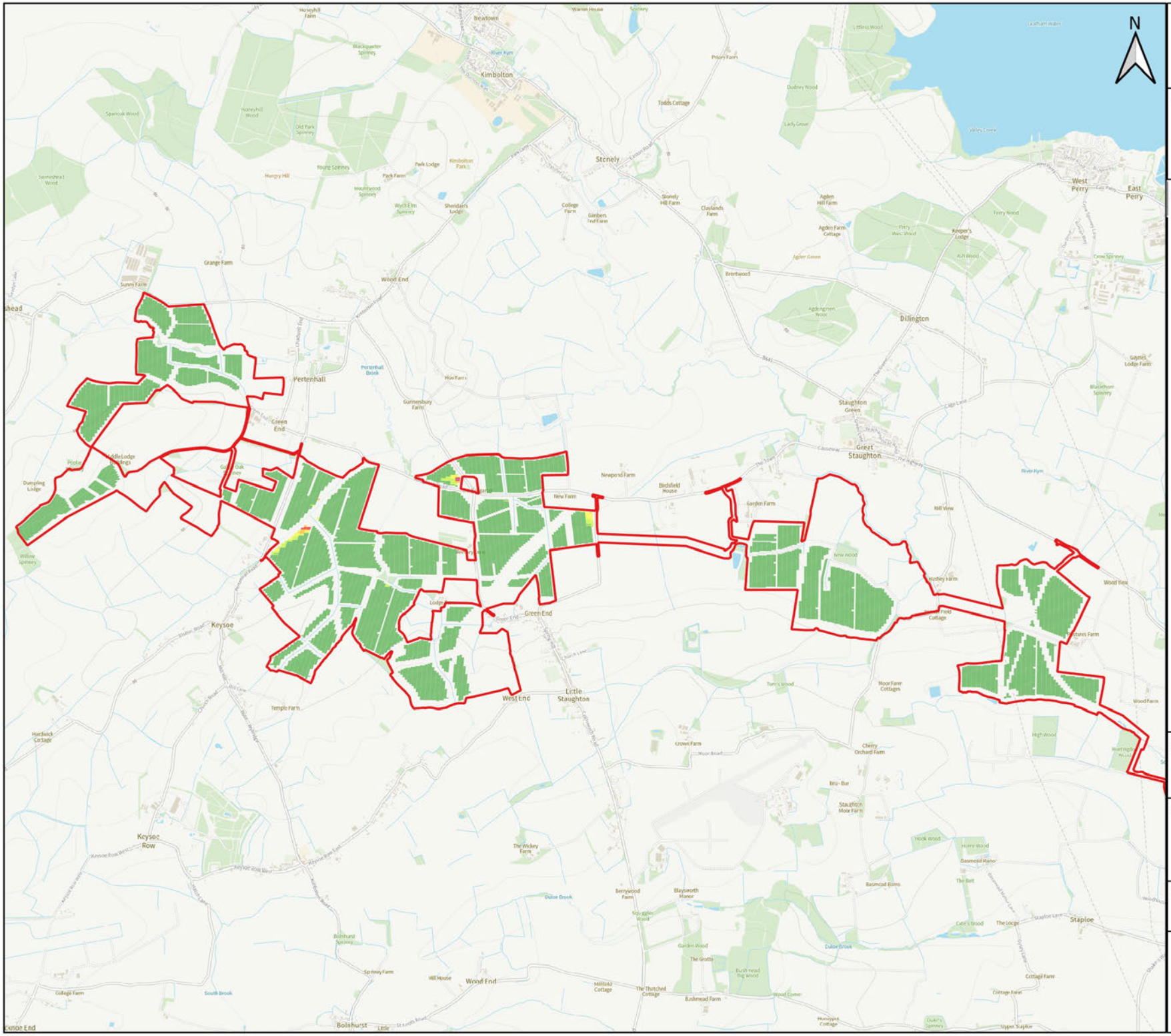
Scale : 0 1,000 2,000 m

Title :

Figure 10: Reservoir Failure Flood Map

Drawing :	Rev :
WHS1967-T01-0007	3

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

Required Panel height above ground level to provide 300 mm freeboard (1.0% AEP +40% CC) (mm)

- 800
- 900
- 1000
- 1100
- 1200
- 1300

Scale :

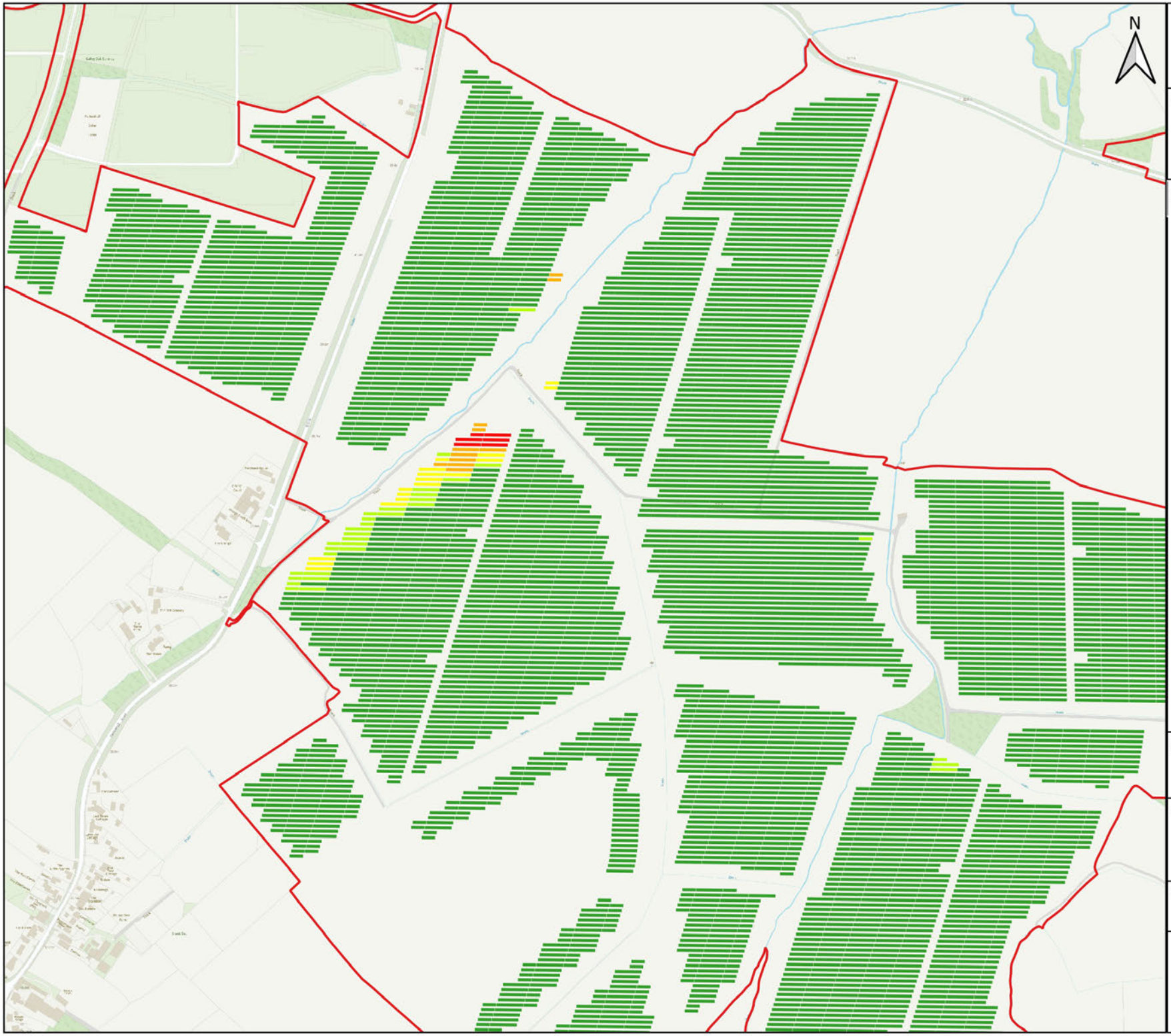
0 1 2 km

Title :

Figure 11a: Required Panel Heights (Full Site)

Drawing :	Rev :
WHS1967-T01-0011	1

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

Required Panel height above ground level to provide 300 mm freeboard (1.0% AEP +40% CC) (mm)

800

900

1000

1100

1200

1300

Scale :

0 150 300 m

Title :

Figure 11b: Required Panel Heights (East Park Site B - West)

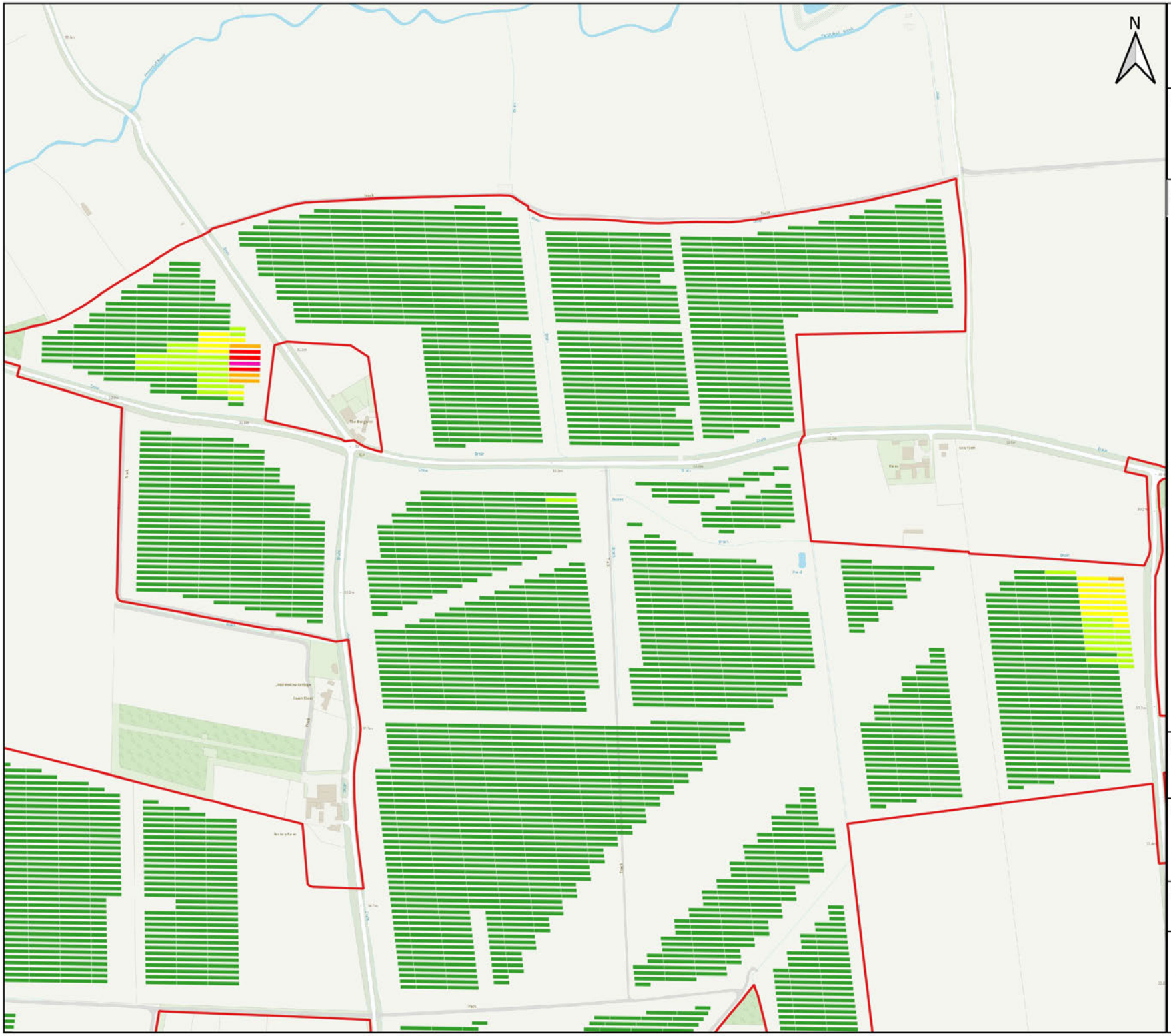
Drawing :

WHS1967-T01-0011

Rev :

1

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

Required Panel height above ground level to provide 300 mm freeboard (1.0% AEP +40% CC) (mm)

- 800
- 900
- 1000
- 1100
- 1200
- 1300

Scale :

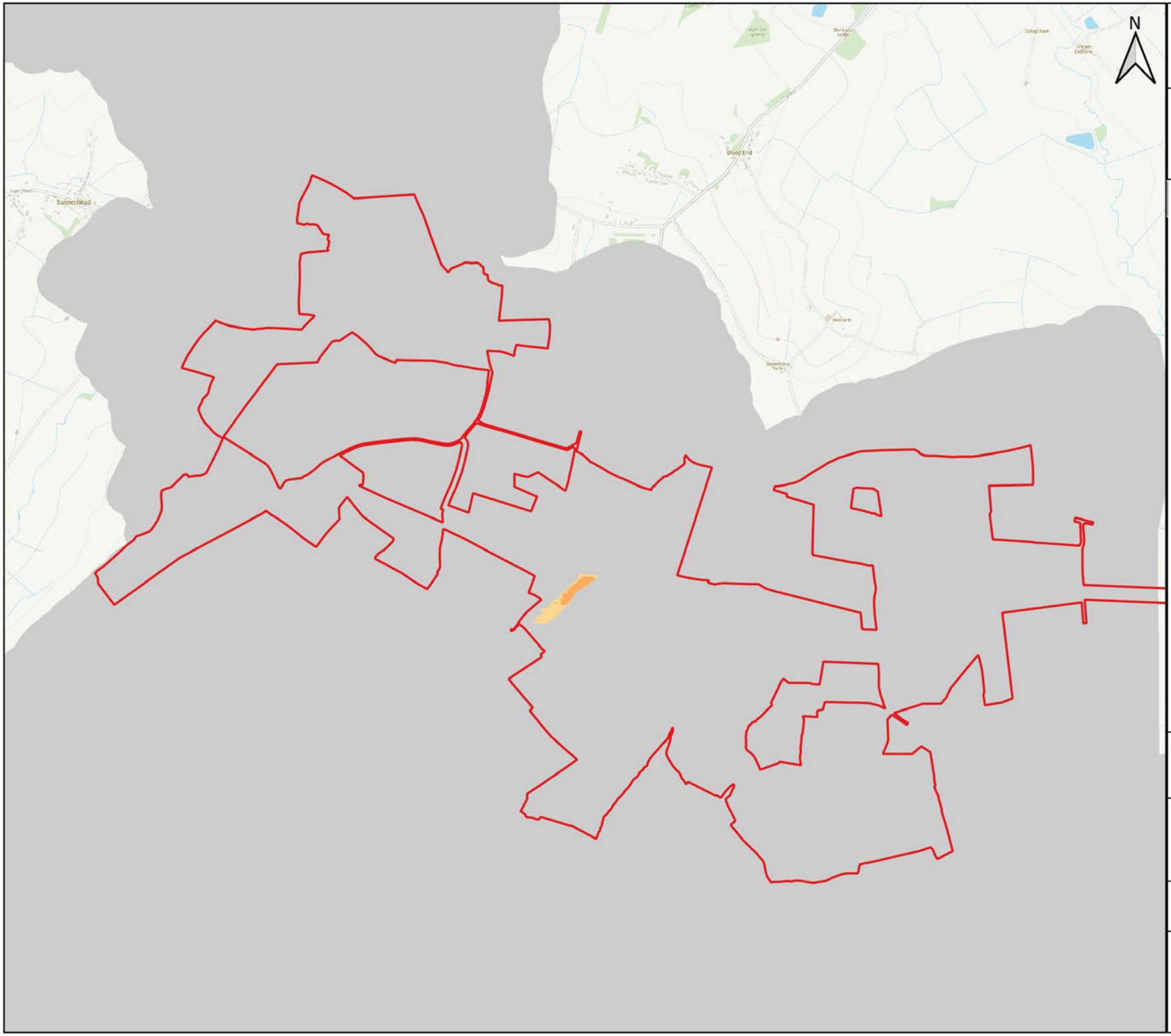
0 150 300 m

Title :

Figure 12c: Required Panel Heights (East Park Site B - East)

Drawing :	Rev :
WHS1967-T01-0011	1

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

Modelled 1.0% AEP +40% CC
Baseline vs Post Development
Depth Change (m)

- <= -0.10
- -0.10 - -0.05
- -0.05 - -0.02
- -0.02 - -0.01
- -0.01 - 0.01
- 0.01 - 0.02
- 0.02 - 0.05
- 0.05 - 0.10
- >0.10

Scale :

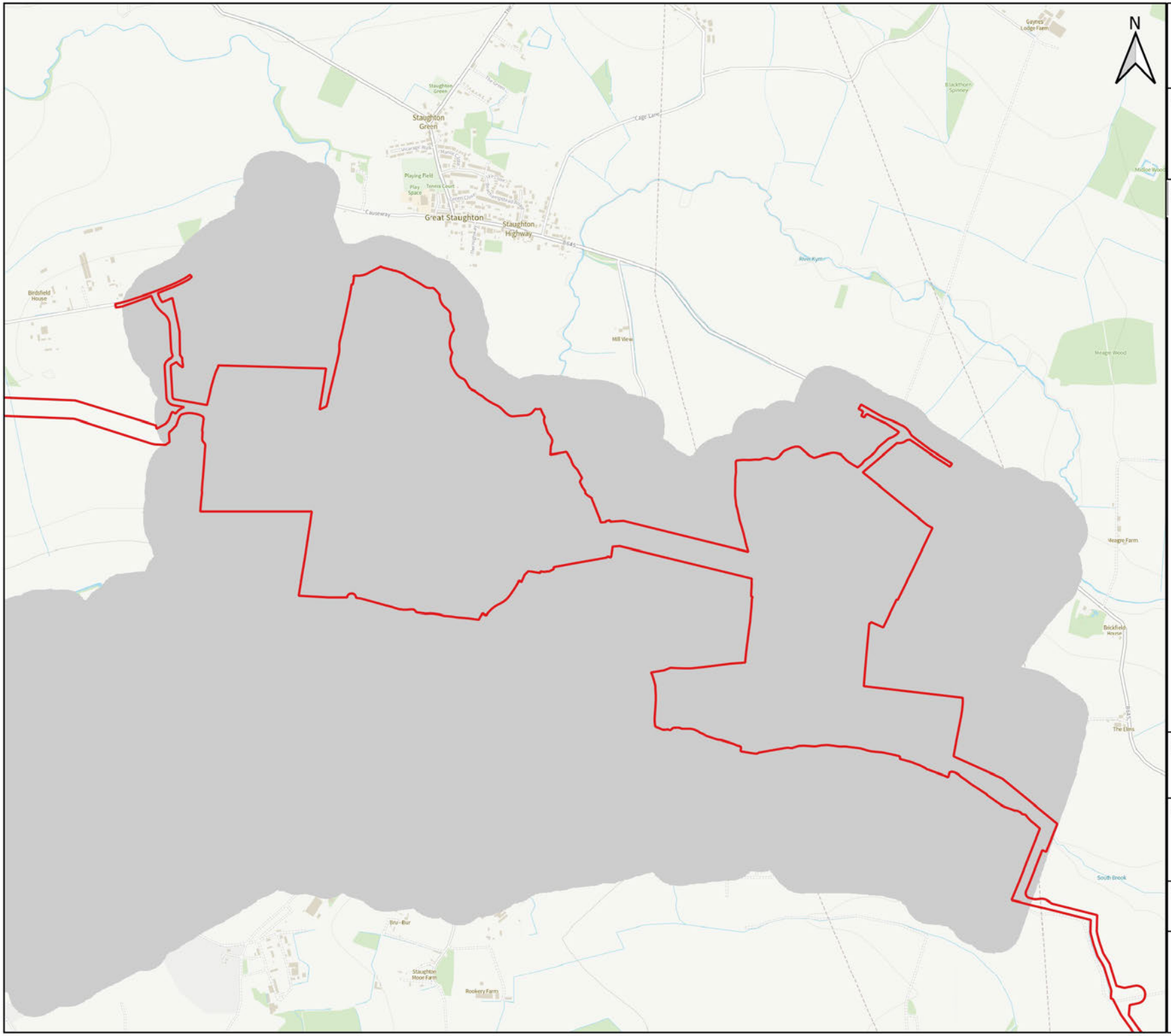
0 0.5 1 km

Title :

Figure 12a: Modelled Depth Change (East Park Site A & B)

Drawing :	Rev :
WHS1967-T01-0012	1

WHS



Project :

East Park Energy

Client :

axis

Legend :

Order Limits

Modelled 1.0% AEP +40% CC
Baseline vs Post Development
Depth Change (m)

- <= -0.10
- -0.10 - -0.05
- -0.05 - -0.02
- -0.02 - -0.01
- -0.01 - 0.01
- 0.01 - 0.02
- 0.02 - 0.05
- 0.05 - 0.10
- >0.10

Scale :

0 0.5 1 km

Title :

Figure 12b: Modelled Depth Change (East Park Site C & D)

Drawing :	Rev :
WHS1967-T01-0012	1

WHS

Annex A – EA Response to East Park Flood Zone Maps Enquiry

[redacted]

The model origin is described as a 'direct rainfall model' and certainly appears to represent overland flow routes directly from rainfall in the surrounding catchment, rather than flooding from any of the nearby watercourses. On this basis, we are unsure why this has been included in the Flood Zone mapping.

Would you please be able to advise on this, or otherwise advise who best to pass this query on to?

Many thanks in advance,

[redacted]

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