
EAST YORKSHIRE SOLAR FARM

**East Yorkshire Solar Farm
EN010143**

Environmental Statement

**Volume 2, Appendix 15-4: Communications with Natural England
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Prepared for:

East Yorkshire Solar Farm Limited

Prepared by:

AECOM Limited

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1. Introduction

1.1 Purpose of this Appendix

1.1.1 This Environmental Statement (ES) appendix contains the email correspondence with Natural England regarding the methodology of baseline data collection for **Chapter 15: Soils and Agricultural Land, ES Volume 2**. Correspondence was undertaken via the Scheme’s Discretionary Advice Service (DAS) agreement (411969 DAS East Yorkshire Solar Farm).

2. Email to Natural England: 15 February 2023

1.1.1 The email was accompanied by a series of attachments most of which are not reproduced in this appendix as they are provided elsewhere in this ES as identified in **Table 1**.

Table 1. List of Attachments and location of information within the ES.

Attachment to Email	Alternative location in ES
Figure 1: Site location and elements of the Scheme	Figures 1-1 and 1-2, ES Volume 3 [EN010143/APP/6.3]
Figure 2: Predictive ALC	Figure 15-2: Predictive Agricultural Land Classification, ES Volume 3 [EN010143/APP/6.3]
Figure 3: Provisional ALC.	Figure 15-1: Provisional and Post 1988 Agricultural Land Classification, ES Volume 3 [EN010143/APP/6.3]
Figure 4: LRA reconnaissance survey data	Provided as Annex A as this was submitted with the PEI Report as Figure 15-3: Reconnaissance Agricultural Land Classification Survey for the Solar PV Site , but is not included in the ES.
Cranfield University Predictive ALC Report	Appendix 15-2: Predictive Agricultural Land Classification Map (Cranfield University), ES Volume 2 [EN010143/APP/6.2]
LRA Reconnaissance ALC Survey Report (January 2023)	This report is not presented in this appendix, nor is it included in the ES. This report has been updated with further survey data bringing the reconnaissance level survey up to a detailed level survey. The data are now presented in Appendix 15-3: ALC and Soil Survey Report, ES Volume 2 [EN010143/APP/6.2]

[REDACTED]

From: [REDACTED]
Sent: 15 February 2023 14:36
To: [REDACTED]
Cc: [REDACTED]@lra.co.uk; [REDACTED] Boom Power East
Yorkshire Email Group; [REDACTED]
Subject: East Yorkshire Solar Farm: Request for Discretionary Advice on Soils (411969 DAS East Yorkshire Solar Farm)
Attachments: GEN_DAS_Fig2_Predictive_ALC_A3_20230213_R0.pdf; GEN_DAS_Fig1_Site_Location_and_Boundary_Plan_A3_20230213_R0.pdf; GEN_DAS_Fig4_Reconnaissance_ALC_Survey_for_the_Solar_PV_Site_A3_20230213_R0.pdf; GEN_DAS_Fig3_Provisional_and_Post_1988_ALC_A3_20230213_R0.pdf; LRA Reconnaissance ALC report.pdf; A Predictive ALC map of East Yorkshire Solar Version 1 and 2 (2).pdf

Dear [REDACTED]

Thank you for your email dated 4th January and for offering DAS advice on soils for the East Yorkshire Solar Farm Scheme.

Overview

Due to its generating capacity (over 50 megawatts (MW)) the Scheme qualifies as a Nationally Significant Infrastructure Project (NSIP), which requires a Development Consent Order (DCO) from the Secretary of State (SoS) for Business, Energy and Industrial Strategy. A Scoping Report, on which Natural England commented, was issued in September 2022 (<https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/EN010143/EN010143-000015-EYSF%20EIA%20Scoping%20Report.pdf>). The Scheme is currently developing the Preliminary Environmental Information Report (PEI Report) which is intended to be consulted on in May 2023.

The purpose of this email is to seek advice from Natural England on the proposed baseline data collection methodology for the Cable Corridors and the Solar PV Site. It is supported by the following attachments:

- Figure 1: Site location and elements of the Scheme;
- Figure 2: Predictive ALC;
- Figure 3: Provisional ALC;
- Figure 4 LRA reconnaissance survey data;
- Cranfield University Predictive ALC Report; and
- LRA Reconnaissance ALC Survey Report.

Background

The proposed Solar PV Site (solar farm) consists of 18 Solar PV Areas located on agricultural land which is predominantly arable. The Solar PV Areas are linked via Interconnecting Cable Corridors and the Solar PV Site is connected to National Grid's Drax Substation by a Grid Connection Cable. The land within the Grid Connection and Interconnecting Cable Corridors is also predominantly agricultural, however, to allow some spatial flexibility at detailed design, the described corridors are wider than the actual working areas where disturbance will occur.

Additionally, it is intended that cables will be routed in roads and roadside verges as far as is practicable.

The Solar PV Site and the Interconnecting Cable Corridors are wholly located in the East Riding of Yorkshire and the Grid Connection Corridor is located both in the East Riding and North Yorkshire (Selby District). The site location and elements of the Scheme are shown in **Figure 1**.

Within the Solar PV Site, disturbance to land due to the installation of the solar PV infrastructure is minimal with the solar PV frames being driven directly into the soil without the need for excavations or foundations. It is intended that the land beneath and around the Solar Panels will be grazed. The potential for hay cropping using mini-balers or similar is also being investigated. The loss of agricultural land will therefore be limited to the construction period only (short-term temporary). The construction period is estimated at 24-months, however construction will be undertaken sequentially, moving from one Solar PV Area to another with the land within each Area reinstated to agricultural use as soon as possible following completion of construction activities, and so the actual time each Solar PV Area is removed from agricultural use will be less.

For other elements within the Solar PV Site (such as the small field stations which will require hard standing foundations, access tracks, and grid connection substations) the loss of agricultural land will be long-term temporary for the operational life of the solar farm, which is expected to be at least 40 years, although the design life could be longer than this depending on the condition of equipment. To present a worst case the impact assessment at PEI Report and ES will consider this long-term temporary loss to be permanent. Where practicable, hardstanding elements have been designed to be located in areas described as non-BMV. Where field stations can only be located on land identified as BMV the use of 'no-dig' ground screw foundations will be considered.

It is noted that depending upon the required management regime, some areas of habitat enhancement may be grazed or cropped for hay, but others are expected to be completely removed from agricultural use. To present a worst case the PEI Report will assume that all habitat areas identified in the indicative site layout plan as grassland are agricultural, but areas identified as woodland or wetland wildlife zone are non-agricultural. Should the management of the wetland wildlife zone include grazing this approach will be amended within the ES to more accurately reflect the agricultural use of the Site.

Where possible, it is intended to route cabling within roads or roadside verges to limit the impact to agricultural land. All land within the cable corridors (agricultural or non-agricultural) would be returned to its original condition and land use upon completion of cable installation. Where cables are installed in agricultural land, the depth of cable installation will be sufficient to that there will be no impediment to normal farming operations such as ploughing, and the overlying land could be used for arable or pastoral farming. The loss of agricultural land within the Cable Corridors would therefore be temporary - for the duration of construction works only.

It is anticipated that grid connection cable installation operations will take 12 months to complete, whilst interconnecting cables will be installed throughout the 24-month Solar PV Site construction period. Again, the works would be undertaken sequentially and it is anticipated that individual sections of cabling would be completed and restored in a shorter timeframe.

An Outline Soil Management Plan will be submitted with the Environmental Statement, based upon best practice measures such as those contained in Defra's Code of Practice for the Sustainable Use of Soils on Construction Sites and The Institute of Quarrying's Good Practice Guide for Handling Soils in Mineral Workings.

Proposed Approach

We would like to agree an approach for the proposed baseline data collection methodology for the Cable Corridors and the Solar PV Site. We have provided details of the queries within the text below, supported by the attached figures, and are happy to undertake further discussion via meeting/video conference if this would assist you in addressing the queries below.

1) Baseline ALC data collection for the Cable Corridors.

The methodology for determining the amount of BMV land within the Grid Connection Corridor proposed at Scoping was to calculate the proportion of Subgrade 3a/3b land within the Grid Connection Corridor using the Provisional Agricultural Land Classification (ALC) data in combination with Natural England's Likelihood of BMV mapping. The proposed methodology was as follows:

- Provisional ALC Mapping would be used to directly determine the proportions of ALC Grades 1, 2, 4 and 5.
- For areas Provisionally mapped as Grade 3, the relative proportions of Subgrade 3a and 3b would be calculated using Natural England's Likelihood of BMV Agricultural Land mapping, whereby land mapped as High Likelihood is considered as Subgrade 3a; land mapped as Low Likelihood is considered as Subgrade 3b; and land mapped as Moderate Likelihood is split 50/50 between Subgrades 3a and 3b.

The Applicant has since commissioned Cranfield University to prepare a Predictive ALC dataset, which was not available – or the Applicant was not aware of – during Scoping stage. We would therefore like to formally agree a change in methodology for the use of these data to describe the baseline ALC conditions for the Grid Connection Corridor within the PEIR and ES assessments, in place of the above methodology put forward at Scoping.

At Scoping the Interconnecting Cable Corridors had not yet been determined and so no baseline data for this element of the Scheme were presented within the Scoping Report. The Interconnecting Cable Corridors have now been described and we would also like to agree the use of the Predictive ALC dataset to describe the baseline ALC for these areas.

Two levels of Predictive ALC dataset are available and the more detailed 'Version 2' which also considers Post-1988 survey datasets has been purchased. The Cranfield University methodology was used to prepare the Welsh Government's Predictive ALC dataset (publicly available), and it is anticipated that it will be used to prepare the same dataset for England (for Defra) over the next three to four years.

The Cranfield data are more accurate than those which would be obtained via the methodology proposed at Scoping, as they are generated by undertaking ALC calculations using the current ALC methodology (Agricultural Land Classification of England and Wales, Guidelines and criteria for grading the quality of agricultural land, 1988) with inputs taken from a combination of the most detailed / current published data and survey data. This also allows the geographic distribution of the different ALC gradings to be mapped, which is not possible with the methodology put forward at Scoping which only provides the proportions of each grading likely to be present.

The Predictive mapping against the PEI Report Site Boundary is shown in **Figure 2** and the full Cranfield University Predictive ALC Report is attached. Please note that the mapping presented in the Cranfield University Report uses the Scoping Boundary. Consequently, the boundary does not show the Interconnecting Cable Corridors or Solar PV Areas 1g and 1h, although they are covered by the mapping data, and the Grid Connection Corridor is much wider than current.

As explained above, the impact is temporary and can be managed adequately through a Soil Management Plan. The land can be farmed again as soon as the cabling is installed. There is therefore no long term or permanent loss of BMV or other farmland anticipated within the Interconnecting Cable Corridors and Grid Connection Corridor.

2) **Baseline ALC data collection for the Solar PV Site**

Soils and agricultural land, specifically ALC, were a key consideration in the site selection process. Using the 1:250,000 Provisional ALC (**Figure 3**), the initial search area for the Solar PV Site was predominantly within areas classified as Grade 4 with smaller areas of Grade 3 to the south and west. The south eastern most Solar PV Area (2g) is mapped as a combination of Grade 3 and Grade 2 land.

In addition to commissioning the Cranfield University Predictive data described above and shown on Figure 2 our specialist subcontractor (Land Research Associates, LRA) has undertaken a reconnaissance scale (one survey point per every 4 to 5 ha) survey of all land within the Solar PV Site (except Solar PV Area 1g and 1h to the north east of the Site (Figure 1) which came into the Scheme after completion of the survey in early January 2023). The survey area covered approximately 1,173 hectares (ha).

Within the PEI Report the baseline for the currently unsurveyed Areas 1g and 1h will be taken from the Predictive ALC, with survey data presented within the Environmental Statement (ES).

The reconnaissance survey was undertaken between October and December 2022 at a density of one survey point per every 4 to 5 ha, resulting in a total of 268 intrusive auger observations over the survey area, 12 full investigation pits and 24 topsoil texture analyses (using Particle Size Distribution (PSD)). A copy of the LRA reconnaissance survey report is attached.

The soils across the survey area show a high level of uniformity (heavy wet soils of the Foggathorpe Series) and the majority of the land is very flat. The ALC is therefore generally uniform and classified as Subgrade 3b (non-BMV), limited by wetness/workability (Figure 4). There are likely to be some small patches of Subgrade 3a or Grade 2 land within this area; however, investigations show these are rare and of small area, unlikely to be mappable and to only be farmable as per the wetter surrounding land.

The survey recorded two main areas of better quality land, the location of which aligns with the Provisional and Predictive ALC data (Figures 2 and 3). These occur where Brighton Sand deposits (lighter wind-blown accumulations of sandy/silty soils) are present over the top of the clays. These can be identified (both in the field and on arial imagery) from the topography as they form ridges / rises. These are recorded in the south of the survey area in Solar PV Areas 2g and 3c (**Figure 4**), with the most significant area being located in Solar PV Area 2g.

The Scoping Report proposed a detailed one point per ha survey across the whole of the Solar PV Site. However, due to the very high degree of uniformity which has been proven across the reconnaissance survey area, and the current baseline data and visual observations of Solar PV Areas 1g and 1h also indicating to also be predominantly heavy clay soils, the following change in survey methodology is proposed.

The whole of the Solar PV Site (including Areas 1g and 1h) will be investigated at a minimum density of 1 sample per 2 ha (incorporating the data from the reconnaissance survey). Where land quality grade is found to vary an increased density of 1 observation per hectare will be employed. This methodology is considered to provide a robust evidence base for the occurrence and distribution of BMV land in the Solar PV Site.

As stated above, the reconnaissance survey included sampling for PSD, to provide detailed information on soil texture (a determining factor in ALC grading especially in clay soils). Further limited sampling for PSD will be undertaken during the full survey.

The Scoping Report also referred to sampling being undertaken for soil organic matter (SOM), pH, and macronutrients (P, N, K, Mg), as at the time it was considered this may be required in order to undertake assessment using IEMA’s newly issued guidance document ‘A New Perspective on Land and Soil in Environmental Impact Assessment’ (with respect to assigning sensitivity to the soil resources within the Site). However, we have subsequently determined that a robust assessment, following the IEMA guidelines, can be made without the provision of this analysis. It is therefore proposed that the above sampling will not be undertaken as it will not contribute to the assessment of impacts to soils and agricultural land.

3) Other Information

The LRA reconnaissance survey identified peat soils, comprising deep humified fen peat on a small area of floodplain land in Solar PV Area 1e adjoining the River Foulness in the north east of the survey area. These are low-lying and poorly to very poorly draining (Soil Wetness Class IV or V) and are shown on Figure 4 as Grade 4. It is anticipated that these soils are also likely to present to the east of Solar PV Area 1h, which is also adjacent to the river.

These peat soils are not described on the Soil Survey of England and Wales 1:250,000 mapping, which does not pick up small-scale local variations in soil type and consequently were not described in the Scoping Report.

As these soils lie within an area of Flood Zone 3, they are included in the Scheme as areas of habitat provision / enhancement only and will not be subject to development or disturbance. The presence of these high sensitivity soils will be considered within the impact assessments at PEI Report and ES.

Conclusion

We welcome a discussion and your opinion on the information provided above. Should it not be possible for Natural England to resource a call or review this letter/memo ahead of the preparation of the PEI, we will progress the PEI on the basis of what we have outlined above and consider any comments from Natural England during statutory consultation.

Kind regards

Dr [REDACTED]

Associate Director, Environment and Sustainability, UK and Ireland
AECOM

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[Click here to connect with me on LinkedIn](#)

My normal working days are Tuesday to Friday.
Advance notice of holidays: 21st October to 31st October inclusive.

If you receive this email outside of your normal working hours please only respond during your normal working hours

2. Response from Natural England: 31 March 2023

- 2.1.1 The following response was received from Natural England on 31 March 2023. The letter also contained advice on Ecology, and therefore only the relevant sections of the letter are reproduced.

Date: 31 March 2023
Our ref: 384466



BY EMAIL ONLY

To [Redacted]

Dear Francesca Sutton

Discretionary Advice Service (Charged Advice)

Project Name: East Yorkshire Solar Farm

Location: Land between Selby and East Riding of Yorkshire

Thank you for your consultation on the above dated 16 March 2023.

This advice is being provided as part of Natural England's Discretionary Advice Service.

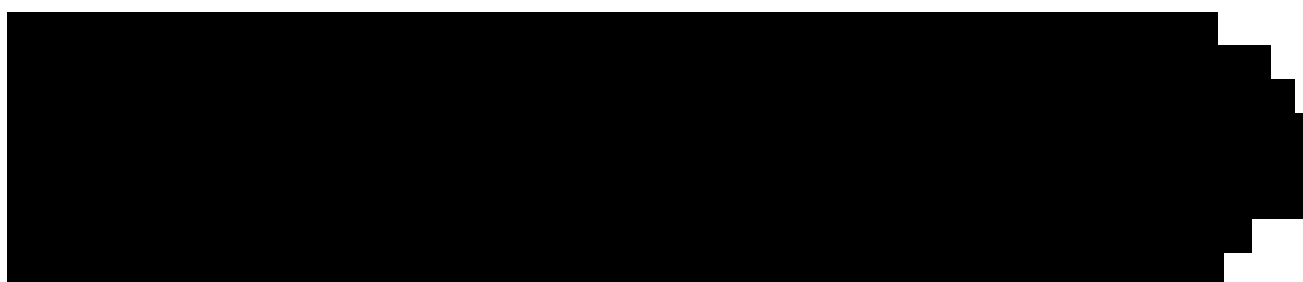
This advice is provided in accordance with the Quotation and Agreement dated **A008504**.

The following advice is based upon the information within the following documents provided by the developer;

1. East Yorkshire Solar Farm — Discretionary Advice Service on Survey and Assessment Methodology (dated 15 March 2023)
2. EYSF Overall Layout (dated 15 February 2023)
3. Figure 1 Site Location and Boundary Plan (dated 21 February 2023)
4. Figure 2 Statutory Ecological Sites (dated 21 February 2023)
5. Figure 2 Predictive ALC (dated 13 February 2023)
6. Figure 3 Provisional and Post 1988 ALC (dated 13 February 2023)
7. Figure 4 Reconnaissance ALC Survey for the Solar PV Site (dated 13 February 2023)
8. LRA Reconnaissance ALC Report (dated 21 January 2023)
9. A Predictive ALC Map of East Yorkshire Solar Version 1 and 2 (dated 10 November 2022)

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

1.0. Ecological Advice



It		

[REDACTED]

[REDACTED]

[REDACTED]

2.0. Best and Most Versatile Land and Soils

2.1. *Introduction*

Natural England is the statutory adviser on the use of best and most versatile agricultural land within the planning system and advises on wider soil protection issues as a component of the natural environment.

Natural England has been commissioned by AECOM to provide discretionary pre-application advice on the baseline soil and Agricultural Land Classification (ALC) data collection approach to support a forthcoming Nationally Significant Infrastructure Project (NSIP) application for the proposed >50 MW East Yorkshire Solar Farm (EYSF) development covering ca 1167 ha.

This report contains Natural England's advice on the:

- Proposed baseline data approach set out in the email titled 'East Yorkshire Solar Farm: Request for Discretionary Advice on Soils (411969 DAS East Yorkshire Solar Farm)' sent to Natural England on 15th February 2023 from Dr Helen Simpson (AECOM)
- Agricultural Quality Report (prepared by Land Research Associates) dated January 2023
- A Predictive ALC Map for East Yorkshire Solar (Version 1 and 2) (prepared by Cranfield University) dated November 2022

2.2. Proposed baseline data approach set out in the email titled 'East Yorkshire Solar Farm: Request for Discretionary Advice on Soils (411969 DAS East Yorkshire Solar Farm)' sent to Natural England on 15th February 2023 from Dr Helen Simpson (AECOM)

Natural England have previously provided comment on the proposed Scheme Scoping Report. Natural England advised that the proposed detailed ALC survey was appropriate, but that the grid connection corridor should also be subject to a detailed ALC survey. [EN010143-000008-EYSF - Scoping Opinion.pdf \(planninginspectorate.gov.uk\)](#).

AECOM would like to formally agree a change in methodology since Scoping for the baseline ALC for the (i) Cable Corridor and (ii) solar PV site.

(i) **Baseline ALC data collection for the Cable corridor**

The methodology for determining the amount of best and most versatile (BMV) land within the Grid Connection Corridor proposed at Scoping was to calculate the proportion of Subgrade 3a/3b land within the Grid Connection Corridor using the Provisional Agricultural Land Classification (ALC) data in combination with Natural England's Likelihood of BMV mapping.

Natural England's Scoping response requested that the grid connection corridor should be subject to a detailed ALC survey (1 auger per ha plus representative pits).

At Scoping the cable corridors had not yet been determined and so no baseline data for this element of the Scheme were presented within the Scoping Report. The cable corridors have now been described.

The updated methodology set out in the email (15/02/2023) proposes the use of a commissioned Cranfield University 'Predictive ALC data' for the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES) assessments in place of the methodology proposed at Scoping. AECOM would also like to agree the use of the Predictive ALC dataset to describe the baseline ALC for these areas.

The mapping presented in the Cranfield University Report uses the Scoping Boundary. The Cranfield University Report utilises the 1:250,000 National Soil Map for England and Wales (Predictive mapping Version 1); and published soil mapping at 1:25,000 or 1:50,000 scale (Predictive mapping Version 2).

The Cranfield University Report (version 2) indicates the cable corridor is predominantly ALC Subgrade 3b to the north of the site connecting Solar PV areas 1, 2 and 3. The cable corridor to the south west of the main solar PV areas is a mix of Grade 1, Grade 2, Subgrade 3a (BMV) and Subgrade 3b.

The report does not provide any figures on areas of each predicted ALC grade within the Project Boundary (for Version 1 or 2).

Whilst this predictive mapping provides an indication of the ALC grade, and thus the potential impact on BMV agricultural land, it does not provide the soil details required to inform soil management which would feed into the Soil Management Plan. There is a risk of soil damage, ALC degradation and long term or permanent loss of BMV from cable installation. Soil will need to be handled according to best practice and reinstated to a high standard to reduce the impacts. The results from a detailed ALC survey would provide soils data to inform a soil management plan for the whole site regardless of whether the use is permanent or temporary in nature.

We require that land quality and soil resources information is gathered for any land that is disturbed by the development, so the cabling route should be surveyed. Ideally a full detailed ALC survey would have been carried out across the whole site. With the Predictive mapping provided (specifically Version 2), it is recommended in this instance, that an ALC survey is undertaken within the cable route, with flexibilities around density depending on land quality identified in the Predictive ALC Mapping report (version 2). A semi detailed survey is acceptable where the site is clearly expected to be non-BMV (1 auger per 2 ha plus representative pits), but where BMV has been identified, a detailed ALC survey would be expected (1 auger per ha plus representative pits).

This type of survey requires an experienced ALC surveyor, in order to make the correct professional judgements, where to introduce flexibility. A semi detailed survey may not identify all of the BMV land.

As a result, we request that the site is revisited to carry out a detailed ALC survey of the predicted BMV areas and a semi-detailed survey in the areas currently identified to be non-BMV to confirm its extent. The ALC survey will enable a soil management plan to be generated for any areas to be disturbed (temporary and permanent) to ensure correct handling and restoration of soils, and onsite reuse of any surplus soils stripped from areas of permanent development.

Detailed comment on the Cranfield University Report is presented in Section 4 of this report.

(ii) **Baseline ALC data collection for the Solar PV Site**

In addition to commissioning the Cranfield University Predictive data described above, Land Research Associates (LRA) have been commissioned by the Applicant to undertake a reconnaissance scale (one survey point per every 4 to 5 ha) ALC survey of all land within the Solar PV Site (except Solar PV Area 1g and 1h which came into the Scheme after completion of the survey). The reconnaissance ALC survey was undertaken in January 2023 across an area of approximately 1,173 hectares (ha).

The Scoping Report proposed a detailed (one point per ha) ALC survey across the whole of the Solar PV Site. An updated methodology is proposed in the email (15/02/2023), is driven by the high degree of soil uniformity which has been identified by the reconnaissance ALC survey, coupled with the current baseline data and visual observations of Solar PV Areas 1g and 1h indicating to also be predominantly heavy clay soils.

The Cranfield University Report (version 2) indicates the Solar PV site is predominantly ALC Subgrade 3b, with areas of Predicted ALC Subgrade 3a and Grade 2 in areas 1e, 1g, 1h, 2g and 3c. The LRA reconnaissance ALC survey identifies the majority of the Site to be ALC Subgrade 3b. The reconnaissance ALC survey also identifies BMV agricultural land in areas 1a, 2g and 3c largely in agreement with the Predictive mapping. However, a small area of Grade 4 in area 1e has been identified in the reconnaissance survey due to flood risk. This land is mapped in the Predictive Mapping as Grade 2. It is considered that the reconnaissance ALC survey is likely to be more reliable than the predictive mapping.

The Applicant proposes that the whole of the Solar PV Site (including Areas 1g and 1h) will be investigated at a minimum density of 1 sample per 2 ha (incorporating the data from the reconnaissance survey). Where land quality grade is found to vary an increased density of 1 observation per hectare will be employed. Further limited sampling for PSD will be undertaken during the full survey.

The Applicant states that within the PEIR, the baseline for the currently unsurveyed areas 1g and 1h will be taken from the Predictive ALC, with survey data presented within the ES.

Ideally a full detailed ALC survey would have been carried out across the whole site, but recognise that as a reconnaissance ALC survey has been undertaken across the majority of the proposed site alongside the Predictive ALC mapping, in this instance, there could be some flexibility as proposed by the Applicant.

In the circumstances, Natural England is content with the proposed changes to the ALC survey approach for the Solar PV areas as set out in the email (15/02/2023), with the following comments.

It is agreed an ALC survey is undertaken within the Solar PV Areas, with flexibilities around density depending on land quality identified in the reconnaissance ALC survey and Predictive ALC Mapping report. In the circumstances, a semi detailed survey (1 auger per 2 ha plus representative pits) is acceptable where the site is clearly expected to be non-BMV, but where BMV has been identified (including Areas 1a, 2g and 3c), a detailed ALC survey (1 auger per 1 ha plus representative pits) would be expected. A detailed ALC survey is expected to be undertaken within Areas 1g and 1h, particularly given the findings of the Predictive ALC map. We would also require a detailed ALC survey density for any proposed permanent infrastructure (i.e. substation).

This type of survey requires an experienced ALC surveyor, in order to make the correct professional judgements, where to introduce flexibility. We would hope that the ALC survey would inform the layout of the development, i.e. avoid BMV for permanent development. A semi detailed survey may not identify all of the BMV land.

The ALC survey will enable a soil management plan to be generated for any areas to be disturbed (temporary and permanent) to ensure correct handling and restoration of soils, and appropriate onsite use of soils for habitat enhancement and onsite reuse of any surplus soils stripped from areas of permanent development.

The Scoping Report referred to sampling being undertaken for soil organic matter (SOM), pH, and macronutrients (P, N, K, Mg), to assign sensitivity to the soil resources within the Site. The Applicant has subsequently determined that a robust assessment, following the IEMA guidelines 'A New Perspective on Land and Soil in Environmental Impact Assessment', can be made without the provision of this analysis. It is therefore proposed that the above sampling will not be undertaken as it will not contribute to the assessment of impacts to soils and agricultural land.

Natural England advise that soil sampling to include SOM, pH, and macronutrients can inform appropriate soil re-use as set out in Defra's [Construction Code of Practice for the Sustainable Use of Soils on Construction Sites](#). This may be particularly important to firstly identify areas of the Site most appropriate for habitat enhancement. Secondly, this testing will also be important for areas identified for habitat enhancement to inform the most suitable habitats, including the most appropriate seed mix etc.

2.3. Agricultural Quality Report (prepared by Land Research Associates) dated January 2023

The ALC survey carried out by LRA is of a low density, reconnaissance sampling density (1 soil auger boring per 4 to 5 hectares) and is supported by 12 representative soil observation pits and 24 topsoil texture analyses. The reduced survey density is acknowledged by LRA as being below that recommended by Natural England, however is intended to give provisional grades only.

From the information presented in the email (15/02/2023), it is expected this survey will be supplemented with additional ALC survey data undertaken at a detailed (1 per ha) density and semi detailed (1 per 2 ha) density approach as discussed in point 2, above.

The output of this reconnaissance ALC survey should be used to inform the upcoming ALC survey approach (See response to points 2i and 2ii, above).

At this stage a detailed review of the data has not been undertaken, however the presented data methodology appears reasonably robust, following the MAFF (1988) *Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*. Initial comments on the Agricultural Quality Report (2023) include:

- The name, qualification and experience of the lead surveyor undertaking the ALC survey work is not given. This is important to demonstrate the likely competence of the lead surveyor.
- Munsell soil colour notation is only provided for the soil pits. Munsell colours are necessary to determine whether the soil horizon is gleyed or not. It is not clear which colours have been used in the list of auger samples, therefore it is not clear whether the wetness class ascribed to each auger observation has been correctly assessed in accordance with the published ALC criteria for grading (MAFF, 1988).
- The survey has not graded the Solar PV Site area 1g and 1h, nor the route of trench line for the underground cabling; an ALC survey should be undertaken for these areas as part of the baseline soil and ALC information given that soil disturbance will take place in these areas.

2.4. A Predictive ALC Map for East Yorkshire Solar (Version 1 and 2) (prepared by Cranfield university) dated November 2022

At this stage a detailed review of the data has not been undertaken, however the presented methodology and data, specifically pertaining to 'Version 2' appears reasonably robust.

The report could usefully provide areas of each identified ALC grade within the site boundary.

2.5. Additional Comments

Para 4.2.3 PPG Renewable and low carbon energy contains advice in relation to greenfield land which should be referred to in the PEIR and ES, namely i) '*whether the proposed use of agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land*'; and ii) the proposal allows for continued agricultural use where applicable and or encourages biodiversity improvements around arrays. The PPG also draws attention to two ministerial statements which provide planning authorities with further advice about protecting the best agricultural land.

The ES should present the detailed and semi-detailed ALC survey information. This should include a breakdown of the ALC grades (area, %) in relation to the application site boundary and include ALC and soil data for the cable route and areas of permanent infrastructure and habitat enhancement. A breakdown of the proposed site into disturbed and undisturbed land categories should also be included, split by ALC grade, to help illustrate the potential for impact on agricultural land grade.

This site-specific detail informed through a site survey is required to assist the decision maker to reach a decision and apply the National Policy Statement for Renewable Energy Infrastructure (EN-3).


Natural England advise that within the ES, there is a commitment to decommissioning and an outline decommissioning plan.

The presence of peat soils in the floodplain in area 1e identified through the reconnaissance ALC survey is noted and agree the need for proper delineation and consideration of this resource, particularly with regards to its carbon storage capability. This highlights the usefulness of on the ground data for informing appropriate soil management.

The advice provided in this letter has been through Natural England's Quality Assurance process

The advice provided within the Discretionary Advice Service is the professional advice of the Natural England adviser named below. It is the best advice that can be given based on the information provided so far. Its quality and detail is dependent upon the quality and depth of the information which has been provided. It does not constitute a statutory response or decision, which will be made by Natural England acting corporately in its role as statutory consultee to the competent authority after an application has been submitted. The advice given is therefore not binding in any way and is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course. The final judgement on any proposals by Natural England is reserved until an application is made and will be made on the information then available, including any modifications to the proposal made after receipt of discretionary advice. All pre-application advice is subject to review and revision in the light of changes in relevant considerations, including changes in relation to the facts, scientific knowledge/evidence, policy, guidance or law. Natural England will not accept any liability for the accuracy, adequacy or completeness of, nor will any express or implied warranty be given for, the advice. This exclusion does not extend to any fraudulent misrepresentation made by or on behalf of Natural England.

Yours sincerely


Yorkshire and Northern Lincolnshire Area Team
Natural England

Email:  [@naturalengland.org.uk](mailto: [redacted]@naturalengland.org.uk)

3. Email to Natural England: 9 May 2023

- 3.1.1 The email and attached memo responded to the queries raised in Natural England's response of March 2023 and presented a summary of the proposed methodology for baseline data collection based upon the advice issued by Natural England. No direct response to this email was received from Natural England, however they provided a Statutory Consultation response on 16 June 2023 as further discussed in **Chapter 15: Soils and Agricultural Land, ES Volume 1 [EN010143/APP/6.1]** and the **Consultation Report [EN010143/APP/5.1]**. The memo is presented as Annex B.

From: [REDACTED]
Cc: [REDACTED]
Bcc: [REDACTED]
Subject: East Yorkshire Solar Farm (DAS: A008504) - Confirmation of Soils and ALC Survey Methodology
Date: 09 May 2023 18:39:00
Attachments: [image001.png](#)
[East Yorkshire Solar Farm \(DAS A008504\) - Confirmation of Soils and ALC Survey Methodology.pdf](#)

Dear [REDACTED],

Discretionary Advice Service (Charged Advice): A008504.

Project Name: East Yorkshire Solar Farm

Location: Land between Selby and East Riding of Yorkshire

Thank you for your letter dated 31 March 2023 (your reference: 384466) and the pre-application advice on the baseline soil and Agricultural Land Classification (ALC) data collection approach for East Yorkshire Solar Farm. The attached memo confirms the details of the soil and ALC survey, based upon the advice received.

Additionally, I wanted to let you know that the Preliminary Environmental Information Report (PEI Report) for the Scheme was published on 9 May 2023 and is available at the following link: <https://www.boom-power.co.uk/east-yorkshire/>. The Statutory Consultation period for the Scheme will run for six-weeks from 9th May to 20 June 2023.

Once again thank you for your response to our queries.
If you have any further comments, please do not hesitate to contact me.

Best regards

[REDACTED]

Associate Director, Environment and Sustainability, UK and Ireland
AECOM

[REDACTED]

[REDACTED]

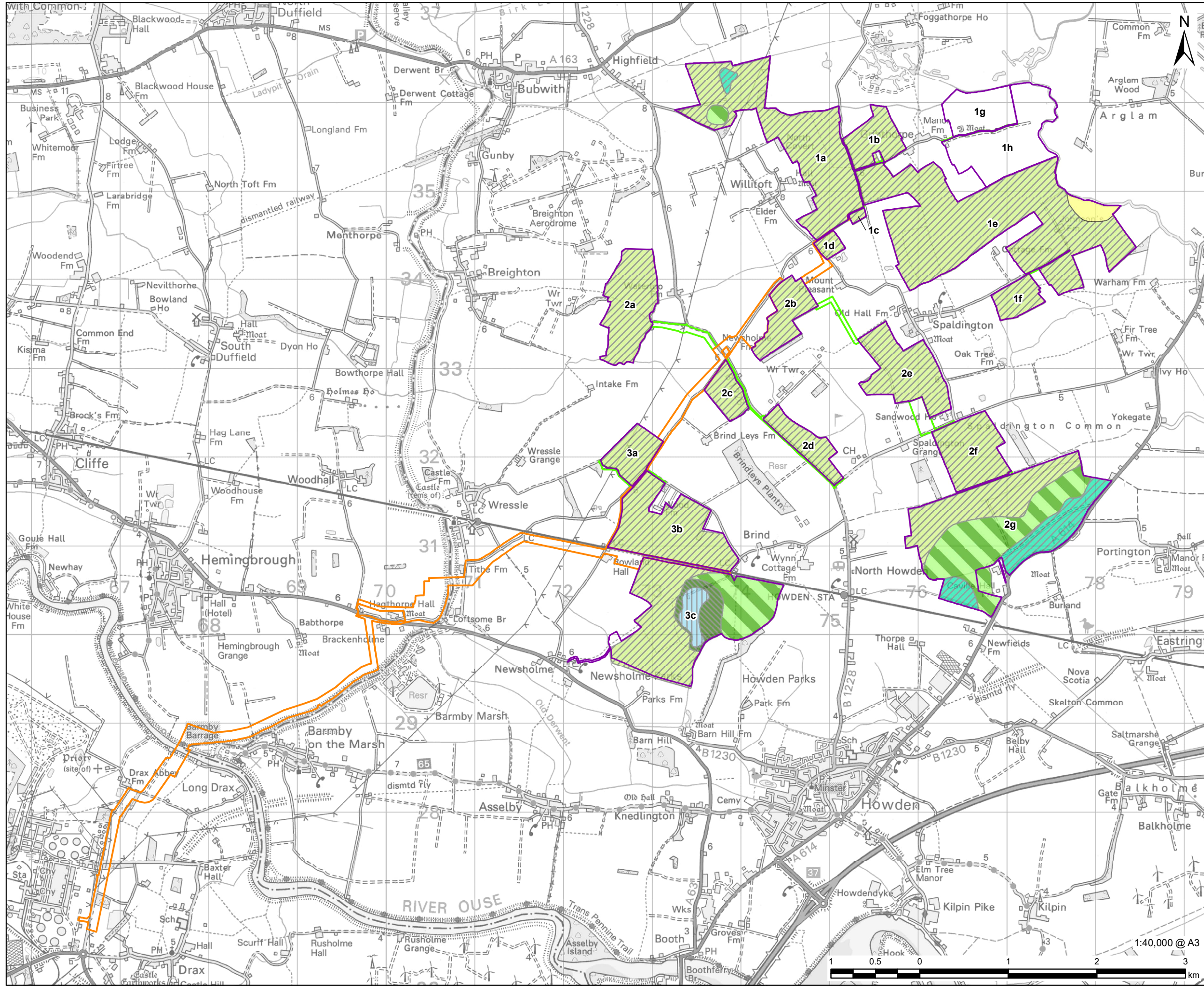
If you receive this email outside of your normal working hours please only respond during your normal working hours

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Annex A



PROJECT
East Yorkshire Solar Farm

CLIENT
East Yorkshire Solar Farm Limited

CONSULTANT
AECOM Limited
Midpoint,
Alencon Link
Basingstoke, RG21 7PP
www.aecom.com

- LEGEND**
- Solar PV Site (xx = Solar PV Area)
 - Grid Connection Corridor
 - Interconnecting Cable Corridor
 - Reconnaissance Agricultural Land Survey LRA**
 - Mainly grade 1 or 2
 - Mainly subgrade 3a
 - Mix of subgrades 3a and 3b
 - Mainly subgrade 3b
 - Grade 4
 - Mainly BMV land

NOTES
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ISSUE PURPOSE
PEI Report

PROJECT NUMBER
60683115

FIGURE TITLE
Reconnaissance Agricultural Land Classification Survey for the Solar PV Site

FIGURE NUMBER
Figure 15-3

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Annex B

To: [REDACTED]
Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

CC: [REDACTED]

Project name:
East Yorkshire Solar Farm

Project ref: [REDACTED]

**Discretionary Advice Service
(Charged Advice) Reference:**
[REDACTED]

From:
[REDACTED]

Date:
9 May 2023

Memo

Discretionary Advice Service (Charged Advice): A008504.
Project Name: East Yorkshire Solar Farm
Location: Land between Selby and East Riding of Yorkshire
Subject: Confirmation of Soils and ALC Survey Methodology

Dear [REDACTED],

Discretionary Advice Service (Charged Advice): A008504.
Project Name: East Yorkshire Solar Farm
Location: Land between Selby and East Riding of Yorkshire

Thank you for your letter dated 31 March 2023 (your reference: 384466) and the pre-application advice on the baseline soil and Agricultural Land Classification (ALC) data collection approach for East Yorkshire Solar Farm. I am writing to confirm the details of the soil and ALC survey, based upon the advice received.

The Preliminary Environmental Information Report (PEI Report) for the Scheme was published on 9 May 2023 and is available at the following link: <https://www.boom-power.co.uk/east-yorkshire/>. The Statutory Consultation period for the Scheme will run for six-weeks from 9th May to 20 June 2023.

Solar PV Site

With respect to the Solar PV Site (i.e., the land that will be the operational solar farm should consent be granted) (approximately 1,275 ha), we will adopt the approach set out in your advice. Building on the data already collected in the reconnaissance survey conducted in October 2022 – January 2023 this will be:

- Semi-detailed survey (1 auger per 2 ha plus representative pits) to be undertaken where (from the reconnaissance survey) the land is clearly expected not to be Best and Most Versatile (non-BMV);
- Detailed survey (1 auger per 1 ha plus representative pits) where BMV has been identified to accurately define the BMV extent;
- Detailed survey across all of Solar PV Areas 1a, 2g and 3c due to the predicted extend of BMV;

- Detailed survey across all of Solar PV Areas 1g and 1h which were added to the Scheme after completion of the reconnaissance survey (due to the difference between the Cranfield University Predictive ALC and the survey data for other land adjacent River Foulness); and
- Detailed survey and at the sites of the two 33 kV/132 kV Grid Connection Substations (permanent development).

These surveys are programmed to commence in May 2023. The survey data will be used to inform site design (to avoid creation of hardstanding on BMV land where practicable), the impact assessment presented in the Environmental Statement (ES), and the Framework Soil Management Plan (SMP) which will be an appendix to the ES (and the detailed SMP prepared prior to construction).

Interconnecting Cable Corridor

Our DAS request (dated 15 February 2023) stated that the baseline data for the Interconnecting Cable Corridor (housing the cables which will link the different areas of solar panels) to be used in the ES would be taken from the Predictive ALC dataset commissioned from Cranfield University and the National Soils map. However, in a change to this approach, as this land is directly adjacent to the Solar PV Site and only covers approximately 25 ha some of which is roads and roadside, where survey access is granted these relatively small areas of agricultural land will be incorporated into the above survey programme for the Solar PV Site. Where access is not granted in time for the ES, the ES will use data from the Predictive ALC to inform the assessment and the SMP will draw upon data from the adjacent fields in the Solar PV Site (as the reconnaissance survey has shown the soils to be highly uniform). Only a proportion of the land within the identified Interconnecting Cable Corridor will be subject to disturbance during the construction phase of the Scheme and the land will be reinstated to its original land use after the cables are installed.

Grid Connection Corridor

Thank you for your comments on the proposed methodology for baseline data collection for the Grid Connection Corridor (connecting the Solar PV Site to National Grid's Drax Substation). We note your comments on the Predictive dataset not providing the soil details required to inform the detailed SMP. We therefore confirm that a soil and ALC survey will be undertaken.

The DAS response stated Natural England '*require that land quality and soil resources information is gathered for any land that is disturbed by the development*'. The Grid Connection Corridor describes an approximate 100 m wide corridor in which the Grid Connection Cables could be placed to allow spatial flexibility during final detailed design post-consent. The actual working corridor (area of disturbance) would typically be a maximum of 30 m and cables would be routed along roads and roadside where possible to avoid impact to agricultural land. Therefore, undertaking soil and ALC survey prior to the final routing of the working corridor being defined (which will occur post-consent) would result in the majority of data collected being for areas where no disturbance would occur. The survey will therefore be undertaken post consent and prior to construction on any agricultural land within the defined working corridor (i.e., agricultural land subject to direct disturbance) so that the survey information can be used to inform the detailed SMP and provide baseline land quality data for the reinstatement of land within the working area of the cable route.

The survey will be conducted to the densities described within your DAS response based on land quality identified by the Predictive ALC mapping. Where (from the Predictive mapping (version 2)) agricultural land is clearly expected to be non-BMV, a semi-detailed (one auger per two ha plus representative soil pits) will be undertaken, but where BMV land is identified a detailed ALC survey (one auger per ha plus representative soil pits) will be undertaken. Delivery of the survey and the detailed SMP would be secured through DCO Requirement.

The baseline data for the Grid Connection Corridor to inform the ES will be taken from the Predictive ALC dataset commissioned from Cranfield University and the National Soils Map data. A desk-based approach to the gathering of baseline soils and ALC data for areas of temporary disturbance is commonly employed in the assessment of linear energy infrastructure projects and local examples of where this methodology has been used include Viking Link (an interconnector from Denmark with

60 km underground cable through Lincolnshire) and Scotland England Green Link 2 (SEGL2) which intersects with the Site Boundary in Solar PV Areas 2g and 3c on the Grid Connection Corridor near Drax Power Station.

Survey experience

We note your comment regarding the need for the surveys to be completed by an experienced soil surveyor. The surveys to date have been conducted by a specialist and highly experienced soils consultant, Land Research Associates (LRA), led by Dr. Mike Palmer (CSci, MISoilSci), who also authored the Reconnaissance Survey Report. LRA will complete the surveys of the Solar PV Site and Interconnecting Cable Corridor. The Applicant will ensure that the contract for the surveys of the Grid Connection Corridor is also awarded to a suitably experienced firm of soil surveyors.

Predictive ALC

Regarding your comment on the Cranfield University predictive ALC report not providing data on areas of each predicted ALC grade within the Site Boundary, these data are provided within Chapter 15: Soils and Agricultural Land of the PEI Report for the Scheme which is available at the following link: <https://www.boom-power.co.uk/east-yorkshire/> . The associated figures and appendices can also be accessed via this link.

Laboratory testing

Your DAS response acknowledges that testing for soil organic matter (SOM), pH, and macronutrients (P, N, K, Mg) is not required in order to assess the impacts to soil resources following the IEMA guidelines 'A New Perspective on Land and Soil in Environmental Impact Assessment'. However, we note your comment that such sampling can be used to inform appropriate sustainable soil reuse; and may be important in identifying areas of the Site most appropriate for habitat enhancement and to inform the most suitable habitats, including the most appropriate seed mix etc. to be used within those areas.

The majority of soils within the Solar PV Site will not be disturbed by construction operations and any soils which are stripped and stored (within the Solar PV Site and Cable Corridors) will be restored (to their original location) within the Site. Therefore, this information is not required to inform soil reuse. The proposed areas of habitat creation within the Solar PV Site (grassland, woodland/screening) have been designed to provide screening and green buffers from residential properties and so their locations are unlikely to change in the final ES design. The Scheme will therefore undertake limited sampling for SOM, pH, and macronutrients in these areas to inform the planting which will take place.

Once again thank you for your response to our queries.

If you have any further comments, please do not hesitate to contact me.

Best regards

[Redacted signature]

Associate Director, Environment and Sustainability, UK and Ireland
AECOM

[Redacted contact information]

3. Abbreviations

Abbreviation	Definition
DAS	Discretionary Advice Service
PEI Report	Preliminary Environmental Information Report