

JE/P20-1298

29 October 2021

William Allwood
Uttlesford District Council
Council Offices
London Road
Saffron Walden
Essex
CB11 4ER

Dear William,

UTT/21/1833/FUL

CONSTRUCTION AND OPERATION OF A SOLAR FARM COMPRISING GROUND MOUNTED SOLAR PHOTOVOLTAIC (PV) ARRAYS AND BATTERY STORAGE TOGETHER WITH ASSOCIATED DEVELOPMENT, INCLUDING INVERTER CABINS, DNO SUBSTATION, CUSTOMER SWITCHGEAR, ACCESS, FENCING, CCTV CAMERAS AND LANDSCAPING.

LAND WEST OF CUTLERS GREEN, BOLFORD STREET, CUTLERS GREEN, THAXTED (X: 558848, Y: 231009)

The below technical note has been prepared and is submitted in response to the letter from Cutlers Green Residents Group and the appended technical reports undertaken by 3rd party consultants.

The note offers a response to the comments made in the letter and the technical reports. We request that the below information is taken into your consideration when determining the application.

Letter from Cutlers Green Residents Group

The letter from the residents group provides a summary of the technical reports that were undertaken on its behalf and the comments made are addressed below, in direct response to the individual technical reports.

With regard to solar development in the UK the letter does makes a number of statements that we wish to address, including that:

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

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- There are hundreds of substations in the UK with capacity.
- It doesn't have to be located here.
- The relative inefficiency of solar is well documented; and, there is a clear move away from large scale solar energy production.

We are unsure as to the basis of the comment that there hundreds of substations with capacity. As a company, Low Carbon has looked at all parts of the UK Power Networks, Western Power Distribution, SSEN networks and, parts of Scottish Power Energy Network, Electricity North West and Northern Power Grid networks, where solar irradiation is sufficient. This has led to a number of projects coming forward in various parts of the country, not exclusively in Uttlesford, Essex or the South East. However, the number of viable connections relative to the number of substations is infinitesimally small. The process of investigating viable opportunities to connect to the networks around the country is constant and the opportunities are decreasing. This means that areas with available, viable capacity have to be considered. Currently, the Thaxted substation has capacity to accommodate broadly this size of project and this location has been arrived at by filtering out higher level planning and other constraints before identifying whether land of sufficient size to accommodate the project, is, ultimately available to us.

There is a plethora of publications, guidance and announcements from the Government supporting the role of solar in the UK's future energy mix including; the Energy White Paper: Powering our net zero future; The Contracts for Difference (CfD) Allocation Round 4 and; most recently, within the Draft National Policy Statement for Renewable Energy Infrastructure (EN-3) which sets out that:

- *“Solar farms are one of the most established renewable electricity technologies in the UK and the cheapest form of electricity generation worldwide. Solar farms can be built quickly and, coupled with consistent reductions in the cost of materials and improvements in the efficiency of panels, large-scale solar is now viable in some cases to deploy subsidy-free and at little to no extra cost to the consumer. The Government has committed to sustained growth in solar capacity to ensure that we are on a pathway that allows us to meet net zero emissions. As such solar is a key part of the government's strategy for low cost decarbonisation of the energy sector.”*

In addition to the shift towards net zero, the recent issues surrounding the UK's energy security and the substantial energy price increases being experienced by consumers reminds us that we cannot rely on foreign-derived energy sources. The proposal is part of the wider solution to address these issues.

PLANNING MATTERS (Response to letter from JS Planning Law)

The letter from JS Planning Law states that planning permission should be refused due to the unacceptable impact on landscape character. The letter claims that the LVIA is not credible, but does not say why, other than referring to the JFA response that has been addressed below. The impact on countryside and footpath users has been addressed by the landscape and visual assessment.

The letter claims that the proposal is contrary to Policy TXLSC1 regarding protecting the rural setting surrounding Thaxted. However, the policy confirms that maps 7 and 8 define the rural setting of Thaxted but the application site is located outside of these areas. As such, the assertion that the proposal is contrary to policy TXLSC1 is incorrect.

Regarding Local Plan Policy ENV15, the letter states that the Planning Statement claims the development accords with policy ENV15. In fact, the Planning Statement makes clear that it is only the criteria within policy ENV15, as the main renewable energy policy in the Local Plan, that have been assessed by the Planning Statement.

Policy ENV15 is clear that it relates to 'small scale renewable energy' development. The letter from JS Planning Law states that Policy ENV15 'does not support this application' and is 'thus contrary to Policy ENV15'. That position is based on a fundamental misunderstanding of the proper application of planning policy. If a policy is not directly relevant to a proposal it should not be inferred that the policy is not supportive of proposal that it does not apply to. Rather, it is the case that the Local Plan does not contain a policy that is directly relevant to large scale renewable energy development.

The letter suggests that Thaxted is 'absorbing more than its fair share' of solar farm schemes. But as the letter correctly points out, the NPPF is clear that proposals for renewable energy are not required to demonstrate a need. Furthermore, it is not clear what is meant by a 'fair share'. The UK has made a commitment to reduce CO2 emissions and it is widely accepted that meeting these targets will be very challenging. In addition,

some areas of the country (and local authority areas) will be more suited to the generation of renewable energy than others. For example, a tightly defined city based local authority area with a relatively high population will clearly struggle to provide a significant share of renewable energy, relative to its population.

The Impact of vibrations from inverters is raised as a potential issue, but no specific information is provided. Vibration is not something we have come across anywhere before as an issue.

In relation to the loss of agricultural land, the letter states that the application site includes 'some of the UK's most versatile and productive arable land '. The basis for this assertion is unclear, and is not explained or justified further. If the letter is simply making the point that the site includes Best and Most Versatile land, then it is also relevant to say that such land is to be found in large quantities across wide areas of the UK. It is also pertinent that a detailed ALC report has been included within the submission pack and clearly shows that the land is varied mix of quality, and every attempt has been made to locate the equipment on land of lesser quality.

Regarding the carbon saving benefits that the proposals will deliver, the letter claims that the loss of food production at the site would 'eliminate any perceived theoretical carbon reduction'. The basis for this statement is unclear. For the UK to provide the scale of power from solar envisaged by the Government, agricultural land is going to be needed.

A number of organisations including the NFU and the Solar Trade Association (now Solar Energy UK) have looked at the land take for solar farms in the UK in the past and concluded the actual land take is relatively small. A very useful graphic courtesy of Lightsource shows comparisons with other land uses: <https://s3-eu-west-1.amazonaws.com/assets.lightsource-re.com/2020/09/Solar-in-the-UK-ID-1765335.pdf>. Even allowing for nearly twice the deployment of solar farms since the original estimates and, noting that the area required per MW has fallen to around 1 hectare per MW, only around 0.1% of the UKs land is used for solar farms. This compares with 1.11% used for golf courses.

LANDSCAPE AND VISUAL

This section has been prepared in response to comments within the '*Critique of the Ecological Impact Assessment Report and the Landscape and Visual Assessment for Land adjacent to Thaxted, Essex Application No UTT/21/1833/FUL*' report produced by JFA Environmental Planning (July 2021).

In summary, the JFA critique concludes the following:

- The Theoretical Zone of Visual Influence (ZTVI) at Appendix 1 to the LVIA shows that the proposed development is likely to be visible up to and beyond 5km away; however the study area is very small, with no justification.
- The introduction of a large-scale solar farm is clearly an alien factor in this landscape.
- *"This is an historic landscape of settled character with few or no elements that reflect the proposed solar farm. As such, it has a low capacity to absorb the change proposed, and the impact of such a change on the landscape would be high, essentially permanent (40+ years) and severe. All of the impact levels set out are understated and should be raised a level."*
- There is no discussion of how appearance of the solar farm will protect or enhance the local landscape character as required by Local Plan Policy, nor are special reasons put forward for its location.
- The aggregate effect on individual residences also needs to be evaluated. Whilst there may be "no right to a view" impacts on outlook from residential properties are a material consideration.
- The setting effect of the development on heritage assets needs to be addressed

Response to critique

Critique: The Theoretical Zone of Visual Influence (ZTVI) at Appendix 1 to the LVIA shows that the proposed development is likely to be visible up to and beyond 5km away however the study area is very small with no justification.

Section 1.7 of the Methodology (Appendix 3 of the LVIA) states that:

"The study area for this LVIA covers a 3km radius from the site. However, the main focus of the assessment was taken as a radius of 1km from the site as it is considered that even with clear visibility the proposals would not be perceptible in the landscape beyond this distance."

Whilst a SZTV is a useful guide in identifying where a proposed development would be theoretically visible, it cannot be used as a definitive visual envelope as it does not include the screening effect of vegetation such as hedgerows and trees or other vertical elements.

The SZTV does not illustrate the amount of the development visible. For example, it may be that just the top 20cm of a small section of one panel is visible from the area highlighted on the SZTV, which when viewed from a location such as beyond 1km away may not be perceptible to the naked eye or cause any change to the composition of a view, therefore having no adverse effect on the receptor at that location.

For the above reasons, the SZTV is to be used as a guide only, and it is incorrect to rely solely on it to determine visibility as suggested. Instead, it is used as an informative starting point from which to begin the scope of potential views. A site visit to record viewpoint photography was carried out in October 2020. Following the site visit and review of desktop information including the screened ZTV it transpired that the visibility of the proposed solar farm would be largely contained to its immediate environs (approx. 1km). Considering the established surrounding vegetation, and intervening topography it was assumed that effects on views are unlikely to be significant beyond 3km from the site and were therefore scoped out. The ten representative viewpoints surrounding the Site were identified following this scoping process.

GLVIA3 also states within paragraph 1.17 that when identifying landscape and visual effects there is a "need for an approach that is in proportion to the scale of the project that is being assessed and the nature of the likely effects. Judgement needs to be exercised at all stages in terms of the scale of investigation that is appropriate and proportional." Including views 5km or beyond is not considered to be proportionate to this scale of study and size of the proposed scheme.

Critique: The introduction of a large-scale solar farm is clearly an alien factor in this landscape.

“This is an historic landscape of settled character with few or no elements that reflect the proposed solar farm. As such, it has a low capacity to absorb the change proposed, and the impact of such a change on the landscape would be high, essentially permanent (40+ years) and severe. All of the impact levels set out are understated and should be raised a level.”

The change is accepted within the assessment and a medium magnitude of change assessed for landscape character. A solar scheme of this nature is not deemed to cause a high level of change due to its scale, response to the underlying topography, low lying elements (when compared to residential and wind developments) and pattern which sits within the existing field structure.

The site and surrounding area are a working agricultural landscape. It is not protected by any designations for its historic character, defining elements or landscape character, it is not of high sensitivity and therefore would not be of low capacity to accommodate the proposed development. Existing landscape defining elements such as “woodland patches and copses” and hedgerows around the site are to be retained and “broken hedgerows” infilled, with new hedgerows proposed to strengthen and enhance the existing structure.

The Proposed Development is of a long-term nature (up to 40 years) therefore all effects are assumed to be temporary unless otherwise stated.

Critique: There is no discussion of how appearance of the solar farm will protect or enhance the local landscape character as required by Local Plan Policy, nor are special reasons put forward for its location.

Landscape advice was sought by the client at inception and the layout went through several changes during the consultation process to ensure potential landscape and visual harm was addressed during the iterative design process. Opportunities to enhance the local distinctiveness, character and biodiversity of the area have been introduced as part of the proposed mitigation measures outlined at Section 2 and Appendix 2 of the LVIA.

Critique: The aggregate effect on individual residences also needs to be evaluated. Whilst there may be "no right to a view" impacts on outlook from residential properties are a material consideration.

High sensitivity residential receptors were identified as:

- Waterhall Farm is located along Bolford Street along the eastern edge of the Site.
- Houses along Bolford Street
- Richmonds in the Woods is located to the south west of the Site, the Site boundary wraps around the property.
- Loves Farm is located to the south of the Site.
- Duckett's Farm is located to the west of the Site.

Access to assess the predicted visual effects from private individual properties outside the Application Site was not obtained. GLVIA 3 (Paragraph 6.17) suggests that effects of development on private property are dealt with separately from the LVIA as a 'Residential Amenity Assessment'. This level of assessment was not part of the scope of the LVIA.

As stated in the LVIA at 5.10:

"Through an iterative design process, the layout of the Proposed Development has incorporated measures to prevent or reduce potential visual effects; including the setting back of panels away from identified properties (where appropriate) and additional planting and management proposed as part of the Landscape Strategy (Appendix 2)."

Critique: The setting effect of the development on heritage assets needs to be addressed.

Potential effects on the setting of heritage assets are generally assessed within the heritage report and therefore not assessed within the LVIA. An exception to this might be

if surrounding heritage assets were designated for landscape reasons such as registered parks and gardens or they had important views attached to their listing.

HERITAGE

A response was received from JB Heritage Consulting Ltd on behalf of the Cutlers Green Residents Group regarding the site at land west of Thaxted, Cutlers Green Lane, Thaxted, Essex on 6th July 2021. This is henceforth referred to as the 'JB Response'.

The JB Response was based on a desk-top review of the site and its surroundings only. Although the author states that they are familiar with Thaxted and its environs including Cutlers Green, any desk-based review of our assessment, which was informed by a site visit to fully comprehend the topography of the landscape and in turn the visibility of designated heritage assets, is not considered to be of merit.

Our assessment has followed a robust, staged approach to the assessment of assets, as outlined below.

The Screening Opinion, which was issued by Place Services on 24th March 2021, stated that the following designated heritage assets as a minimum ought to be addressed within the application:

- The Grade II Listed 57-60 Henham Road (1170903);
- The Grade II Listed Potts Cottage (1112411);
- The Grade II Listed The Old Post Office (1112412);
- The Grade II Listed Richmonds in the Wood (1112979);
- The Grade II Listed Spring Cottage (1317275);
- The Grade II Listed Loves Farmhouse (1165549);
- The Grade II Listed Tower Cottage (1112978);
- The Grade II Listed Wayside (1322221);
- The Grade II Listed Lower Farmhouse (116538);
- The Grade II Listed Corner Cottage (132222);
- The Grade II Listed The Old Cottage (1112977); and
- The Grade II Listed Barn at Cutlers Green Farm (116541).

The Screening Opinion went on to state that the Grade I Listed Church of St John the Baptist (1112151) and Grade II* Listed Windmill (1112153), both located within the settlement of Thaxted approximately 1.6km south-east of the site, should be included.

Step 1 of the methodology recommended by the Historic England guidance GPA3 is to identify which heritage assets might be affected by a proposed development. All of the assets outlined in the Screening Opinion were assessed at this stage during the preparation of the Heritage Statement, and the presence of any other assets that should be assessed was reviewed during the background research and site visit. It was ascertained that the following assets were not considered to require further assessment on the basis of distance, and/or a lack of intervisibility, and/or an absence of historical, functional association, and the nature of the development proposals, comprising solar development:

- The Grade II Listed Corner Cottage (132222);
- The Grade II Listed The Old Cottage (1112977);
- The Grade II Listed Barn at Cutlers Green Farm (116541);
- The Grade II* Listed Windmill (1112153); and
- The Thaxted Conservation Area.

The JB Response includes a brief paragraph on the Thaxted Conservation Area, stating that the site is located adjacent to one of the main approaches to the asset from the west. The Conservation Area lies approximately 1.6km east of the site. A large amount of intervening agricultural land lies between the site and the western boundary of the Conservation Area. Agricultural land will be retained adjacent to Cutlers Green and on the eastern side of Bolford Street opposite the site. The land within the site does not contribute to the heritage significance of the Thaxted Conservation Area through setting as part of its approach from the west. Further assessment is, therefore, not considered to be appropriate.

With regard to the assessment of the Grade II Listed Buildings in the vicinity of the site which have a historical, functional association with the land within the site, an assessment of the contribution to the setting of these assets were undertaken within the Heritage Statement. The Grade II Listed Loves Farmhouse, Richmonds in the Woods and Lower Farmhouse all had a historic relationship with the land within the site at the time of the Tithe Map during the mid-19th century. This functional association between the land within

the site and both Loves Farmhouse and Lower Farmhouse has since been severed and the proposed development within the site, although intervisible with these assets, is not considered to result in an impact on the overall understanding, experience and appreciation of Loves Farmhouse and Lower Farmhouse. The Heritage Statement concluded no harm to the heritage significance of these two Listed Buildings through changes to setting. The Heritage Statement concluded that the proposed development within the site would result in less than substantial harm at the lowermost end of the spectrum to the heritage significance of the Grade II Listed Richmonds in the Woods, via a change in setting.

As correctly stated within the JB Response, Cutlers Green is a hamlet which has retained its rural character within an agricultural landscape. This has been reflected in the evolution of the masterplan which has resulted in the movement of the red line to be set back from Cutlers Green and the retention of intervening agricultural land adjacent to the hamlet and the associated Listed Buildings and the retention/strengthening of the existing mature field boundaries within and along the site boundaries.

The JB Response concluded that the scope of the assessment provided in the Heritage Statement did not include all of the heritage assets with the potential to be affected by the development proposals as it did not appraise the full range of heritage assets that were requested to be scoped in by Place Services. As explained above, all of the designated heritage assets in the wider vicinity of the site were assessed at Step 1 of the methodology outlined in GPA3 and some were not taken forward for further assessment.

The JB responses goes on to state that the assessment within the Heritage Statement is likely to have underestimated the degree of harm to designated heritage assets. Responses were received from both Historic England on 30th June 2021 and Place Services who provide historic buildings and conservation advice to Uttlesford District Council on 22nd July 2021. Both of these responses referred to the Heritage Statement produced by Pegasus Group (April 2021) and considered that the assessment undertaken within the Heritage Statement was acceptable.

The Historic England response stated that they would have no objections on heritage grounds should Uttlesford District Council approve the application and considered that the

application meets the requirements of the NPPF. The Place Services response did not object to the application, subject to a condition securing details of landscaping.

In conclusion, Pegasus have undertaken an appropriate assessment in line with guidance and to the satisfaction of relevant heritage consultees. This has been informed by research and a site visit, and the critique of our work undertaken by JB Heritage without a site visit is not considered to have merit.

ECOLOGY

Phase 1 Survey

For all habitat types, information on botanical species has been provided within the EcIA report. As stated within the report, an extensive species list was not collected but species characteristic of the habitats present were recorded and reported, and this is entirely consistent with industry norms for reporting and is sufficient for the purposes of ecological assessment.

Habitats

Woodland and Hedgerows

As stated within the EcIA, the woodland present at and adjacent the site will be retained and protected with adequately protective fencing and undeveloped buffer zones. For the purposes of ecological impact assessment, it is rarely if ever a requirement to survey woodlands to NVC criteria for development proposals where they are highly unlikely to be impacted, as is the case for this site.

There will be a total of 33m length of hedgerow loss to facilitate new site access, comprising 5 breaches each measuring between 5 and 8m. This is comparable to the size of existing access gaps in the hedgerow network and is highly unlikely to result in fragmentation or loss of connectivity for wildlife present (e.g. see 'Dormice' subheading below). Aside from these gaps, all woodland and hedgerows will be retained and protected through appropriately protective fencing. As part of the proposals, the creation of circa 1,640m of native, species-rich hedgerow will be planted for biodiversity and visual amenity benefits. This will adequately compensate for the loss of relatively small hedgerow sections and will provide excellent connective linkages between hedgerows and woodland blocks

present at the site and the wider landscape. The proposals will substantially increase the extent of this priority habitat at the site.

The cessation of intensive arable farming practices, including spraying crops with pesticides & herbicides, is likely to be of benefit to the woodland and hedgerow habitat at the edge of the site as these currently would suffer from spray to spray drift. In particular, this would encourage the growth of woodland ground flora at woodland edge habitats.

An overall positive impact in terms of extent, quality and connectivity of woodland and hedgerow habitats as a result of the proposals can therefore be expected.

Ditches

Whilst no detrimental impacts on the ditch network are expected as a result of the proposals, it is agreed that the scheme provides an opportunity to enhance the ditch network for the benefit of biodiversity. To that end, it is proposed to include prescriptions for management of the ditches within the Landscape and Ecological Management Plan (LEMP) to be prepared and implemented at the site. Management prescriptions will aim to prevent choking by vegetation, enhance the water retaining abilities of the ditches, maintain habitat diversity, and encourage settling of sediments and nutrient uptake by vegetation. This can be achieved by a rotational management regime which is sensitive to the presence of wildlife inhabiting the ditches, as well as plug-planting with beneficial marginal plant species.

It should be noted that the cessation of arable farming practices, including a subsequent reduction in spraying and application of fertiliser to the land, is reasonably likely to result in the improvement of water quality with the ditches.

Field boundaries

It is agreed that late October is a suboptimal time of year for surveying vegetation (this is acknowledged as a limitation in the report) and it is right that some flowering species may have been missed or under recorded. However, all of the grassland margins present at the field boundaries are to remain free from development and protected from impacts by installation of site perimeter fencing. An undeveloped margin of at least 5m (but typically larger) is to be maintained in this way between the array and the hedgerows/woodland

bounding the fields, which is wider than the existing field margins. These will be managed via a low-input rotational cutting regime which will be prescribed in the LEMP, with the aim of encouraging the development of a structurally diverse and species rich grassland sward, whilst preventing the encroachment of scrub.

As for all habitats currently present at the edges of the arable fields, the cessation of intensive arable farming practices, including spraying crops with pesticides & herbicides, is likely to be of benefit to the existing grassland marginal habitat as these currently will be subject to spray drift, which would discourage growth of many herbaceous plant species. This effect, plus the proposed management of field margins described above, should provide optimal conditions for those species which are cited in the nearby Wildlife Site descriptions (namely devil's-bit scabious *Succisa pratensis*, pyramidal orchid *Anacamptis pyramidalis* cowslip *Primula veris*, twayblade orchid *Listera ovata* and sulphur clover *Trifolium ochroleuco*) to thrive at the operational site whether they are already present at the existing field margins or not.

The existing arable land will be sown with grassland seed mix and managed via low intensity sheep grazing or through to encourage a diverse sward to establish. This will greatly increase the coverage of grassland habitat at the site, which is not common in the local area. As such, the proposals will be expected to deliver a significant benefit for grassland habitat as a whole, in terms of coverage and quality.

Arable

Further discussion on the use of the arable land by birds is discussed under 'Species' below.

Species

Bats

No obvious features with potential to support roosting bats were identified during the Phase 1 survey. It was acknowledged within the EcIA that the site could support roosts at trees with the hedgerow network. The habitats at the boundaries of the arable fields (woodland, hedgerows and ditches) were also described as likely to be important for bats as foraging grounds and for moving through the landscape between roosts. However,

these important features will be retained and protected with suitably protective fencing and undeveloped buffer zones.

It is not anticipated that lighting will be required during the construction phase. However, localised lighting might be needed for short durations during working hours only, and only during the winter months when bats are largely inactive. The control of construction phase lighting can be prescribed as part of a CEMP recommended for the development, and can prescribe. Control measures would include the use of lighting to be minimised as far as possible, and directional fittings/cowls etc. to direct light away from boundary features to prevent impacts on bats and other nocturnal wildlife. No operational artificial lighting will be necessary except, at most, a motion triggered downlighter above the DNO substation and customer switchgear building doors, or when emergency works are required outside daylight hours. Any resulting impacts will be localised, occasional and temporary in nature.

Overall, artificial lighting required for the solar array is minimal, will only be required infrequently and for short durations, and would not be expected to result in detrimental impacts on bats using the site.

Given the retention/protection of the key habitats and features for bats, as well the minimal requirements for lighting, no detrimental impacts to bats will occur. No bat activity surveys are required to inform this assessment.

Great Crested Newts

Further great crested newt *Triturus cristatus* eDNA surveys were undertaken in June 2021, the results of which have been provided to Uttlesford District Council. This survey revealed the presence of GCN eDNA in two off-site ponds within 250m of the Site.

No ponds will be impacted by the development and impacts on newts are only likely to occur during the construction phase of the development; no adverse long-term effects upon great crested newts or other amphibians are predicted for this project, and the habitat established within the operational array will constitute an improved habitat for amphibians in comparison to the current arable land.

The project has been registered under Natural England's District Level Licensing scheme to mitigate for impacts on GCN and ensure legal compliance – a counter-signed Impact

Assessment and Conservation Payment Certificate (IACPC) document has been forwarded to Uttlesford District Council as evidence that the project has been registered under this scheme, and no further mitigation is strictly required.

Reptiles

As described within the EcIA, given the large expanses of arable land with generally narrow field margins currently at the site, the site represents suboptimal habitat for reptiles. Should reptiles be present, they are only likely to be in small numbers and restricted to the field boundaries. As the proposals will only impact relatively small areas of sub-optimal habitat for reptiles (i.e. the aforementioned sections of hedgerow due to be removed), no significant impacts are anticipated.

Where hedgerow clearance works are carried out however, there is a very small but nonetheless conceivable risk of encountering individuals and causing injury or death where works are undertaken in the absence of mitigation. When implemented, the precautionary approach to hedgerow removal adopted for dormice (outlined within the EcIA) would also mean that any reptiles present could be safely captured by the attending ECoW and moved to a safe location. Habitat manipulation under ecological watching brief is a widely adopted practice for removal of relatively small areas of habitat used by reptiles and would be appropriate in this circumstances. All remaining suitable habitat for reptiles will be retained and protected by installing fenced buffer zone at least 5m from the edge of hedgerow, ensuring no impacts will occur away from the short sections of hedgerow to be removed. No surveys are therefore required to determine the presence or likely absence of reptiles at the site.

The reversion of the arable land within the array to grassland would provide significantly increased extent of suitable habitat for common reptiles, and the scheme is therefore anticipated to have an overall beneficial impact for this taxa group.

Dormice

It is not known whether dormice *Muscardinus avellanarius* are present at the site, especially given their patchy distribution in Essex, although their presence at the site has been assumed on a precautionary basis.

As described above a small (33m total) extent of existing hedgerow will need to be removed for new access. The removal of these relatively small section of hedgerow would not be detrimental to the conservation status of this species (if present) as this is significantly less than the minimum width across which dormice are known to cross (e.g. Chanin P & Gubert L (2012) Common dormouse movements in a landscape fragmented by roads. *Lutra* 55 (1):3-15).

Should dormice be present, there is a low risk of direct impacts on individuals during clearance. As such the non-licensed precautionary approach to clearance of hedgerow sections, which is outlined within the EcIA and can be prescribed within a Construction Environmental Management Plan (CEMP) or similar document, is appropriate for avoiding impacts on individual dormice. This approach is in line with Natural England's guidance for clearing short sections of hedgerow where dormice are present {<https://www.gov.uk/guidance/hazel-or-common-dormice-surveys-and-mitigation-for-development-projects>}. A CEMP can be conditioned as part of planning permission for schemes such as this. We have employed this approach on numerous schemes across the UK and it is typically considered acceptable. In our view, provided that cumulative loss of habitat totals less than 50m, then the habitat loss cannot be considered at risk of significantly affecting dormice on the site.

The provision of circa 1,640m of new hedgerow planting would more than compensate for the loss of 33m of hedgerow, and would also be sufficient to meet for Natural England requirement for dormice mitigation licensing, should a licence be required (i.e. in the event that evidence of dormice were encountered during hedgerow clearance).

Wintering Birds

As described within the EcIA a single wintering bird scoping survey was undertaken in February 2021. This recorded a moderate diversity of bird species typical of lowland arable farmland. Moderate flocks of yellowhammer *Emberiza citrinella* were recorded during the survey and were seen to be using the hedgerows for foraging. All species recorded during the scoping survey were typically associated with hedgerow/field boundary habitat. No species that usually favour open farmland fields during the winter (such as skylark *Alauda arvensis*, meadow pipit *Anthus pratensis*, corn bunting *Emberiza calandra* or flocks of wading birds) were recorded during the survey.

As detailed within the EcIA and the Breeding Bird Survey Report, the field boundary habitats will be retained and protected (with the exception of minor losses for access, further discussed below) and significant new hedgerow planting (totalling approx. 1,640m) is proposed. Very few detrimental impacts therefore are likely to occur on birds predominantly utilising the boundary features. Given the expected increase in foraging value of the Site and proposed new hedgerow planting, a residual beneficial impact is expected for those wintering species recorded during the scoping survey.

The site is not located within proximity of any designated sites important for wintering wildfowl and waders (such as Special Protection Areas, Ramsar Sites or Sites of Special Scientific Interest), nor any large waterbodies or estuaries. With reference to important areas for wintering birds, the RSPB's general policy on solar arrays states 'Where proposals are not within or close to protected areas and functionally linked land, it is unlikely that the RSPB will have major concerns' <https://www.rspb.org.uk/globalassets/downloads/documents/positions/climate-change/solar-power-briefing---may-2017-update-revised.pdf>. No wildfowl or waders were recorded during the scoping survey and it is therefore considered that the proposals would not have any significant impacts on waterbird flocks which can be dependent on arable land during winter, and which could be displaced by the proposals.

Although not recorded during the scoping survey, it remains possible that species reliant on open farmland (such as skylarks) may use the arable fields for foraging during the winter months, and thus could be affected by the development proposals. The fact that none of these species were recorded during the scoping survey indicates that the site does not represent critical foraging grounds during the winter for birds of open farmland, although it may be used on a semi-regular/casual basis. The approach to mitigating impacts for breeding skylarks is detailed within the Breeding Bird Survey Report, and in summary consists of the retention of a portion of open land in addition to an expected increase in foraging value of the habitat within the operational solar array. It is anticipated that this would also adequately mitigate for any potential impacts of habitat loss on wintering farmland birds of open farmland habitat, if using the site.

As the scoping survey visit did not record an assemblage of bird species that are likely to be significantly detrimentally impacted by the proposal, nor is the site located close to important sites for overwintering birds, no further surveys beyond the scoping survey were

considered essential for determining impacts and appropriate mitigation for wintering bird species. It is considered that adequate mitigation will be provided for farmland birds which use or potentially use the site during the winter months.

Breeding Birds

Due to the project timescales breeding bird surveys had not been completed at the point the EcIA was written and submitted to the LPA. Breeding bird surveys were subsequently completed during April to June 2021 and the Breeding Bird Survey (BBS) report was submitted to Uttlesford District Council in July 2021.

The report provides the details of breeding bird survey methods, results and mitigation proposed for the identified impacts. In summary, the surveys found the site supported a good assemblage of birds which are typical of farmland incorporating arable crops and hedgerows. As for wintering birds, the notable birds utilising the Site could be split into two categories: those which were recorded predominantly within open habitats and those recorded predominantly in boundary habitats such as woodland and hedgerows.

Again, most of the species identified were strongly associated with the hedgerows and woodland present around the field boundaries, but not the open arable fields. The site appears to support low to moderate breeding populations of red and amber listed species (including yellowhammer, linnet and dunnock). Very few detrimental impacts are likely to occur on birds breeding within the boundary features. With appropriate protection of boundary habitats and mitigation in place, as well as the expected increase in foraging value of the site and new nesting opportunities within newly planted hedgerows, a residual beneficial impact is expected for these species.

Of farmland bird species that are more dependent on open areas such as arable land for territories and nesting, only skylark showed a persistent association with the Site. Around 9 pairs of this species was recorded nesting within the arable crop.

With the extent of the arrays within the proposals, it is not possible to entirely mitigate for the loss of large open areas of habitat for all of the ground nesting birds recorded using the development site. It is likely that at least some skylarks will continue to utilise the strips between the panel strings and at field margins at least for foraging. If such habitats are assumed to be used the creation of a diverse grassland with low management input

will benefit these species by increasing the quality of foraging habitats, primarily due to the anticipated boost in abundance and diversity of invertebrate prey species. The improvement in habitat quality for foraging birds (from arable to species-rich grassland) would also be expected to boost the breeding success rates of birds nesting within the site and nearby farmland.

Furthermore, as described in the BBS report, areas of the site outside of the construction area will be designated and managed as wildlife mitigation areas to provide optimal conditions for nesting skylark. These areas will be managed via the LEMP and can be expected to support a proportion of the existing skylark population.

A residual adverse impact on the population of skylark is expected as the Site may not continue to support the current numbers using the site due to loss of open habitat. Following comments received by the LPA in August 2021, it was deemed that additional mitigation would be required for skylark territories that could not be retained on-site. To this end, and in accordance with the recommendations of the LPA Ecologist, 8 skylark plots will be provided within off-site arable farmland as part of a S106 agreement under the Habitat Banking system operated by Whirledge and Nott.

Biodiversity Impact Assessment Calculation (BIAC)

Clarkson and Woods are happy to provide the completed Biodiversity Metric for the scheme. Proposed solar developments at arable land such as this project do generally record a high score in terms of habitat units, principally as a result of the reversion of arable land to grassland beneath panels, which inherently results in a significant net gain according to the metric.

As has been stated, the scores are based on version 2.0 of the Biodiversity Metric which was in use at the time the EcIA was written. Natural England have since released an update version of the Biodiversity Metric in July 2021 to version 3.0. Natural England advise that projects which have used the Biodiversity Metric 2.0 should continue to do so (unless requested to do otherwise by the consenting body) for the duration of the project it is being used for. The net gain scores can be recalculated using Metric 3.0 if necessary; however from our experience using both versions, there would be very little change in the scores should version 3.0 be used; a significant net gain would still be recorded.

Designated Sites

The comments received under this heading are addressed under the 'Field boundaries' Subheading above.

HEALTH AND SAFETY

A number of concerns relating to health and safety and amenity have been raised, including:

- The high pressure fuel pipeline creates a safety hazard (disturbance and vibration, and fire),
- Battery storage presents a fire risk,
- Vibration from piling, which may be heard from over 2 miles away,
- The planning application makes no mention of the pipeline.

We can confirm that the applicant is aware of the pipeline that crosses the site and is also in contact with the owner/operator of the pipeline. The pipeline has been taken into account by the proposed development and planning application.

The battery technology proposed is likely to be Lithium based which is the basis for all manufacturers – the cells themselves are to contain materials in the event of a failure and sit within a wider containerised package providing added protection in the event a cell was to fail. All battery manufacturers have inherent electrical and fire suppression systems that prevent failure from leak, overheating and 'trips' which are automatically activated under circumstances which put the equipment outside of parameters. As well as electrical and fire control systems each cell module has a HVAC system that actively cools the batteries reducing the chances of issue under operation. The UK Government has widely recognised the use of this technology across its energy strategy which speaks about the practicality and safety of its widespread implementation in the UK. Health and safety of these sites are of paramount importance which is why there are numerous procedures and design features put in place to combat hazards.

The proposed development would accord with all relevant health and safety policy.

We request that the above discussions are taken into consideration when determining the application. Should you have any questions regarding any of the information or explanations contained within this Technical Note, please do not hesitate to contact me.

Your faithfully,



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