BEANE SOLAR FARM

Flood Risk Sequential Test

HELF 85532

Beane Solar Farm

5

November 2024

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Quality Management

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Approval for issue

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Our Experience

With a highly experienced team of chartered engineers, modellers and consultants, RPS has the technical expertise to support clients across all aspects of the flood risk, hydrology and sustainable drainage disciplines. We provide commercial, practical, cost-effective advice and solutions, working closely with clients to meet their objectives.

We have international experience spanning a diverse range of projects, from planning applications for residential, industrial and mixed-use developments, to strategic scale assessments in support of airports, large-scale housing developments, energy facilities and infrastructure projects.

Our clients include developers, investors, architects, planning consultants, Local Authorities and Water Authorities. We also advise and support numerous government agencies with statutory responsibilities for flood risk management.

Services provided include Flood Risk Assessments and sustainable drainage strategies, hydraulic modelling (local and catchment scale), Environmental Statement chapters, drainage modelling, Flood Risk Management Plans and Sequential Test assessments.

Contents

1. OVERVIEW OF PROJECT AND SITE BACKGROUND

1.1. Introduction

1.1.1 RPS have been appointed by Renewable Energy Systems Limited (RES / the Client) to perform a sequential test regarding their application, according to their pre-application advice (Ref. M/23/0018/MPREAP, dated 12th January 2024). The Lead Local Flood Authority (LLFA) has also been contacted regarding flood risk and drainage as part of the Flood Risk Assessment and Sustainable Drainage Strategy (FRA) which alongside this Report, forms part of the planning application pack submitted in respect of the application for Beane Solar Farm.

1.1.2 This technical note provides suitable flood risk technical information for assessing the National Planning Policy Framework (NPPF) Sequential Test to support the full planning application in terms of flood risk. It will be carried out in accordance with the approach contained in Section 14 and Annex 3 of the NPPF, as well as the guidance contained in the Planning Practice Guidance (PPG) section title "*flood risk and coastal change*" and the specific guidance set out in the DEFRA guidance "*Flood risk assessment: the sequential test for applicants*" as well as have regard to the recent High Court decision Mead & Redrow v the Secretary of State for Levelling Up, Housing and Communities (SoS LHC), North Somerset Council and Hertsmere Borough Council which explores further the requirements when undertaking a sequential test, and the East Hertfordshire District Council (EHDC) "*Sequential and Exception Test Technical Note*".

1.1.3 This report also cross references the FRA produced by RPS and submitted as part of the planning application pack where relevant.

1.2. Background

1.2.1 The Proposed Development comprises the construction and operation of a solar farm with a proposed capacity of 49.9MW. Key project components are listed in the bullet points below:

- Photovoltaic (PV) Solar Panels erected on steel/aluminium frames set out in south facing arrays;
- Transformer/ inverter units and energy storage facility co-located within compounds placed throughout the site;
- Electrical Substation Compound;
- On-site cabling;
- Internal Tracks;
- New site accesses;
- Associated infrastructure including CCTV and Security Fencing;
- Temporary construction compounds (x2);
- Associated Landscaping; and
- Biodiversity Enhancement.

1.2.2 It is understood that this development is of local importance as opposed to regional or national. As detailed in EHDC Strategic Flood Risk Assessment, 2016 Section 3.2 the following is applicable for development sites in the district:

The Sequential Test should be applied to the whole Local Planning Authority area to increase the likelihood of allocating development in areas not at risk of flooding. The Sequential Test can be undertaken as part of a Local Plan Sustainability Appraisal. Alternatively, it can be demonstrated through a free-standing document, or as part of strategic housing land or employment land availability assessments. NPPF Planning Practice Guidance for Flood Risk and Coastal Change.

1.2.3 As such, the assessment has been applied to the LPA within which the site is located (EHDC) and in response to Local Planning Policy CC3 (as described in the EHDC Supplementary Planning Guidance note dated March 2021) which states:

Policy CC3 encourages the generation of clean energy, which include schemes to provide low carbon and renewable energy generation to specific developments or wider generation proposals. The policy recognises that renewable, zero and low carbon proposals must be considered within their local context. The policy states the Council will permit the development of sources of renewable energy generation subject to assessment of the impact on the local environment and amenity. It is vital that any impacts associated with the proposed technology are considered as part of the planning process. Guidance related to this is already available via the national Planning Practice Guidance and as such it is not considered necessary to repeat this guidance in the SPD, although pointers to this guidance will be included in the SPD.

1.2.4 The site location and extent are shown on Figure 1 with the site outline in relation to the flood zones shown as Figure 2 below. The site is irregular in shape and approximately 79.5 hectares. The river Beane and an ordinary watercourse pass through the site.

1.2.5 As set out in Section 1.1.1 of this Report, a pre-application advice letter from the LPA (reference: M/23/0018/MPREAP) in January 2024 (Section 4) stated that a sequential test is required for this application. As such, the Client has commissioned RPS to produce this Report to support the application.

1.2.6 The risks identified within the RPS FRA are:

- ***EA mapping shows that the majority of the Site is located in Flood Zone 1 with areas of Flood Zone 2 and 3 extending from the on-Site unnamed ordinary watercourse and the River Beane, which also runs through the Site. This is confirmed by the EHDC SFRA.***
- ***There are also areas of overland flow/surface water flooding along the watercourses. The solar panels will be raised off the ground and as such, the development is unlikely to cause an obstruction to the flow paths/ponding.***

- ***Flooding from groundwater, reservoir and sewer sources is also considered to be low.***

1.2.7 As also stated within the FRA, all development will be restricted to 10m from the banks of the River Beane, and 5m from the ordinary watercourse which is its tributary.

1.2.8 Paragraph 162 of the NPPF requires that ***'development should not be permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower risk of flooding'***. Paragraph 162 notes that this relates to flooding ***'from any source'*** and ***'any form of flooding'*** (i.e. including groundwater sources).

1.2.9 For this application, and in accordance with the guidance set out within 7-027-20220825 of the PPG, and as discussed with the LPA, this Flood Risk Sequential Test has been undertaken to support this application based on the following stages:

- Stage 1 – Identify potential sites;
- Stage 2 – Review the sites against Minimum Site Area Requirement, and site specific criteria;
- Stage 3 – Flood Risk Analysis; and
- Stage 4 – Further Assessment (if required) of short-listed sites.

Figure 1: Site location plan

Figure 2: Site plan (showing Flood Zones)

2. SCOPE OF THE SEQUENTIAL TEST

2.1 Sequential Test Basis

2.1.1 This sequential test has been undertaken in accordance with the approach contained in Section 14 and Annex 3 of the NPPF, as well as the guidance contained in the PPG section title “flood risk and coastal change”.

2.1.2 Importantly, the geographical area to which this sequential test has been applied has been informed by the approach set out at ID: 7-027-20220825 of the PPG (within Section 14).

2.1.3 The total search area for the reasonably available site assessment is shown in Figure 3 below.

2.1.4 The search area applies a 4km corridor along the existing overhead line that traverses the site and applies this along the length of the line as it crosses the entire East Hertfordshire District Council Area. An electricity grid connection to this line within the site boundary has been agreed with the network operators. The total area searched amounts to some 74 km^2.

2.1.5 The application of a 2km limit to the existing power line is based on the principles that:

- The closer a facility is to the point of connection the more commercially viable it will be. Further there is a “tipping-point” beyond which the cost of cable connections when taken with the other capital expenditures will render the project unachievable; and
- Proximity to the point of connection will limit the potential for associated environmental risks.

2.1.6 Further information in respect of the Client’s site selection process can be found in Section 3 of the Planning, Design and Access Statement, submitted as part of the planning application pack.

2.1.7 It is worth summarising that as well as the technical considerations listed in the above bullet points, the availability of an appropriate area of land free from environmental designations is a key part of the overall site selection processes.

2.1.8 Using Geographical Information System (GIS) software, GIS shape files from the Environment Agency’s Long Term Flood Risk mapping data (that includes Fluvial, Surface Water Flood Risk and Reservoir) and the proposed site boundary and the boundaries for the reasonably available sites, the total area in each site impacted by either fluvial, surface water flooding (including climate change allowances) or reservoir flood risk has been calculated and the percentage of the site area impacted by each source of flooding has also been calculated. The information for the Beane Solar Farm site has then been compared to the reasonably available sites.

2.1.9 Reasonably available sites have been taken from the EHDC list of sites within the Local Plan and supporting evidence base (the documents used to derive the list are

summarised in Section 2.2). Although it should be noted that sites included are based on Local Plan allocations for residential, employment and leisure and not specifically for energy uses. There are no sites allocated for energy usage within the Local Plan. This approach to identifying reasonably available sites was driven in part by the reasoned assumption that the listing of sites would, at least in principle, suggest that landowners would be at least aware of their development potential, facilitating potential discussions. All sites from these documents within the search area have been considered (see Section 3).

2.1.10 It is accepted that within the search area shown in Figure 3 there are significant areas of existing agricultural land. The Client is not aware of the reasonable availability of any alternative appropriately sized area of agricultural land upon which to host this Proposed Development. This site and other agricultural land are not included or identified in the reviewed local plan and supporting documents.

2.1.11 The sequential test process is based on the NPPF [updated December 2023] requirements of paragraphs 167 and 168 (as described below) and supported by the NPPF Planning Practice Guidance [updated August 2022].

NPPF:

167. All plans should apply a sequential, risk-based approach to the location of development – taking into account all sources of flood risk and 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 and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management); 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.***

168. The aim of the sequential test is to steer new development to areas with the lowest risk of flooding from any source. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower risk of flooding. The strategic flood risk assessment will provide the basis for applying this test. The sequential approach should be used in areas known to be at risk now or in the future from any form of flooding.

2.1.12 National Planning Practice Guidance - Flood risk and coastal change:

How can the Sequential Test be applied to the location of development? (Paragraph: 024 Reference ID: 7-024-20220825)

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 go on to compare reasonably available sites:

- ***Within medium risk areas; and***
- ***Then, only where there are no reasonably available sites in low and medium risk areas, within high-risk areas.***

2.1.13 It should also be noted that in applying the sequential test the following needs to be considered:

What is a "reasonably available" site? (Paragraph: 028 Reference ID: 7-028-20220825)

'Reasonably available sites' are those in a suitable location for the type of development with a reasonable prospect that the site is available to be developed at the point in time envisaged for the development.

These could include a series of smaller sites and/or part of a larger site if these would be capable of accommodating the proposed development. Such lower-risk sites do not need to be owned by the applicant to be considered 'reasonably available'.

The absence of a 5-year land supply is not a relevant consideration for the sequential test for individual applications.

2.1.14 As mentioned above, the assessment has been prepared having regard to the guidance in the High Court decision Mead & Redrow v SoS LHC, North Somerset Council and Hertsmere Borough Council. In particular, with regard to the Redrow Case (Appeal Ref: APP/N1920/W/23/3314268) and the selection of "*reasonably available sites*".

2.1.15 In determining the size and capacity of reasonably available sites, and in particular the energy generation, there will be an optimum size of development in order to generate capacity that can offset the investment costs and infrastructure enhancements required. Reducing the size of the development or spreading the site over a number of smaller sites makes the grid connections and associated infrastructure harder to achieve in engineering terms and uneconomic to construct in comparison to the site capacity.

2.1.16 As a result, it is proposed, in respect of the High Court decision referenced above (Paragraphs 110 and 164) and considering whether there are multiple sites that could form a "series" and their sequential preferability in terms of flood risk, this assessment refers to and considers Paragraph 110 of the decision, which is whether such sites

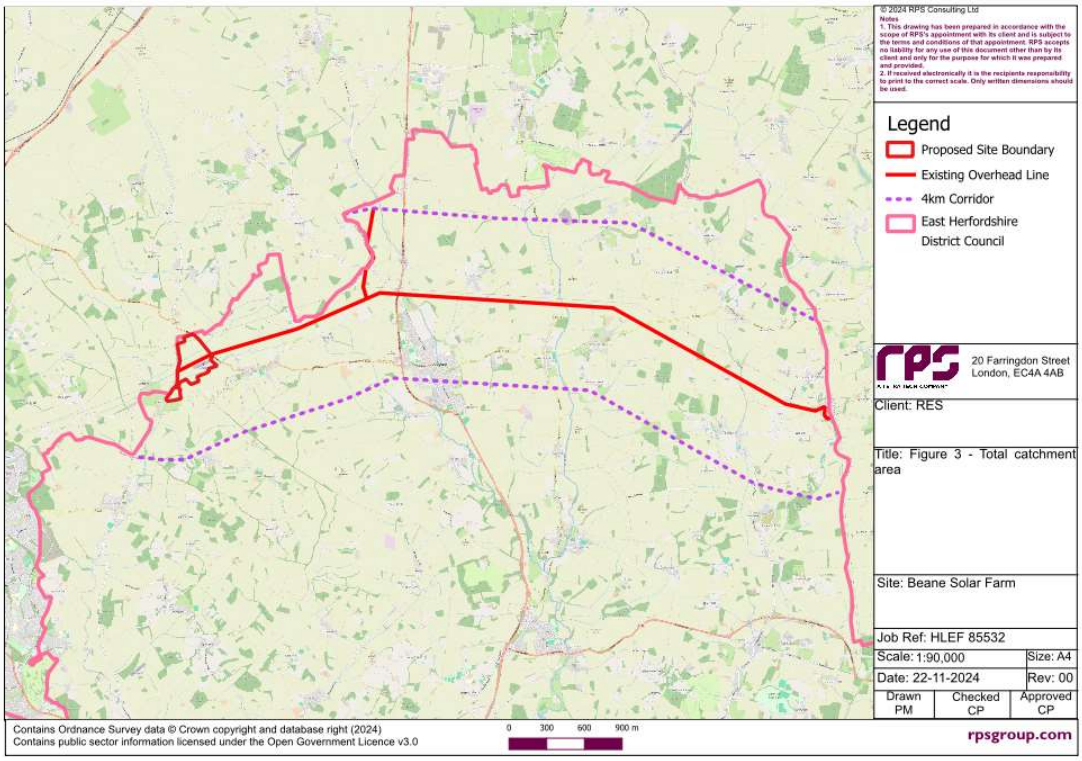
"*have a relationship which makes them suitable in combination to accommodate any need or demand to which the decision-maker decides to attached weight*" alongside Paragraph 164 of the decision: which questions whether these sites could "***deliver the range of interconnected benefits which the appeal scheme would deliver and for which there was a need***". As a result, RPS is recommending a conservative methodology (consistent with the Redrow approach) that the appropriate size/capacity criteria should be limited to within a range of plus or minus 25% of the development as proposed. This is not wholly applicable to this type of development as the capacity and efficiency of a solar farm drastically reduces with area.

2.1.17 This assessment has been carried out based on the search criteria discussed with EHDC in September 2024, namely:

- ***Proximity to existing grid infrastructure (a point of connection to a pylon on site which is a 132kV OHL is offered as the grid connection) – in terms of distance, any HV connection greater that 2km will incur additional infrastructure provision to counteract the effects of increased lengths of transmission as well as the environmental and construction activities required to provide longer connections.***
- ***Trunk road highway access;***
- ***Topography (generally south facing, not too steep);***
- ***Avoiding nearby shading and hills;***
- ***Lower impact on environmental constraints and designations***
- ***Deemed to be available and suitable in all regards to being assessed against the five purposes of the Green Belt, as outlined in Paragraph 138 of the NPPF;***
- ***Flood risk; and Presence or absence of environmental designations***

2.1.18 The resultant total catchment area and location of reasonably available sites for the sequential test is shown in Figure 3 below.

Figure 3: Total Catchment Area



2.2 Documents Used

2.2.1 The following documents have been reviewed:

- Department for Levelling Up, Housing and Communities: National Planning Policy Framework (NPPF), Dec 2023;
- NPPF Planning Practice Guidance: Flood risk and coastal change, Aug 2022;
- Mead & Redrow v the Secretary of State for Levelling Up, Housing and Communities;
- Wathen-Fayed v SoS [2023] England and Wales High Court (EWHC) 92 (Admin);
- EHDC: "Strategic Land Availability Assessment 2017" (SLAA);
- RPS: Flood Risk Assessment, Ref. HLEF85532, 3, dated August 2024.
- The Planning, Design and Access Statement submitted as part of the planning pack;
- Pigeon Investment Management "Land Northwest of Buntingford masterplan" (2021);
- EHDC: "Flood Risk Sequential and Exception Test Technical Note" (2016).
- North of Letchworth masterplan (19th July 2024);
- North of Stevenage masterplan (27th June 2024);
- East of Luton draft masterplan (14th May 2024);
- North-East of Great Ashby masterplan (14th May 2024);
- S106/S278 Plan Tim Palmer – WSP – Committed Developments with Survey Locations (18th September 2023);
- Phasing Plan V1 (Land off Barkway Road and North of Flint Hall Barkway Road Royston Hertfordshire) (24th April 2023);
- HCC Highways revised comments (Land to the East of Talbot Way, Kristiansand Way and Flint Road Allotments Letchworth Garden City Hertfordshire) (25th April 2023);
- DMH Stallard On Behalf of Mr R Wilson MBE And Mrs M Wilson Swangleys Farmhouse Knebworth (3 of 3) (26th July 2024);
- Design Review Panel Report (Land South of Little Wymondley Hertfordshire) (15th August 2023); and
- PC561a - WSI mitigation Land at Barkway Royston Road (Land between Cambridge Road & Royston Road, Barkway) (10th September 2024).

3. SITE SELECTION ANALYSIS

3.1.1 The analysis carried out by RPS for this sequential test evaluates the selected site boundaries from the sites listed in the above published documents that include residential, employment and mixed-use site. The sites are listed in Appendix A and in Figure 1 below. The steps in sifting of sites are shown in Figure 4 below.

3.1.2 The site selection has been based on the criteria which has been discussed with the LPA as described above (Section 2.1.17) and with the catchment area for the assessment shown in Figure 3 above.

3.1.3 This has resulted in an initial total of 19 sites (including the Beane Solar Farm site) to be considered further in the analysis. These are listed in Table 1.

3.1.4 All sites within the proposed 2km search area lay within EHDC.

4. SEQUENTIAL TEST METHODOLOGY

4.1.1 The sequential test methodology carried out in this study involves the following stages:

- Appraise the pool of sites from Table 1 in terms of their vulnerability to flooding;
- Establish the development capacity of the sites taken from the reviewed documentation and remove the sites that are smaller than the subject site; and
- If required, rank sites in terms of vulnerability to fluvial flooding, then surface water flood risk, then groundwater flood risk (as indicated in the flow chart (Figure 4).

4.1.2 The assessment of the sites will be undertaken in relation to their flooding vulnerability. The following flooding data will be collected on each site:

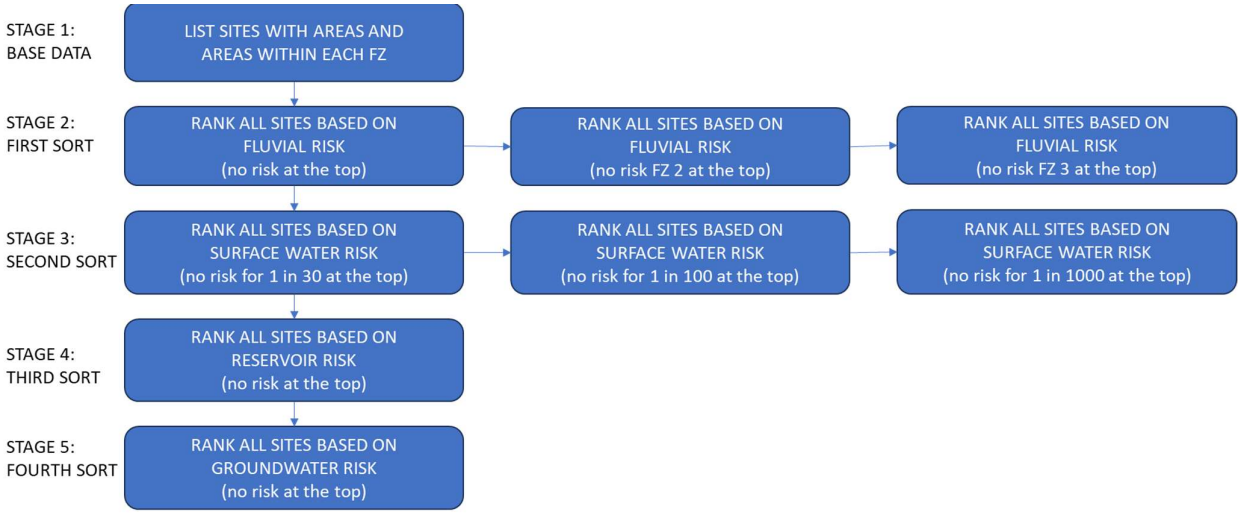
- Area of site covered by Flood Zones 1, 2, and 3;
- % of site covered by Flood Zones 1, 2, and 3;
- Whether the site is on a dry island;
- Impact of climate change on fluvial flood risk;
- Probability of surface water flooding occurring (low medium and high);
- % of site subject to surface water flooding occurring (low medium and high);
- Risk of reservoir flooding occurring;
- Potential for ground water flooding to occur;
- Groundwater source protection zone.

4.1.4 The impacts of climate change will be considered utilising the most comprehensive and complete form of modelling available at the time (the climate change allowances for peak rainfall and river flow provided by the Department for Environment Food & Rural Affairs).

4.1.5 Each site boundary has been identified and measured along with the flood boundaries for each source of flood risk within the site boundary. This includes the risks as listed above.

4.1.6 It is recognised that sites may lie in a number of flood zones. Where this occurs, a precautionary approach will be followed whereby the highest risk flood area in which the site is located will be used to classify the site, even if only a marginal area of the site is affected.

Figure 4: Sequential Test screening stages



4.1.7 Because sites in Flood Zone 1 (FZ1) are all considered equal in respect of fluvial flooding they will be ordered according to the percentage of the site that falls into the 1% Annual Exceedance Probability (AEP) surface water extent.

4.1.8 Those sites unaffected by the 1% AEP surface water extent, or those sites where the same percentage of the site is located in the 1% AEP, have been ordered according to the percentage of the site falling within the 0.1% AEP extent.

4.1.9 Where sites achieve the same fluvial score, the extent of surface water flood risk has been taken from the Environment Agency's RoFSW (Risk of Flooding from Surface Water) mapping with the 3.3% AEP or less area used to rank sites as the surface water (although it could be argued that this more frequent rainfall generated during these events should be accommodated within on-site surface water drainage).

4.1.10 The sites are then further ranked according to the 1% AEP surface water flood extent (as shown on the RoFSW).

4.1.11 The 1% AEP surface water flood extent was deemed a more relevant factor than the 0.1% AEP surface water flood extent because of its greater level of risk, and because it accords with the principle of the NPPF in terms of planning, i.e. ascribing more significance to areas at risk from flooding from 1% AEP events and less.

4.1.12 The 0.1% AEP surface water flood extent has only been considered to order the sites and these events are highly unlikely to occur. It should also be noted that this event does not have to be directly designed for within a proposed development.

4.1.13 Where sites are equal in fluvial flood risk and lie outside this surface water flood extent, they have been ordered alphabetically according to the site name.

4.1.14 If any sites have a joint position in the ranking of sites following the ordering process, the % of the sites in question which are at risk from surface water and groundwater flooding will be used to decide which site should gain a higher position in the overall ranking.

4.1.15 The risk of flooding from reservoirs will not be significantly relied on at this point given that the flood risk that exists from reservoir failure is considered residual. The data relating to sewage flooding will also not be relied upon to distinguish between sites which are tied in the overall ranking as the data cannot be applied at site level.

5. RESULTS

5.1.1 The results of this analysis on the sites contained in Table 1 and Appendix A display all sites ranked by flood risk, with the lowest rank equalling the highest risk of fluvial and surface water flooding. There are a total of 19 sites within the area studied.

5.1.2 The area of the reasonably available site search can be seen in Figure 3 above. Figure 5 shows the relative location of all the sites listed in Table 1.

Table 1: Full list of sites ranked by flood risk

Rank	Site ID	Address and site reference	Current Allocation	Gross Area (ha)	FZ3 impact (%)
1	16/001	Land adjacent to Pumphill Cottage	Residential	0.31	0.00
2	19/003	The Paddock	Residential	0.45	0.00
3	22/003	Land at Violets Lane	Residential	0.37	0.00
4	28/004	Land to rear of Jubilee Cottages	Not developable	1.22	0.00
5	NW Bunt	Land Northwest of Buntingford	Residential	2.15	0.00
6	07/002	Silkmead Farm	Not developable	3.01	0.00
7	19/002	Land to the rear of Peasecroft and The Crescent	Residential	13.24	0.00
8	22/002	Hollybush	Not developable	0.28	0.00
9	02/005	Land west of Buntinfgford	Residential	20.44	0.00
10	09/001	Land north of Buntingford Business Park	Employment uses	2.89	0.00
11	19/004	Land at Stocking Hill	Development complete	0.39	0.00
12	28/005	Land at Lamorna	Not developable	1.12	0.00
13	22/001	Land north of Lake Villas	Not developable	0.30	0.00
14	22/011	Unnamed	Unknown	0.70	0.00
15	28/002	Land to rear & east of Hormead C of E Primary School	Not developable	3.80	2.32
16	SITE	Beane Solar Farm proposed site	Solar Farm	79.45	8.17
17	22/014	Unnamed	Unknown	1.43	27.29
18	28/001	Field 2769, land south of B1038	Leisure / recreation	0.94	99.66
19	22/013	Unnamed	Unknown	0.29	100.00

5.1.3 This shows that, in terms of a flood risk ranking (purely based on surface water flood risk as a percentage of land area), in theory, the Land adjacent to Pumphill Cottage site is identified as being preferable overall due to the lack of any fluvial or surface water flood risk.

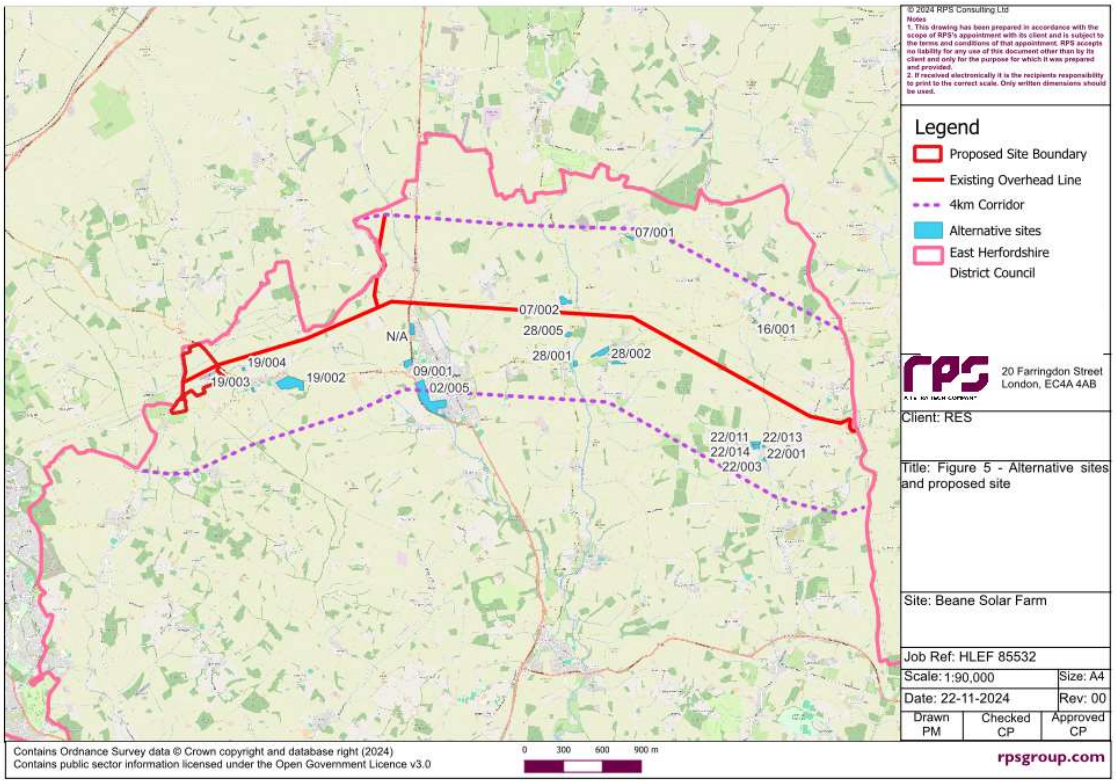


Figure 5: Site to be reviewed to be considered "reasonable available"

5.1.4 To then screen the reasonably available sites further, the following two stages have been applied:

a) Has the Local Plan considered the sites to be "developable"? and

b) based on being able to support the scale of the proposed development, the minimum site area of 59.34 ha has been applied.

Table 2: List of sites identified by EHDC as "UNDEVELOPABLE" to be removed as not "Reasonably Available"

Rank	Site ID	Address and site reference	Current Allocation – EHDC Comment
4	28/004	Land to rear of Jubilee Cottages	Not developable
6	07/002	Silkmead Farm	Not developable
8	22/002	Hollybush	Not developable
12	28/005	Land at Lamorna	Not developable
13	22/001	Land north of Lake Villas	Not developable
15	28/002	Land to rear & east of Hormead C of E Primary School	Not developable

5.1.5 An addition site can also be discounted as EHDC have stated Land at Stocking Hill (19/004) as "Development complete". Thus, can also be considered to not be "reasonably available".

5.1.6 Out of the remaining list, the following sites have discounted due to their small size. It should be noted that even the larges of these sites were only approximately 25% of the size of the proposed solar farm.

Table 3: Sites discounted due to size

Rank	Site ID	Address and site reference	Current Allocation	Gross Area (ha)	FZ3 impact (%)
1	16/001	Land adjacent to Pumphill Cottage	Residential	0.31	0.00
2	19/003	The Paddock	Residential	0.45	0.00
3	22/003	Land at Violets Lane	Residential	0.37	0.00
5	NW Bunt	Land Northwest of Buntingford	Residential	2.15	0.00
7	19/002	Land to the rear of Peasecroft and The Crescent	Residential	13.24	0.00
9	02/005	Land west of Buntinfgford	Residential	20.44	0.00
10	09/001	Land north of Buntingford Business Park	Employment uses	2.89	0.00
11	19/004	Land at Stocking Hill	Development complete	0.39	0.00
14	22/011	Unnamed	Unknown	0.70	0.00
17	22/014	Unnamed	Unknown	1.43	27.29
18	28/001	Field 2769, land south of B1038	Leisure / recreation	0.94	99.66
19	22/013	Unnamed	Unknown	0.29	100.00

5.1.7 Following this review, Table 4 below shows that only one site meets this criterion (the application site).

Table 4: List of sites that meet the minimum area requirement

Sifting Rank (based on risk)	Site ID	Name	Gross Area (ha)	FZ3 impact (%)
16	Site	Beane Solar Farm Proposed Location	79.12	8.17

5.1.8 Due to the proposed location being the only location to meet the criteria for minimum area, no further steps of the sequential test have been carried out.

5.1.9 The NPPF states that the Sequential Test: "…***approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. This means avoiding, so far as possible, development in current and future medium and high flood risk areas considering all sources of flooding including areas at risk of surface water flooding***." (Paragraph: 023 Reference ID: 7-023-20220825).

5.1.10 As also stated in the NPPF Planning Policy Technical Guidance - Flood risk and coastal change (Paragraph: 029 Reference ID: 7-029-20220825) and reiterated in recent appeal decisions, it is "***Ultimately the local planning authority needs to be satisfied in all cases that the proposed development would be safe throughout its lifetime and not lead to increased flood risk elsewhere***".

5.1.11 The Beane Solar Farm site is at risk from fluvial flooding along the banks of the River Beane and the ordinary watercourse. The same areas are also at risk from surface water flooding. However, the rest of the site is not at risk from fluvial, reservoir or surface water flooding. This development will maintain a 10m buffer between any infrastructure and the banks of the River Beane and a 5m buffer between the ordinary watercourse. Any water susceptible plant will lie outside the areas at risk of fluvial and surface water flooding.

5.1.12 In terms of the sequential test, this site is the only "**reasonably available**" site that meets the size and location criteria and as such is deemed to pass the sequential test.

APPENDIX A

Sequential Test site calculations

For more information, contact:

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					SITE SORT - LEVEL 1 FLUVIAL FLOOD RISK						SITE SORT - LEVEL 2 SURFACE WATER FLOOD RISK						SITE SORT - LEVEL 3 - RESERVOIR FLOOD RISK			
					Percentage of Site in Each Flood Zone			Area of Site in Each Flood Zone (m2)			Percentage of Site in RoFSW			Area of site in RoFSW						
Rank	Site Ref	Site Name	Area (m2)	Area (ha)	Flood Zone 1	Flood Zone 2	Flood Zone 3	Flood Zone 1	Flood Zone 2	Flood Zone 3	Low Risk	Medium Risk	High Risk	Low Risk	Medium Risk	High Risk	Percentage of Site in Reservoir		Area of Site in Reservoir	
1	16/001	Land adjecent to Pumphill Cottage	3147	0.31	100.00	0.00	0.00	3147.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	19/003	The Paddock	4450	0.45	100.00	0.00	0.00	4450.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	22/003	Land at Violets Lane	3712	0.37	100.00	0.00	0.00	3712.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	28/004	Land to rear of Jubilee Cottages	12209	1.22	100.00	0.00	0.00	12209.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	NW Bunt	Land Northwest of Buntingford	21510	2.15	100.00	0.00	0.00	21510.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	104.04	0.00	0.00	0.00	0.00
6	07/002	Silkmead Farm	30095	3.01	100.00	0.00	0.00	30095.00	0.00	0.00	0.00	0.00	0.93	0.00	0.00	280.99	0.00	0.00	0.00	0.00
7	19/002	Land to the rear of Peasecroft and The Crescent	132432	13.24	100.00	0.00	0.00	132432.00	0.00	0.00	0.00	0.08	2.03	0.00	108.56	2693.54	0.00	0.00	0.00	0.00
8	22/002	Hollybush	2781	0.28	100.00	0.00	0.00	2781.00	0.00	0.00	0.00	1.64	10.77	0.00	45.70	299.52	0.00	0.00	0.00	0.00
9	02/005	Land west of Buntinfgford	204400	20.44	100.00	0.00	0.00	204400.00	0.00	0.00	0.00	1.75	5.19	0.00	3571.05	10604.31	0.00	0.00	0.00	0.00
10	09/001	Land north of Buntingford Business Park	28896	2.89	100.00	0.00	0.00	28896.00	0.00	0.00	0.00	2.01	2.58	0.00	580.20	744.30	0.00	0.00	0.00	0.00
11	19/004	Land at Stocking Hill	3893	0.39	100.00	0.00	0.00	3893.00	0.00	0.00	0.00	3.97	6.67	0.00	154.44	259.74	0.00	0.00	0.00	0.00
12	28/005	Land at Lamorna	11173	1.12	100.00	0.00	0.00	11173.00	0.00	0.00	5.59	12.77	29.37	625.00	1427.00	3281.02	0.00	0.00	0.00	0.00
13	22/001	Land north of Lake Villas	2980	0.30	99.98	0.02	0.00	2979.46	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	22/011	Unnamed	7021	0.70	61.24	38.76	0.00	4299.59	2721.41	0.00	0.00	2.17	4.00	0.00	152.61	280.77	0.00	0.00	0.00	0.00
15	28/002	Land to rear & east of Hormead C of E Primary School	38042	3.80	96.68	3.32	2.32	36745.06	1296.94	907.36	0.00	1.27	5.38	0.00	497.54	2098.87	0.00	0.00	0.00	0.00
16	SITE	Beane Solar Farm proposed site	791164	79.12	88.97	11.03	8.17	703867.16	87296.84	64620.49	6.40	9.49	17.77	50648.60	75106.37	140577.03	0.00	0.00	0.00	0.00
17	22/014	Unnamed	14285	1.43	27.23	72.77	27.29	3890.26	10394.74	3898.73	0.96	16.31	30.18	137.82	2330.09	4312.00	0.00	0.00	0.00	0.00
18	28/001	Field 2769, land souh of B1038	9352	0.94	0.00	100.00	99.66	0.10	9351.90	9320.09	35.15	50.51	94.47	3287.16	4723.19	8834.70	0.00	0.00	0.00	0.00
19	22/013	Unnamed	2850	0.29	0.00	100.00	100.00	0.00	2850.42	2850.42	82.22	93.28	100.00	2343.58	2658.93	2850.42	0.00	0.00	0.00	0.00