

SUNNICA ENERGY FARM - RESPONSE TO STATUTORY CONSULTATION

December 2020

Introduction

This document is the joint response of West Suffolk Council, Suffolk County Council, East Cambridgeshire District Council and Cambridgeshire County Council (referred to as “the Councils” in this response) to Sunnica’s Section 42 consultation. Unless it is identified otherwise in specific sections, the Councils share their views on matters within this response. Any views expressed in regards to East Cambridgeshire District Council are at an informal professional officer view only.

The following comments are organised according to the chapters of the Preliminary Environmental Information Report

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EIA Methodology

Policy considerations

The Councils acknowledge the need to increase renewable energy generation. For example, West Suffolk Council is an investor, developer and supporter of renewable energy generation and has set out its plan to achieve Net Zero Emissions. The Councils recognise the demands for new additional generation and the UK Government's legal obligation to achieve Net Zero Emissions by 2050, as supported by research and publications by the Committee for Climate Change.

East Cambridgeshire District Council on the 21 October 2019 declared a climate emergency. Policy ENV6 of the Adopted Local Plan 2015 and the Council's Renewable Energy SPD both support in principle solar farms, with battery storage to use the solar energy created at the most appropriate times during the day.

NPS EN-1 (the Overarching National Policy Statement for Energy) was published in July 2011. This sets out the UK Government's commitment to increasing renewable generation capacity and recognises that, in the short to medium term, much of the new capacity is likely to come from onshore and offshore wind. Solar is noted within the document as being an intermittent renewable technology.

NPS EN-3 (the National Policy Statement for Renewable Energy Infrastructure) does not include solar power or electricity storage within its scope. NPS EN-3 suggests that, at the time of designation in 2011, other types of onshore renewable energy generation were not technically viable at a scale of more than 50MW, and that the Government would consider revisions to NPS EN-3 or separate NPSs to cover such technologies should the situation change. The Councils acknowledge that the feasibility of delivery of solar PV technology has advanced to enable deployment on a larger scale, however, no such updates to the NPSs have been produced to indicate that solar PV on the scale proposed is appropriate.

In relation to 1.2.10, the Councils welcome a diverse energy generation mix to support the growing need for clean renewable energy. The East of England has significant solar photovoltaic generation in place, with more planned in the future that will make it one of the dominant onshore renewable generation technologies in the short term¹.

In relation to the policies set out and the acknowledgement to the developing West Suffolk Local Plan, it is clear that Councils will need to develop clear strategic plans to achieve net zero emissions balancing out demand reduction with increased electrical demands and renewable generation alongside the needs of the community and the need for wild biodiverse ecosystems that will provide the carbon positive countryside we demand upon.

East Cambridgeshire requires the developer to assess the significant loss of agricultural land over the lifetime of development and how this loss might be further

¹ See East of England Renewable Capacity Plan:
<https://www.eastsuffolk.gov.uk/assets/Planning/Suffolk-Coastal-Local-Plan/Document-Library/Infrastructure/east-of-england-renewable-energy-capacity-study.pdf>

pressurised by the need for the Council to deliver dwellings, employment and the need to provide greater areas of biodiversity.

The Councils therefore require additional information in relation to the carbon balances of the development as the land take required is clearly significant and relevant to the local activities to achieve net zero emissions.

The UK Solar PV Strategy requires proposals to be appropriately sited, with proper weight given to environmental considerations such as landscape and visual impact, heritage, and local amenity, and provide opportunities for local communities to influence decisions that affect them. As detailed elsewhere in this response, insufficient weight has been given to the environmental effects of the proposal, particularly in relation to its landscape and visual impact. Insufficient attention has been paid to the views of the local communities and there is little evidence to demonstrate that the local communities have had any meaningful input to the scheme design.

The proposed Development Consent Order (DCO) boundary definition makes reference to land potentially being required temporarily and/or permanently. Clarification as to what land is required on a temporary basis and for which periods is required.

The scheme definition refers to a *potential* Battery Energy Storage System (BESS). If there is a possibility that this element of the scheme may be removed, then the needs to be non-BESS scenarios within the PEIR. Clarity is necessary as all other references within the PEIR indicate that this is a confirmed part of the scheme.

East Cambridgeshire District Council wish to point out that the village of Witchford has an adopted Neighbourhood Plan, as the developer does not make reference to this in their adopted policies for East Cambs while referencing the other adopted neighbourhood plans.

West Suffolk Council highlight that Freckenham as an emerging Neighbourhood Plan and the Freckenham Landscape Character Assessment with Key Views is complete and published on the Parish Council website.

Scheme Location

This section describes the location of the project. The Councils do not disagree with this description. Our view on site selection can be found in the Alternatives section.

Scheme Description

The scheme description fails to identify the electrical generation capacity for the scheme, and it is considered that this information should be contained within this section in the same way that it is detailed in the Scoping Opinion. Likewise, confirmation of the BESS electrical capacity should also be contained within this section.

Plate 3-10 depicts a typical battery storage compound configuration. The BESS electrical capacity of this configuration needs to be set out including how this relates to the proposed BESS system as set out in the Scoping Opinion.

The solar PV generating capacity is significant as it will enable an assessment of the Green House Gas (GHG) impacts benefits from the project set out in later chapters. Further comments in this response in relation to the energy proposed to be generated and the need for clarification of the size of the solar array relate to the scheme description as do the role of the BESS in emissions savings and the quantification of the overall emissions benefits.

Paragraph 3.6.12 refers to the volume of staff on site, and the vehicle journeys this will generate and is of significant concern. Whilst a Travel Plan will be produced, its effectiveness will depend on investment and consideration as to implementation. The potential for, a shuttle bus or holding non-critical journeys away from the site should be part of the Travel Plan. An understanding of how vehicle journeys will be distributed across the sites is required in order to aid the understanding of the key issues and would assist the promoter in developing a travel plan and recommendations to manage journeys that can actually be implemented. Does the applicant intend to make provision for any temporary living accommodation on site for staff and/or make land available for privately owned accommodation to be sited?

In relation to paragraphs 3.6.15, 3.6.16 and 3.6.27, the Councils expect further details in relation to the fuel used on site and how this will be monitored and managed for efficient use. The promoter should provide a final report of the fuel consumption and carbon footprint of the scheme after completion showing what was undertaken to reduce fuel consumption and emissions generation.

Concerns are raised in relation to paragraph 3.6.25 and the treatment of topsoil and spoil from the sites. In terms of the soil as a natural resource, retaining the distinct ecological characteristics of the sites and to encourage local biodiversity back to the sites there needs to be a priority for topsoil management, retention and redistribution on site. Further reference to the management and maintenance of the sites post construction should be made and it is suggested reference is made to DEFRA's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and that this tool is utilised- <https://www.lancaster.ac.uk/spies/>. The operational phase management should minimise fuel demands and avoid spraying, and this should be detailed.

Clarity is also required on where the weather stations be positioned and what form will these take.

Paragraph 3.6.13 states that working hours are expected to be 07:00 to 19:00 Monday to Saturday. An assurance is required on these hours and that there will be no working on Sundays, bank holidays and public holidays. Chapter 11 of the PEIR (noise and vibration) is based on these working hours and assumed construction plant such as a push press piling rig. The actual methods are not confirmed but, as noted in 11.8.10 for example, vibration distances are lower for push piling than other piling activities.

East Cambridgeshire Council's Environmental Health Officer has raised concerns in

regards to proposal, these are included within the Noise and Vibration section below. In addition, concern is raised about why flood lighting is required, when other solar farms have demonstrated they can secure the site with infrared lights during the operational stage of the development.

The location of the office/warehouse at Sunnica East Site A is questioned given the amount of vehicular traffic that will need to use the local road network to access the site. The office/warehouse would be better located at parcel E18 where there is access from the major road network. It is unclear from the parameter plans what is occurring on parcel E23.

Alternatives

The PEIR states that a report setting out the assessment of alternative sites will be submitted with the DCO application. While the PEIR sets out that a key consideration in relation to site selection was the chosen connection point at Burwell, it is unclear how a search radius of 15km from this point was arrived at. East Cambridgeshire specifically would refer to the elements of the energy farm near Isleham that are located a substantial distance from Burwell given the route of the electrical cable. Furthermore, the promoter should explain why land closer to Burwell Substation does not form part of the scheme, to negate the need for the installation of extensive connecting cables, and that the use of four separate sites is an efficient strategy given the additional connection work that will need to be undertaken.

The PEIR fails to include two critical requirements in connection with site selection in connection with the avoidance of areas that have an impact on residential areas and, in respect of Sunnica East, the avoidance of an impact on The Brecks. The Sunnica East sites are located close to ancient villages (some dating back to 1000 AD) such that over 11,000 residents will be impacted by the development. The proposal will surround a number of villages, reducing the perceived openness of their landscape setting, and in places individual properties/farms are enclosed by the development. For further details of the landscape impacts see the Landscape & Visual Amenity section below.

It is noted that there are proposals for other solar PV installations in the vicinity of Burwell substation and it is assumed that all such installations will want to use the same connection point. The promoter should demonstrate that their proposal is still feasible and viable should these other installations be completed ahead of the anticipated operation years.

Geographical location, local weather patterns, pollution levels and damage or failure of key components are some of the important factors influencing the overall effectiveness of solar PV. The promoter should provide further detail to demonstrate that such factors have been taken into account including, for example, whether damage from bird strikes has been considered. West Suffolk Council has experience of damage being caused to solar panels from birds dropping stones from height onto the panels, believing that they are a body of water.

The promoter should demonstrate that sufficient light will pass through the solar PV panel tables to support plant growth below.

It is considered that the option of 'No Development' should be included in the Environmental Statement in sufficient detail given the extent of land that will be occupied by the scheme and the adverse effects it may have on soil and carbon storage and any future options to increase the carbon sequestration from this considerable land area.

The need for the generation of renewable energy should not be stated in isolation. The Committee on Climate Change (CCC) have stated that a considerable amount of carbon could be stored by improved land use and from land use change, as set out in 'Land use: Reducing emissions and preparing for climate change':

'Land is a critical natural asset. It provides us with the fundamentals of life: clean water, food, timber, and the natural regulation of hazards such as flooding. Key to the effective functioning of these is biodiversity. Land is also an essential resource to mitigate climate change, naturally sequestering and storing carbon. Over the rest of this century and beyond, climate change combined with other social, economic, and environmental pressures will present significant risks to the services provided by the land. Unless land is managed more effectively over this transition, its essential functions will not be maintained for future generations'.

The above document is now being utilised to set out environmental targets within the Environment Bill, which will detail how soil health and improved woodland health should be achieved, monitored, and reported. It would be beneficial to understand how this project may impact on these expected targets and the stated ambitions for a Nature Recovery Network.

The Councils agree with the point made at 4.2.7 in relation to energy diversity and would highlight that, in the East of England, Suffolk and Cambridgeshire are locations where solar PV is the predominant onshore renewable energy generation technology. However, the projects role in diversification locally is not adequately explained.

The Councils expect to see a comparison to other energy generation technologies in this section. It is noted from 4.1.3 "*The NPS confirms that from a policy perspective there is no general requirement to consider alternatives or to establish whether a development represents the best option.*" However, this is contested given the rapid growth of the renewable energy industry, the need to achieve Net Zero Emission by 2050 and the roles that land use and land use change will play in achieving this Net Zero Emissions target, the discussion around "best option" might have moved on.

It is appropriate to consider how alternative schemes using the same technology may have different acceptability depending on the scale of development. As the scale of a development increases, the resulting increase in benefits is presumably directly proportional as the amount of clean energy that can be produced increases with the amount of land that can be used for arrays. However, it is not obvious that the relationship with environmental impacts is necessarily proportional in the same way, as the marginal impact of each additional hectare of land may be greater than the last. It could therefore be appropriate to consider the relative impact of multiple smaller sites amounting to the same total output. It is our view that this scenario

constitutes a reasonable alternative for the purposes of paragraph 14(2)(d) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

To better understand comparisons to projects with significant visual impact, the Councils would like to see an appraisal of Onshore Wind as a comparator project or a hybrid Onshore Wind and solar PV project. The reason for this appraisal of the alternative generation technologies is to help us to understand the benefits and challenges of the proposed approach.²

East Cambridgeshire District Council seeks greater clarification on the amount of different grade's of agricultural land in order for the developer to justify its statement under 4.3.16 that states the scheme "maximises the utilisation of low grade, non best and most versatile agricultural land".

Climate Change

In relation to 6.3 Assumptions, the assessment should include the emissions from land use and land use change and the carbon sequestration of the land. This is significant given the area of land and the need for increased carbon sequestration from land and vegetation³.

Section 6.3.3 states that 'it has been assumed that overall loss of vegetation will be minimal'; this needs to be firmed up and must state what will be impacted.

In Section 6.3.10 the Councils cannot identify a target for waste material recycling from the project. We would suggest that a higher recycling percentage than 50 percent should be targeted.

Section 6.3.17 - It is requested that the information from the promoter's design team be shared. What is the expected peak electrical generation and annual energy generation for the site and what assumptions are being made in relation to the BESS?

A diagram showing the GHG emissions boundaries should be included at 6.4.3.

Table 6-2 - In relation to "Operation stage" the information should include information in relation to soil carbon and sequestration in vegetation⁴. Given the large area and the figures available for soil and vegetation carbon storage and the 40-year lifetime of the development we feel this is a significant omission. Especially given the need for soil carbon improvements and afforestation as a measure to store carbon.

At 6.4.22, the Councils would prefer to see a county or regional approach with reference to total GHG emissions. The development, located in the districts of West Suffolk and East Cambridgeshire, will feed power into the local grid, and would be accounted for as part of Net Zero Emissions targets for West Suffolk, East Cambridgeshire, and the region. The generation will be included as a regional asset

² See, for example: <http://westmillsolar.coop/> and <https://www.westmill.coop/>

³ See: <https://www.theccc.org.uk/wp-content/uploads/2018/11/Land-use-Reducing-emissions-and-preparing-for-climate-change-CCC-2018.pdf>

⁴ See: <https://iopscience.iop.org/article/10.1088/1748-9326/11/7/074016/pdf>

for Suffolk and Cambridgeshire, it will impact on the local distribution network as managed by UKPN. More importantly, the development impacts on local people and the local environment and therefore it should be able to define its benefits and risks in line with those of the community in which it is situated. This approach means that the Magnitude Criteria for GHG Impact Assessment needs to be reviewed.

Given the need to achieve Net Zero Emissions by 2050 and the need for increased levels of carbon storage and sequestration, the assessment should include data in relation to fluxes of carbon based upon changes to land use over time and in comparison to a baseline scenario where the land is managed in a consistent way to present.

In relation to section 6.6, Baseline Conditions, as set out in Table 6.6 in the comments from the Planning Inspectorate a more detailed response in relation to baseline conditions is required.

The Councils have several questions with regard to sections 6.6.2, 6.6.3 and 6.6.4. What figures for carbon storage has the EIA processes used to assess the soil carbon storage and carbon sequestration from vegetation from the 1,073-hectare site? What is the annual rate of carbon storage and what is the value over 40 years and then in comparison to the construction, operation and decommissioning of the proposed development? How does this figure compare to the following statement in 6.6.4?

" 'While the current land use within the DCO Site will have minor levels of associated GHG emissions, it is anticipated that these emissions will not be material in the context of the overall Scheme. Therefore, for the purposes of the lifecycle GHG impact assessment, a conservative GHG emissions baseline of zero is applied'

In relation to section 6.7, Embedded Design Mitigation, given the scale of the development, the waste generated, the water and fuel inputs, vehicle journeys and the need to limit the overall GHG emissions arising from the construction phase, the use of the Considerate Constructors Scheme (CCS) is not suitable to the project.

Although listed as Best Practice, the CCS is, instead, commonplace with a light touch approach to on-site environmental management. It does require monitoring of impacts but we would expect that such a development will seek to ensure it meets environmental management best practice in terms of target setting, on site management, monitoring and reporting as well of off-site reporting to key stakeholders. In terms of demonstrating Best Practice, the Councils would expect a stated objective to achieve an Excellent or higher CEEQUAL rating as set out in Version 6 targeting key outstanding credits, such as 4.4 "Change and enhancement of biodiversity" and 7.2 "Reducing whole life carbon emissions with an independent third-party certification of carbon management activities".

In addition to SuDS, how will the site design in surface water flood attenuation from this use of vegetation and also ensure a net positive impact in the loss of soils into water systems or air?

In relation to section 6.8.7, as stated previously, the calculations used to determine the professional judgement with regards to the loss of carbon sink from the land use change should be set out. The land area is significant for the districts of West Suffolk

and East Cambridgeshire, and stated ambitions to achieve Net Zero Emissions means that the Councils will need to balance energy generation, energy demand reduction, emissions savings policies and activities alongside soil carbon and other forms of carbon sequestration.

The Councils request the figures utilized alongside to evaluate soil carbon and carbon sequestration as the baseline alongside the figures for the construction, operation, and decommissioning phases to better demonstrate the baseline emissions alongside the GHG impacts from the proposed development.

In relation to section 6.8.23, the promoter should clarify the size of the peak electrical generation capacity of the proposal. The Councils note the 653,973 MWh stated and this would require 1350kWh/kWp/yr from a 500MWp array (which is not possible) or an array with a rated peak generation of around 725MWp using West Suffolk Council's standard solar PV calculation model.

It follows that confirmation is required that the figures stated in relation to the operational emissions benefits are correct – it is noted as being 744,061 tCO₂e (6.8.32) over the 40-year project life – with an average emissions factor of 0.0316 tCO₂e/kWh. It is noted that the detail in 6.8.28 and 6.8.29 shows the forecast grid intensity in Plate 6-1.

If there is an issue with the energy generation and emissions savings figures then all emissions figures should be reviewed to ensure Completeness, Accuracy, Consistency, Relevance, and Transparency.

Potentially these overall emissions savings also account for some benefits from the BESS. If that is the case this should be set out together with clarification on the installed generation capacity of the solar PV array modelled and the BESS size and operation benefits assumptions.

In relation to the Significance of Effect, 6.8.33 to 6.8.41, it is felt that these figures should reflect the impact locally in relation to the emissions arising from the areas that the development is located in as the development will affect the strategic plans for the local areas to meet their Net Zero Emissions targets and impact on future decision making.

Have the 'Increased summer and winter temperatures' been taken into account in relation to the impact on the Solar cell performance at 6.8.49?

In relation to 6.9.1 and as set out previously it is recommended that this development sets a CEEQUAL target to achieve and enhance the level of monitoring of key emissions sources during construction and the works to manage and reduce these to achieve the stated targets.

In relation to 6.9.2 it is good to see the overall emissions for the development in comparison to the other figures for energy generation options. It would be useful to see these again once the generation and emissions figures have been clarified. With this in mind, and given the oversight of the soil carbon and the need for improvements and carbon sequestration, we do not feel it is sufficient to rely on the emissions savings during operation instead of ensuring the emissions from construction, operation and decommissioning are properly targeted and managed. In addition, the UK Net Zero Emissions target means it is even more important that the construction, operation, and decommissioning emissions arising from the

development are minimized as much as possible as the GHG benefits of the site will diminish over time.

In relation to the points above and also the local significance of this development the Councils feel that additional mitigation measures should be put in place to ensure that soil and vegetation carbon storage is improved and the emissions arising from the development are minimized.

East Cambridgeshire District Council welcome the fact that comparisons to gas, nuclear and wind power have been made.

Cultural Heritage

Built Heritage

The Councils broadly consider the chapter on cultural heritage acceptable in as far as it relates to built heritage. The following point should however be addressed:

- Paragraph 7.4.1 refers to the study area as being 1km which extends to 5km for higher grade assets. There does not appear to be any explanation for this, and the setting of Grade II listed buildings is protected in the same way as the higher-grade buildings.
- Table 7.17 – Sunnica East B refers to views to the north of the Freckenham Conservation Area potentially being affected. This is more likely to be in views to the east. Sunnica West A also refers to the same view from Freckenham being affected. It is assumed that this is included in error.

East Cambridgeshire District Council's Conservation Officer states:

"The Preliminary Environmental Information Report itself notes:

'7.8.31 Chippenham Hall RPG (Grade II, NHLE 1000615) is likely to experience adverse effects as a result of the Scheme at Sunnica West Site A...The Scheme will have short- and long-term, and permanent adverse impacts on this asset. It will introduce new infrastructure elements within the rural setting of the park that although will be screened for its most part, the landscape around the park will be altered.'

'7.6.63 The formal parkland is defined by its brick boundary walls, with the south drive extending towards Newmarket. While the wider rural landscape is not visible from within the park, it does form part of its setting, revealing evidence of the impact landowners had on the landscape, and forming part of the informal parkland context.'

'7.8.32 ... The southern part of the drive is included within the scheme boundary. While there will be no development along the drive, it does extend on both sides. Impacts have been limited through enhancement planting of the drive. This has been designed to supplement what is already there and reinstate vegetation which has been lost. Nevertheless, the Scheme will change the character of the wider parkland which forms the setting of the RPG and may be visible along the former main drive. As such, the Scheme is likely to have a medium magnitude of impact, resulting in a moderate adverse effect on this asset of medium value.'

The scheme's underlying assumption seems to be that as Chippenham Park is 'only' Grade II registered, and hence of 'medium value', impacts can only be correspondingly 'medium'. Chippenham Park is remarkably coherent, both visually and topographically, for a designed landscape and has a strong, distinctive presence within its surrounding area. It is very important locally and the report's own definition of medium change still acknowledges that this constitutes a 'noticeably different change to setting affecting significance, resulting in erosion in our ability to understand and appreciate the asset.' That is in plain terms a harm.

The impact is most acute where the south drive extends beyond the perimeter of the park proper, as this effectively bisects West Site A. There is no indication on the 1:17500 scale figures of how closely W04 and W05 will encroach upon the drive, but clearly the wider the buffer the more effect it is likely to have. It should also be noted that even if the scheme proposes to restore planting along the drive, it cannot itself constitute screening: an avenue by definition is a sequence of trees at regular intervals and depends upon space for its effect. Further information will be required on these points to demonstrate that the conflicts have been mitigated as far as possible."

Archaeology

SCC and CCC officers are engaged in an ongoing workstream to determine the acceptability of AECOM's trial trenching proposals. The site contains areas of high archaeological potential, and it is necessary for the promoter to provide sufficient trial trenching coverage to ensure that impacts on below-ground heritage assets can be mitigated by detailed design.

Archaeological trial trench evaluation will enable any sites of national significance which warrant preservation in situ to be identified, to allow archaeological mitigation strategies to be defined at the earliest opportunity and to ensure that archaeological findings are taken into consideration as the scheme design is refined. Not undertaking sufficient archaeological assessment at pre-consent will mean that the nature, extent and significance of below ground archaeological remains will not be fully understood. This will also mean that insufficient information will be available to allow informed planning decisions to be made regarding the impact of proposals on below ground heritage assets.

Mitigation requirements cannot be defined without full evaluation. There needs to be a commitment to undertake archaeological mitigation- either preservation in situ or full excavation-across the entire development area and factor that possibility into project programmes, given that the extent of the archaeological resource is currently unknown and the worst-case scenario approach.

The Councils are pleased that a geophysical survey has been undertaken, although there are a number of key land parcels which have not yet been able to be surveyed. It is essential that the outstanding areas circa 74.6ha in Zone B and 19.4ha in Zone C, 113ha of land on the cable route or in the 10ha required for HV connections, which leaves a total of 217ha to revisit (plus any additional elements of the scheme which have since been added into the red line boundary) are surveyed. This work should be undertaken as a priority at the earliest opportunity- before DCO submission- given that they include high archaeological potential areas, in key sections which have limited flexibility. It is presumed that this work will be submitted

as part of the Environmental Statement, but it would be preferable for the Councils to see the preliminary results as soon as they are available.

If the promoters wish to undertake an 'avoidance' mitigation approach to below ground heritage where possible, they cannot finalise the design without having fully defined all the surviving below ground heritage assets which will be impacted upon by different elements of this scheme. The Councils are extremely concerned that further scheme refinement is being undertaken without sufficient archaeological assessment to inform this work. There is still 217ha of outstanding geophysical survey. Where geophysical survey has defined a number of anomalies likely to be archaeological in nature, their nature and significance is not understood, and this survey will not have defined all below ground heritage assets (for example, due to masking factors or feature types which might not show up well). As a result, there is also high potential for additional unknown archaeological remains to survive throughout the scheme red line boundary area which are of high significance, including a potential for human remains, funerary monuments and settlement. The geophysical survey undertaken to date is a considerable commitment and achievement, but it needs 'ground truthing', as part of a suite of techniques.

It is strongly advised that all elements of the scheme should be subject to archaeological trial trench evaluation. Several of the anomalies defined during geophysical survey which are likely to be archaeological in nature are situated in key areas of the project where flexibility is limited or are of a scale that they cannot be avoided. Therefore, understanding the nature and significance of these remains through trial trenching is essential before planning decisions can be made. The Environmental Statement should set out the approach to any outstanding archaeological evaluation which is required, alongside mitigation.

The Councils wish to highlight the severe risk to extremely tight project timetables by leaving the second phase of evaluation until post consent which means that archaeological mitigation requirements will not be able to be defined until this point. Delays are possible if extensive areas requiring archaeological mitigation are defined.

Insufficient assessment has been undertaken to determine the full scope and significance of heritage assets and therefore the impacts of different elements of this scheme. Many of the statements presented in this chapter are assumptions based upon insufficient assessment to support these conclusions. The potential for additional unknown remains is also not clearly set out. There are additional scheme elements which have the potential to impact upon archaeological remains which are not considered here.

Significant portions of information related to Archaeology is out-of-date and does not reflect the discussions the Councils have had with the promoter since the non-statutory consultation in 2019. In particular the Desk-Based Assessments (DBAs) are dated from April 2019, and use the original scheme boundaries as proposed at that time. This excludes many of the sites in Sunnica East A which are of the highest sensitivity and with the greatest know archaeological potential. The DBAs contain data from the Historic Environment Record which is two years out-of-date.

Additional areas now included into the red line boundary, including revisions to the red line boundary area for PV array fields, compounds, substations, cable route etc. and for scheme elements including new access roads, internal roadways, laydown

areas, compounds, ecological mitigation, landscaping and planting, site access etc., need to be included in all assessments going forward into the Environmental Statement.

As such, the assessments relating to archaeological impact in the PEIR cannot be agreed unless these DBAs are updated and the assessments are made on the basis of the proposal as it stands today. We would encourage the promoter to ensure the DCO proposals reflect and capture all discussions which have taken place to date.

Archaeology should be factored into traffic management, water management, dust and spoil management, landscape management, ecological works plans etc., as proposals have the potential to have archaeological impacts. To avoid conflicts between different priorities and proposed mitigations for other aspects, a joined-up, holistic approach is needed. Archaeological matters, as well as being in the Written Scheme of Investigations (WSIs), should be considered in RAMS documents and Construction Environmental Management Plans, Materials Management Plans, Decommissioning Environmental Management Plans etc. Logistical considerations should be reflected throughout for instance:

- Spoil management associated with archaeological work should be factored in;
- Plant movement should be factored into traffic assessments;
- Ecological implications of pre-construction archaeological work should be considered.

Impacts connected with linear pipelines and cable trenches typically surround the temporary works more than the trench itself: the stripping of working easements (usually between 15-30m working widths) to subsoil depths in order to enable vehicular movements for multiple crews to lay the cable and for the erection of compounds, soil stores and welfare. The damage caused to archaeological sites of vehicles traversing the exposed surfaces of archaeological features is substantial, especially where the evidence relates to buildings, burials or votive sites.

Some preliminary discussions have taken place to seek to reduce or eliminate the stripping of easements by the use of ecogrid of a suitable grade that will enable vehicles to traverse the site alongside the cable, restricting stripping to a far narrower impact width than typically specified. Operating a new way of working will provide the Sunnica project with greater environmental credentials and will have the additional benefit of reducing the need for hundreds of evaluation trenches to check the geophysical survey results, which, though valuable, are not a perfect science.

Local authorities will work to ensure that this restricted easement requirement is included in mitigation strategies and the CEMP prepared for this scheme's DCO application. Reducing stripping would have a tripartite purpose:

1. to reduce the need for largescale evaluation trenching, saving this for where it is most essential;
2. to reduce damage to archaeological remains and concomitant costs for excavation;
3. provide a measurable environmental benefit to the scheme by reducing carbon emissions from multiple stages of machine excavation and soil movements.

Insertion of the cable by drilling is considered for special sections of its route: road/rail/river/infrastructure crossings, but would provide greater benefits to archaeological landscapes if rolled out more extensively - the carbon cost of which

would have to be modelled alongside that for traditional open cut cable laying in stripped working easements. Under current climate change agendas, all major construction schemes should have greater regard to this aspect of construction and reduce pollution from carbon emissions as far as possible.

Sunnica East Site A (PEIR Fig 3.1)

The west part of this site is partly in Isleham parish, Cambridgeshire, the larger part of this site being in West Suffolk. In Cambridgeshire it will include a large solar field (**E05**) fringed with woodland and native grassland on the north west and south sides and a large area to the south where a significant, complex archaeological site will be fenced off from all construction traffic/use and preserved *in situ* with long-term management under new grassland. This site is recorded as undated cropmarks in the Cambridgeshire Historic Environment Record database (CHER ref MCB27640) but geophysical survey conducted for the PEIR has enabled a far greater understanding of the scale and character of the evidence and relate it, morphologically, to the Roman period though with prehistoric elements too. The removal of this site from plough cultivation is highly recommended and very welcome.

The archaeology of Isleham is well known for its richness at fen edges and in the river vallies, where high water tables and relict peat soils and alluvium have aided the survival of organic remains and through intermittent preservation of old land surfaces and prehistoric occupation in the many undulations in the chalk 'upland' of the parish. Understanding these area and their potential can only occur though physical evaluation (trench based), which is yet to occur. Elsewhere, soil deposits are thin, typical of chalk landscapes, and archaeological sites have been severely damaged by ploughing and show as scatters of artefacts on field surfaces or from aerial photographs at suitable times of year.

Sunnica East Site B (PEIR Fig 3.1)

This site, near Freckenham and Worlington, is entirely in Suffolk and not further discussed here.

Sunnica West Site A (PEIR Fig 3.2)

This large area of grouped solar fields lies between the A14 north-east of Newmarket, south of Chippenham Park - the designated 18th-19th century pleasure gardens of Chippenham Hall (National Heritage List Entry 1000615), and in fields straddling the A11 in Kennett parish.

A battery energy storage system (BESS) and substation will be centrally located in the large solar fields. Five archaeological areas are proposed for preservation in situ by removing them from cultivation, managing them under grass and preventing construction impacts of any kind within the selected areas. These areas were defined by geophysical survey and relate to prehistoric burial grounds and large occupation sites, mostly of late prehistoric to Roman date. North of the A14, the southern part of the linear tree lined avenue that formerly led to the Gallops at Newmarket from Chippenham Hall (CHER MCB8994) will be preserved as a landscape feature and enhanced with new woodland planting. The avenue once formed the east side of RAF Snailwell (CHER MCB15150) on which part of the solar fields will be placed.

We agree with the areas selected for preservation and will continue to work with the Sunnica project team to ensure that the land management strategies are appropriate

for the conservation of these sites: both for the construction period and the lifetime of the energy farm.

Sunnica West Site B (PEIR Fig 3.2)

In Snailwell parish, to the south-west of Chippenham Fen Nature Reserve, an area of former wetland in the floodplain of the River Snail has been selected for this significantly smaller solar site, to the south of the grounds of Fordham Abbey (MCB14463). Proposals show that the archaeological remains in the centre of the area would be preserved under grassland and be surrounded by smaller solar fields to the east, west and south. Wetland restoration would arc around the solar fields on the north, west and south sides.

This wetland fringe, together with existing woodland would separate the site from Roman villa settlement designated as a nationally important Scheduled Monument (NHLE 1006868), providing a buffer between it and the solar farm. Historic England will have presented their opinion on the character of the buffer and suitability of development to the Sunnica project team.

Our concerns surround the potential impact of perforating wetland deposits in which ancient organic archaeological remains might be preserved (in the floodplain/fen area) and in so doing risk their dewatering, degradation and loss of palaeoenvironmental and organic content. Evaluation trenches will be needed to assess the deposit sequences and palaeochannels surviving in this archaeologically sensitive area, as shown in the CHER records, to validate or dispel this concern, to determine whether development is suitable here and to refine the mitigation solutions for development and its scale in this location. Piled PV panel foundations can be replaced by concrete shoes where ground conditions and archaeological evidence dictates, but it is too soon to comment on the best approach to such strategies. This area, however, should be classed as highly sensitive until further, tangible evidence has been acquired.

Sunnica Cable Route to Burwell Substation

A 132kV underground cable will connect all of the solar farm areas to the Burwell National Grid Substation. It will be buried in a 1.2m wide trench to a depth of around 2m below the ground surface.

Impacts connected with linear pipelines and cable trenches typically surround the temporary works more than the trench itself: the stripping of working easements (usually between 15-30m working widths) to subsoil depths in order to enable vehicular movements for multiple crews to lay the cable and for the erection of compounds, soil stores and welfare. The damage caused to archaeological sites of vehicles traversing the exposed surfaces of archaeological features is substantial, especially where the evidence relates to buildings, burials or votive sites.

Some preliminary discussions have taken place to seek to reduce or eliminate the stripping of easements by the use of ecogrid of a suitable grade that will enable vehicles to traverse the site alongside the cable, restricting stripping to a far narrower impact width than typically specified. Operating a new way of working will provide the Sunnica project with greater environmental credentials and will have the additional benefit of reducing the need for hundreds of evaluation trenches to check the geophysical survey results, which, though valuable, are not a perfect science.

CHET will work to ensure that this restricted easement requirement is included in mitigation strategies and the CEMP prepared for this scheme's DCO application.

Reducing stripping would have a tripartite purpose:

1. to reduce the need for largescale evaluation trenching, saving this for where it is most essential;
2. to reduce damage to archaeological remains and concomitant costs for excavation;
3. provide a measurable environmental benefit to the scheme by reducing carbon emissions from multiple stages of machine excavation and soil movements.

Insertion of the cable by drilling is considered for special sections of its route: road/rail/river/infrastructure crossings, but would provide greater benefits to archaeological landscapes if rolled out more extensively - the carbon cost of which would have to be modelled alongside that for traditional open cut cable laying in stripped working easements. Under current climate change agendas, all major construction schemes should have greater regard to this aspect of construction and reduce pollution from carbon emissions as far as possible.

Review of the PEIR Chapter 7: Cultural Heritage - direct response

7.4.4 Correction: Aerial photographic transcriptions have not taken place owing to the temporary closure of the national repository of aerial archives for archaeological research due to the Covid-19 pandemic. Other aerial and satellite sources have not been examined. This work is vital as it provides additional information that enables the landscape context and geomorphological setting of archaeological sites to be better understood than from geophysical survey data alone. These surveys are typically carried out together as their joint benefits allow greater understanding of the archaeological resource and geomorphological setting.

7.4.4 and Table 7-3 Portable Antiquity Scheme data has not yet been acquired for the Cambridgeshire Sites. I believe work is in hand and we have contacted the British Museum's PAS office to assist the Sunnica project team with this

7.4.6 It is more accurate to consider that work is still in hand to agree the evaluation trenching strategy. Non-intrusive work for geophysical survey only has occurred, the trenching work remains in discussion.

7.6.93 Geophysical Survey Zone G – this technique is not recommended for wetland areas, trenching will be required to be undertaken by professionals used to working in wetland areas, supported by geoarchaeological investigation and research. That said, that site evidence was found suggests that there are localised high spots within the floodplain and/or that this part of the floodplain has been significantly drained.

7.6.111 Table 7-9: It is important to note that the physical archaeological evidence reported in this table (and others) has been acquired through physical excavation. These sites were unknown prior to development-led archaeological programmes secured by planning conditions. Most of the non-designated CHER data in this area related to cropmarked sites, field finds and historic buildings and their settings. The significant contribution of investigative fieldwork, including palaeoenvironmental investigation to revealing buried archaeological evidence serves to be fully noted.

7.6.121 – no archaeological evidence is yet known, probably owing to the character of deposits at the Burwell fen edge.

7.7.6 – Further mitigation measures outlined here are as have been discussed and will be carefully considered following the proposed trench based evaluation of scheme areas.

Table 7-10 Summary of mitigation measures for cultural heritage:

General section (page 7-42): officers from Historic England do not assess trench locations for schemes setting out to evaluate non-designated archaeological evidence. This is a matter for local authority archaeology services. HE's science advisers do supply valuable advice regarding the application of scientific techniques for archaeological investigation and this advice is highly profitable to archaeological enquiry at all levels.

7.8.10 "Those non-designated assets within the baseline that comprise either discrete findspots or metal detector finds are considered to be no longer present within the Scheme and there would therefore be no impact upon them." This statement is commonly contained within desk-based assessments and can be quite wrong in its assumptions. It is agreed that the individual artefacts are no longer in situ, but their value is to highlight the presence of potential underlying sites, particularly when there is aggregated value to a field scatter, or denote early prehistoric activity or from finds recorded by responsible hobbyist metal detectorists (sometimes these point to unknown burial grounds). For this reason, the PAS data is required to be acquired from the British Museum and assessed for Cambridgeshire, and greater consideration of the significance of find spot evidence. Agreed, this should not be exhaustive but their dismissal from further attention is unwise.

An example of such a scatter site is in Table 7-13 where MCB9032 "Iron Age and Roman finds scatter" and MCB9033 "Bronze Age material recovered including burnt flint. Some gravel, also dark area." These are attributed a low value in the report as they are in longer *in situ*. This is a basic error of judgement as it fails to recognise what the presence of this type of occupation evidence signifies in terms of potential homestead or village remains, the scale of which cannot, of course, be imagined from single find spots. Given that there is no general accord with this method of assessment, the associated designations/value given to Magnitude of Impact upon the remains (Very low) and Effect Category (Minor) or Significant Effect (No) do not follow. Surface finds or find spot information is not given due consideration in this method of appraisal as the preliminary assumption regarding 'value' is flawed.

See also page 7-50 (for example) Summary of Magnitude of Impact and Significance of Effect tables that provide subjective sensitivity values. These do not always accord with CHET's opinion (eg Table 7-12: MSF10199 Single ring ditch, (approximately 30m diameter) identified from on 1956 aerial photograph. Sensitivity (value): Low Ring ditches of this size typically denote barrows – *tumuli* – the quarry ditches encircling the burial area covered over with an upcast mound. Not low value

Only where geophysical survey has contributed site evidence to the record (for example MCB20063 in Table 7-14) have the Magnitude of Impact and Effect Categories of the scheme upon the remains considered to be significant - shown as High and Moderate. This is an extremely biased assessment of the value of known

data and will only be altered by the results of evaluation trenching, after which these tables should be corrected.

No synthesis of the surface finds evidence has been made to highlight the potential for underlying sites being present, they have merely been considered as individual artefacts, now gone from the site with no further significance. This is archaeological interpretation at its worst.

The opinions given for harm to non-designated remains for the cable connections (7.8.56, 7.8.61) and to the Burwell substation extension: 7.8.65 "As there are no heritage assets in this area within the footprint of the substation extension, there are no direct impacts to heritage anticipated from this aspect of the Scheme. Further information regarding the presence or absence of archaeological remains will be obtained through trial trench evaluation works with appropriate archaeological mitigation proposed following these works (if warranted)."

At a fen edge location, it is unwise to predict that no archaeology will be present. The highlighted part of the statement above is flawed. It would have been apposite to consider the effect *unknown* until the completion of non-intrusive surveys (aerial photograph transcriptions, PAS data review) and physical evaluation had occurred. We place considerable emphasis in assessing fragmentary evidence of the historic environment by period, alongside each other and the landscape settings in which they occur to enable predictions to be made about what might lie beneath the soil based on their interpreted value.

Ecology

Introduction

Documents reviewed

- Preliminary Environmental Information (PEI) Report: Chapter 8 Ecology
- All appended ecology reports, including unredacted breeding birds
- Construction Environmental Management Plan
- Landscape and Environmental Management Plan
- Parameter Plans
- Other relevant chapters of the PEI accessed for supporting information but not assessed

Consultation

During the course of this review, the following organisations have provided input:

- Wildlife Trust BCN
- Natural England
- RSPB
- West Suffolk Council
- Suffolk Wildlife Trust
- Suffolk County Council

Key Findings

Baseline surveys appear to have been carried out to a high standard (although terrestrial invertebrate surveys are not yet complete and cable connection routes are not yet surveyed).

The Ecology chapter of the PEI is lacking important detail. Specifically, inadequate characterisation of impacts and unjustified exclusion of ecological features from detailed assessment. Detailed assessment fails to address all potential impacts and relies heavily on the CEMP and LEMP for mitigation, which in themselves are lacking crucial details.

There has been insufficient adherence to the Mitigation Hierarchy, specifically with respect to the avoidance of important habitats and species. The scheme needs to be redesigned to avoid impacts on important habitats and species.

Habitat creation proposals are lacking details, such as how they link to form a coherent nature network and their long-term management regimes.

Lack of any information regarding the decommissioning phase and how this will impact on newly created habitats and their long-term survival (i.e. beyond 40 years).

Opportunities exist to deliver enhancements and benefits, should the scheme be delivered, and these should be explored much further at this early stage in the process and incorporated into the final submitted scheme.

What changes to the parameter plan layouts would we like to see?

- Retention of the whole of the area of habitat supporting scarce arable plants judged to be of County importance (within Sunnica West A).
- Retention of areas T7, T8, T9, T13 and T14 which have been assessed as being of County importance for flora (as shown on plans in Appendix 8B: Flora Report).
- Retention of fields found to support nesting stone curlew, with appropriate areas of connected foraging habitat also retained (more could be delivered as part an enhancement package).
- Removal of area E23 from the solar farm infrastructure (shown on Parameter Plan 3.1) as its current inclusion will result in the loss of County importance acid grassland.
- Wider set-backs from external boundaries; we suggest 20m rather than 5m.
- Undeveloped mitigation areas for habitat creation to deliver a coherent and connected network of habitats, specifically designed to deliver for biodiversity, as opposed to individual parcels/strips of land 'fitting in' around the edges of the solar farm infrastructure.

- More details of the locations of specific types of habitat to be created (rather than the broad-brush 'Native Grassland Planting'), showing where these are being created and how they are connected.
- Appropriate mitigation for skylark, including provision of replacement habitat offsite if this cannot be retained onsite.

Potential benefits that the development could deliver

Improving connectivity between Chippenham Fen and Snailwell Meadows. The wetland grassland proposed at Sunnica West B represents an opportunity to improve connectivity between Chippenham Fen SSSI and Snailwell Meadows SSSI. This would be a positive gain for the area. However, it can only be considered as such if it is committed to on a long-term basis. At present, there is no clarity regarding what will happen to areas within the DCO site post-decommissioning, and this includes habitats created as part of the scheme's compensation/enhancement package.

Habitat for turtle doves. Turtle dove was recorded as possibly breeding within the survey area, and the DCO site does fall within the RSPB's Operation Turtle Dove area. Targeted enhancements for this species will tie in with other species enhancements (such as stone curlew, as well as a variety of invertebrate species) as foraging habitat for turtle dove works best on areas of retained open ground, with patches of bare earth, sown with an appropriate seed mix. The proposed retention of hedgerows is good for this species, and it may be appropriate to also allow scrubby areas to develop / infill gaps in hedgerows to provide better nesting habitat, and also create ponds for birds to drink from.

Improvements to watercourses. The LEMP makes mention of possibilities to improve watercourses associated with the DCO site. More details and a commitment to such initiatives could benefit a range of species, including water voles.

Research opportunities. Given the size of the proposed solar farm and the apparent lack of research into impacts on wildlife, this application would represent an opportunity to lead on UK-based research into the operational impacts of solar farms on wildlife. The potential impacts on varying taxa may be adverse, beneficial or neutral, but any additional research to build on current understanding would be beneficial. This represents an opportunity for the promoter to demonstrate industry leadership in an important and currently under-researched area of ecological impact assessment. It is an area whereby the development, if it proceeds, can deliver wider-reaching positive outputs and thereby increase its societal benefits. It is recommended that a commitment to a specified package of relevant ecological research proposals is included within the application.

Specific comments on the Ecology chapter (ecological impact assessment)

Overall comments

Whilst it is acknowledged that this is a preliminary assessment ahead of the full Environmental Statement, its Methodology section is clear that it is an ecological impact assessment and is following the CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland. The following comments have been made in expectation of the Ecology chapter providing an ecological impact assessment utilising the extensive survey data collected and the scheme design details presently available.

The approach presented in the preliminary impact assessment in the Ecology chapter currently does not follow CIEEM (2018) standards:

- The assessment should aim to characterise ecological impacts: extent, magnitude, duration and frequency. All these should be quantified where possible, for example to give areas of habitat to be lost or % changes to areas of habitat or estimated proportions of bird territories affected.
- Durations should be expressed in months / years.
- Use of the phrases 'short term' and 'temporary' are used throughout the assessment and are never quantified or explained in the context of what that means for the specific ecological features being assessed (some ecological features may be more sensitive to short term impacts than others).
- Insufficient detail is given regarding the mitigation measures and/or compensatory habitat, upon which the conclusions of the impact assessment are hinged.
- Insufficient regard to cumulative impacts.

Comments regarding the evaluation of designated sites:

- Chippenham Fen and Snailwell Poor's Fen, including Fenland SAC, Chippenham Fen Ramsar / NNR, Chippenham Fen and Snailwell Poor's Fen SSSI. The Ecology chapter does not make reference to any published research regarding the potential for operational impacts on the adjacent European Site. For example, there is no evidence that consideration has been given to Natural England Evidence Research (2017) which discusses the potential for aquatic invertebrates to confuse reflected polarised light from the panels for water. This receptor should be taken forward for more detailed assessment.
- Havacre Meadows and Deal Nook CWS. The Ecology chapter says that the installation of required infrastructure will be done via tunnelling underneath the CWS. Does the promoter have any previous experience or examples where this has been successfully done? In the absence of such previous experience, how will the promoter plan for unforeseen problems that may occur? This receptor should be taken forward for more detailed assessment to consider all possible impacts on the CWS.
- Worlington Heath CWS and Badlington Lane CWS. These are within the DCO boundary and it is stated that these will be retained and protected, however,

the Landscape Masterplan / Parameter plans show these areas as under native grassland planting. This receptor should be taken forward for more detailed assessment.

- Joans's Meadow CWS and Worlington Golf Course CWS are on the DCO boundary and Landscape Masterplan / Parameter plans show potential provision of permissive routes around these. Where is the assessment regarding the potential for recreational disturbance due to increased walkers around these sites? This receptor should be taken forward for more detailed assessment.
- No consideration has been given as to how the construction and operational phases could cause recreational impacts on designated sites through potential changes to:
 - public access
 - avoidance of local area during construction (sending the public elsewhere)
 - loss of access
 - newly created public access

The site is located within the buffer around Breckland SPA within which in-combination recreational effects are a concern. The potential effects of loss of recreational access in the vicinity of existing settlements as a consequence of this development should be assessed.

Comments regarding the ruling out of the following features for further evaluation:

- 'Aquatic Macro-invertebrates'. The Ecology chapter does not make reference to any published research regarding the potential for operational impacts on relevant receptors. For example, Natural England Evidence Research NERR012 (2017) discusses the potential for aquatic invertebrates to confuse reflected polarised light from the panels for water, yet this has not been considered within the Ecology chapter.
- 'Wintering birds' and 'Wintering skylark'. Permanent loss of arable habitat (and some temporary loss of hedgerows) would appear to inevitably result in some effects on the wintering birds that have been found to use the site. As well as a direct loss of habitat, there could be impacts from noise during construction (which is defined in Chapter 3 as a period of 24 months). Whether or not these are significant is not clear, but this receptor should not be excluded from further assessment, in order to provide clarity. Reference is made to 'undeveloped mitigation areas' but no further information is supplied as to specifically how these will deliver habitats for wintering birds.
- 'Bats'. The chapter states that 'there will be no loss of important habitats used by bats anywhere in the DCO site'. By 'important' does this mean the habitats scored as 'high' in the Bat Report (Appendix 8G)? It's not clear how the statement in the Ecology chapter links directly to the data collected in the field surveys and query why there are maps highlighting areas of most (and least) value for potential bat roosts, but not for commuting and foraging habitat. This needs further exploration. Use of thresholds for defining levels of bat activity must be used with care due to differences in the detectability of

species and query whether such thresholds should be tailored for individual species/groups of species to take account of this. In terms of impacts, habitat loss is not the only one – what about consideration of lighting and noise disturbance? As set out below, the CEMP does not deal with these impacts to a point where they can be discounted from the assessment.

Assessment of impacts and significance of effects on receptors

Direct loss of unimproved acid and semi-improved acid grassland

The Ecology chapter says that there will be direct loss of acid grassland and that this will result in a temporary short term impact. There is no qualification as to what is meant by 'short term'. Impacts need to be characterised and quantified wherever possible (CIEEM, 2018).

On what basis are the impacts in acid grassland considered to be temporary? This is not discussed. Presumably it relates to the fact that there are proposals to create/restore new acid grassland but no details are given regarding proposed compensatory habitat.

There is no quantification of how much acid grassland will be lost, how much this is as a % of the total existing on the site and how much will be restored/created in compensation.

There is no indication of when it is expected that created/restored habitats will be of a quality such that they can be considered as providing a compensation for that which has been lost.

Has an analysis of soils been undertaken to demonstrate there are suitable areas available to create habitats of the same quality as those being destroyed?

There are no details/commitment to how they will be managed long-term.

Taking all this into account, it is unclear how the conclusion of 'temporary' impacts can be justified, or that the effects from the project will not be adverse or significant.

Direct loss of semi-improved calcareous grassland – same comments as for direct loss of acid grassland.

Direct loss of marshy grassland - same comments as for direct loss of acid grassland.

Direct loss of arable habitat supporting notable arable flora

The Ecology chapter says that there will be direct loss of arable habitats, particularly field margins, supporting notable arable flora and that this will result in a temporary short term impact.

There is no quantification of the areas of arable habitat to be lost (i.e. how many ha of County importance arable habitat, how much District level, and Local level?).

There is no detail as to how much is being lost as a percentage of the total existing on the site nor how much will be restored/created in compensation.

The chapter says 'it is possible that construction activities will create ground disturbance that may benefit arable flora during the construction in certain areas'. Whilst this may be true, a much more definitive statement regarding what can confidently and realistically be delivered is needed within an ecological impact assessment. Furthermore, what happens once construction is complete? As discussed further below, there are no details in the LEMP regarding the creation and management of arable habitat, including, crucially, how the required conditions, such as ongoing ground disturbance, will be provided.

Therefore, the report provides no explanation of how the loss of this habitat type (including that of County importance) can be compensated for, such that it will result in the stated negligible effects.

Direct loss of habitat supporting notable terrestrial invertebrate species and assemblages

When will compensatory habitat be of sufficient floristic diversity or suitable habitat structure such that it can support the invertebrate species and assemblages recorded on the site?

Specifically, which areas of habitat creation shown on the Landscape / Parameter plans are envisaged to provide replacement habitat for the invertebrate species affected?

How do the areas of habitat proposed link up to provide connectivity?

Whilst compensatory habitat is developing, can the species affected survive on remaining areas of habitat? And if so, where are these areas and how big are they? Otherwise, there is a risk of species being lost permanently from the area, even if the habitat loss is temporary.

Temporary loss of stone curlew breeding habitat and Disturbance to stone curlew
Sunnica East development will displace up to four pairs of breeding stone curlew. One pair of stone curlew are considered to require 16ha of good quality breeding habitat. This would equate to approximately 65ha of habitat required. It is understood that the proposals would deliver approximately 70 ha of habitat in the undeveloped mitigation areas (plus an additional 10ha of specific stone curlew plots). This would superficially appear to potentially be a large enough area of replacement habitat. However:

- These areas do not form a particularly coherent network of habitats, with poor connectivity in many places and do appear to be areas 'added on' around the edges of the solar farm infrastructure, rather than specifically designed to deliver for biodiversity.
- How has the level of disturbance in these areas been assessed? Disturbance to nesting stone curlew could result from the operational maintenance activities

on the solar farm or from areas of replacement habitat being provided close to roads or well-used footpaths, including proposed permissive paths.

- The proposals for acid grassland creation would appear to aim to deliver a suitable habitat structure (suitable sward height and areas of bare ground) but no quantification is provided as to how much of the undeveloped mitigation areas will be acid grassland, as opposed to semi-improved grassland which would likely have a denser sward (more suitable for foraging than breeding). Therefore, despite the figures looking suitable, much of the newly creation grassland may need to be discounted from the calculations as it may not provide suitable breeding habitat.
- No information is provided regarding the specifics of the three stone curlew plots, so it is not possible to understand their suitability in terms of distance from sources of disturbance, linkage to suitable foraging habitat, how they will be managed long-term to retain suitability.

The construction phase is stated to take two years. This is a significant period of time during which there will be high levels of disturbance (despite the intentions of the CEMP). Stone curlew can be slow to return to breeding areas after displacement and so how will the construction disturbance affect the overall stability and size of the wider stone curlew population?

The HRA Screening report references the Breckland Local Plan (2017) which takes 3km as the maximum distance over which stone curlews outside the SPA can be considered to be functionally linked to the SPA site. However, research undertaken since that time has demonstrated stone curlews travelling up to 5km from nest sites during the breeding (unpublished manuscript under review, Hawkes *et al*) and observations of colour-ringed birds shows movement of stone curlews between the development site and the SPA. This demonstrates a link between Breckland SPA and habitats over a greater distance than the previously defined 3km buffer, to the extent that they may have an important role in maintaining or restoring the population of the qualifying species (stone curlew) at favourable conservation status. At their closest, the stone curlew nesting in the DCO site were 3.2km from Breckland SPA.

Taking all this into account, we would dispute the findings of impacts on stone curlew as being temporary and not significant.

Furthermore, the updated research relating to stone curlew movements around the Breckland SPA should prompt a revisiting of the Stage 1 HRA Screening report. If deemed to result in 'likely significant effects' on stone curlew, these will need to be considered within the Stage 2 Appropriate Assessment.

Breeding bird assemblage

The undeveloped mitigation areas appear to be providing replacement habitat for a very large array and diversity of displaced species and there is no clarity regarding the carrying capacity of these habitats and whether they realistically can deliver for all taxa affected.

Is there evidence that species such as skylark will nest under solar panels at the density proposed at this site? If so, this should be presented and discussed. Details of how displacement of Skylark will be mitigated / compensated for, e.g. by provision of Skylark plots at an equal or higher number than any lost to the scheme, should be considered.

The timing of when the replacement/compensatory habitats will be available for breeding birds is not given. There is no discussion regarding how temporary the loss will be and how the bird species affected will fare in the intervening period. This is exacerbated by the two year construction phase and associated disturbance.

There is no discussion relating to potential operational impacts on breeding birds, with no reference to any published literature which discusses how birds may be affected by solar panels (e.g. birds trying to drink from solar panels, collision risks) or examples of successful breeding bird habitat created between panel arrays.

Cumulative Assessment

The study breaks the scheme into component sub-sections (West A and B, East A and B, Cable routes) and whilst this may have been useful for the initial survey reports, in terms of assessing impacts, these need to be brought back together: there is no proposal to develop only parts of the scheme, it is a whole package.

Construction Environmental Management Plan

Lighting – The Bat report states that the site is of ‘up to County importance for bats’, including County/District importance for foraging and commuting barbastelle, common and soprano pipistrelle. Therefore, such areas of habitat need to be protected from disturbance, including lighting. The same is true of potential bat roosts. This necessitates a highly robust approach within the CEMP document. However, the CEMP in its current form does not make a specific commitment not to illuminate important bat flight lines, foraging habitat or potential roosts, nor other habitats that may be of importance for other nocturnal wildlife. Given that the Ecology chapter relies on the CEMP for its conclusion of ‘no significant effects on bats’, the CEMP contains insufficient detail to allow such a conclusion to be made. The CEMP states in relation to lighting ‘*controls on lighting/illumination to minimise...potential adverse effects on...bats will be considered as far as is reasonably practicable*’. We would expect that important / potentially important bat habitat, in all its forms would be identified and highlighted as areas to be kept dark (no change to existing baseline) during both construction and during the operational phase of the solar farm. If this is not possible, then the Ecology chapter needs to identify and highlight that there is potential for significant adverse effects on bats, providing an adequate level of detail so that it is understood how the various species of bats will be affected by the different phases of the project.

Noise – The CEMP states, in relation to noise, that '*Best Practicable Means will be applied, as far as is reasonably practicable*'. Given the unspecific nature of the reduction measures set out in the CEMP, we would expect the effects of noise disturbance, in particular on birds, to be more fully explored within the Ecology chapter.

Reliance on a CEMP to rule out an assessment of impacts within an EcIA would not appear to follow best practise; a CEMP is not an integral part of the design of the development.

Outline Landscape and Ecology Management Plan (LEMP)

Some of the habitats that will be lost require a big commitment to maintain them long-term and so we question the feasibility of re-creating them and would urge consideration be given to keeping and protecting what already exists (avoid impacts in the first place), allowing existing land management regimes to continue in these areas. We have provided further details below.

We would like to see a commitment to grazing, as this seems the only solution to create and maintain the conditions required by the majority of the various grassland habitat types. The LEMP correctly states that grazing is generally preferable to mowing. Therefore, a clear commitment to grazing is required, in order to accept that the habitat creation proposals will truly deliver what they set out to.

Unfortunately, many solar farm applications have promised the creation of flower-rich grasslands, to be managed by grazing, but have failed to deliver the promised habitat benefits, instead creating grasslands among the solar panels that are heavily shaded, affected by rain shadow and manged by regular mowing and herbicides. Changes may be needed to the height of the solar panels to allow sheep grazing and these aspects need to be considered now.

Arable Flora: The LEMP talks about maintaining valuable field boundaries for arable flora. However, it is envisaged that rotavating the ground / use of other mowing machinery will be unlikely to be carried out due to the potential for debris/stones to kick up and damage the solar panels. The time involved in tracking such machinery in and around the lines of panel arrays would also seem to make it unlikely to happen in reality. It seems unrealistic that the required ongoing ground disturbance will happen year after year around the solar farm infrastructure. Therefore, in the case of arable flora, we cannot see how suitable habitats can be created and maintained within a solar farm. Ground disturbance is key to maintaining favourable conditions for these plant species and no demonstration of a feasible approach to long term habitat management has been provided.

Marshy grassland: No details are supplied within the LEMP as to how this habitat will be created. The Ecology chapter (para 8.7.2) says the project '*will consider suitable water level management*' and '*alternatives [to abstraction from the River Snail] will be considered*'. This statement fails to provide any definitive explanation for how the

proposed grazing marsh will be created. Without the correct underlying hydrology, this type of habitat simply will not exist.

Decommissioning

How does the promoter ensure the survival of compensatory habitats beyond the 40 year lifespan of the Solar Farm?

Even at this outline stage, it seems reasonable to be provided with a better understanding of the plan beyond 40 years. Given the exceptional size of the land within the DCO, it would seem reasonable / pertinent to require more details about the decommissioning process. Whilst it is accepted that the details of this will be a matter for a separate assessment nearer the time, given the huge amount of land involved, it is considered appropriate at this stage to request information on what is proposed for the land (or even just some specific key areas of the site) after decommissioning. For example, whether there is any commitment to retain the compensatory grassland and arable habitats to ensure they survive beyond the 40 year lifespan of the solar farm.

Forty years is not a long time in landscape planning / management terms and it is not appropriate to avoid considering what will happen beyond this point. The end of the project is very much a crucial part of the decision-making process, and not something that should be left out of the assessment. Otherwise it is very possible that long-term, there could be a net loss to biodiversity across this varied landscape, which would affect large areas of both Cambridgeshire and Suffolk. If this is a possibility, then it needs to be highlighted in the impact assessment.

A stronger, clearer vision for the site should be provided for the post decommissioned stage.

Loss of arable farmland compromising landscape-scale nature conservation projects

We note that the assessment of the loss of arable land will be covered in the ES and that very little assessment has been made at this stage (ref Chapter 12 Socio economics and Land Use).

We would like to request that the next stage of assessment also considers the loss of such a large extent of countryside landscape in relation to the impact this may have on allowing conservation minded-farmers and charities to deliver habitats for wildlife at a landscape scale. There has been a positive move in recent years (post the Making Space for Nature Lawton Report, 2010) to aim to deliver 'bigger, better and more joined up habitats'. In order to do this, land needs to be available to support such initiatives. The loss of such a significant area of productive farmland, which happens also to be in close proximity to several strategic landscape-scale nature conservation initiatives, has the potential to compromise efforts to deliver nature

conservation priorities elsewhere in East Cambridgeshire and West Suffolk, by making it harder to secure arable land for habitat creation in the best places.

Water Resources

Flood Risk

The majority of the land required for Sunnica East Site A has a low risk of flooding (less than a 1 in 1,000 chance of being flooded each year). There are some small areas at greater risk of flooding (1 in 100 to 1,000 annual probability) presents within Sunnica East Site A, associated with the Lee Brook within the western extent, and also north from the River Lark. The Sunnica East Site B is located on land with a low risk of flooding (less than a 1 in 1,000 chance of being flooded in any given year).

A range of mitigation measures, such as crossing of watercourses with trenchless techniques, removing infrastructure from Flood Zone 3b areas, and implementation of swales/drainage ditches, are embedded within the design of the scheme or captured within standard construction practices reflected in the CEMP so as to prevent or minimise effects on the water environment.

Overall, the councils agree with the assessment of flood risk; only Sunnica East A contains notable sources of fluvial risk from Lee Brook but construction works will be outside Flood Zone 3. Surface water flooding is very low across all site and we therefore agree with the findings of the report

Drainage Strategy

The use of open SuDS features to route runoff towards a basin is acceptable. All features are shallow, which is satisfactory and follows Environment Agency groundwater criteria and our local guidance on open SuDS.

The proposal to mimic natural drainage is a suitable approach, but it is difficult to evaluate as the topographic plans are difficult to use. No levels are provided, and resolution is poor. It would be better to convert contours into heat maps given the size of the plots. We need these plans to be able to follow logic behind the siting of swale and basin locations. We recommend the use of LiDAR if surveys have not already been undertaken. It would be helpful if the plans showing conveyance swales could include flow arrows.

Though we anticipate that infiltration is likely to be successful based on local knowledge of the site areas, no infiltration testing has yet occurred. At this stage, we would expect at least some intrusive investigations at each site to gain a better understanding of conditions. The critical factors are groundwater levels and how far below ground any chalk deposits are.

The section of chapter 9 concerned with Management of Construction Site Runoff does not appear to be based on the runoff dynamics of the site. It is also concerning that this section proposes "site drainage, including surface runoff and dewatering effluents, will be discharged to sewers". This is the opposite approach to the SuDS hierarchy; surface water should not be discharged to sewers. Instead, we would suggest that the best temporary drainage system would be temporary SuDS based

on an infiltration strategy with increased levels of pollution and sediment control (i.e. silt and oil traps).

In addition, this document should contain some assessment of the surface water drainage impacts of proposed access and haul roads through the site, both in terms of the quantity of run-off and the quality.

The decision to use piled foundations rather than concrete pads for solar panels is suitable from a drainage perspective. However, it is recommended that the risk of scouring and/or rutting caused by localised compaction during construction followed by intense rainfall being routed off panels is evaluated in order to consider whether any mitigation is necessary.

The promoter should also consider the possibility of conflict between drainage features and archaeology due to the shallow soils in the area.

It is not clear from the drainage strategy whether existing land drains are to be retained. They do not seem to be mapped in the PEIR documentation, so clarification would be welcome.

Finished floor levels should be raised 300mm above surrounding ground levels, or 600mm above the predicted river flood levels, whichever is highest.

Drainage Technical Note (FRA/Drainage Strategy Appendix F)

The Councils have the following specific comments to make on the technical note provided:

- A conservative infiltration rate has been selected – This is acceptable for this stage, however we do not agree with suggestions that ground investigation is cost prohibitive at this stage as groundwater levels information is important.
- 10% PIMP is an acceptable assumption for solar arrays but 50% for compound areas seems too low.
- FEH13 or observed rainfall should have been used given the scale of these sites and not FSR.
- 0.6m deep Suds features are satisfactory.
- Table 2 suggest 8% increase in impermeable due to the development – 45ha increase for eastern sites – This seems reasonable, but should be reflected in body of report at 4.1.
- Results in a conservative estimate of 53,400 m³ of storage required across all sites (88ha of imp area) – again seems reasonable.

Document Quality

Although the Councils generally agree with the recommendations of this chapter, there are a number of quality issues in the document which must be addressed in the Environmental Statement.

- In terms of drainage strategy, the PEIR does not match the findings and recommendations in the Flood Risk Assessment (FRA, Appendix 9A). The main chapter refers to attenuation features or detention basins throughout the document whereas the FRA uses infiltration as the basis for control. This is an

important distinction, as attenuation is unlikely to be acceptable to the Ministry of Defence due to the risk of bird strikes for military aviation caused by standing water.

- The drainage strategy assumes that 50% of the total area will be impermeable. If this relates to the compound and substation areas only, then it seems a little low, as it is presumed that there is little green space in these areas.
- At 4.1 it seems unlikely that the contributing area will not change post-consent, even if only due to the addition of the compound and substation areas. It would be useful to provide a map showing the contributing areas mentioned.
- The table with Greenfield runoff rates shows the Qbar rate being the highest. It may be that the return periods have been incorrectly inserted within the table, however, this should be accurate in future applications when determining the runoff rates.

Landscape and Visual Amenity

The characterisation of the baseline and the assessment of the adverse effects of the proposals, as well as the suggested mitigation/compensation are not appropriate or acceptable. Therefore, as it is currently presented, the proposed scheme is not acceptable in respect of landscape and visual amenity, and in this respect cannot be supported. However, the Councils consider that many of the methodological and baseline characterisation issues can be resolved, if the promoter is willing to engage effectively on these issues.

If a project of this scale must proceed, there will be substantial residual landscape character and visual impacts that just cannot be mitigated. A creative approach to design is required avoiding monotonous rows of panels. This could be through, for example, emulating field patterns or creating shapes and vistas that promote more visual interest. If the promoter was prepared to recognise the need for an exemplary approach to the design and mitigation, of what is currently the largest solar proposal in the UK, the Councils consider that there might be scope for considerably more of the landscape and visual amenity impacts to be mitigated.

Key Issues – relating to the overall scheme

Landscape character assessments and Landscape effects assessments

The boundaries are blurred between baseline findings and assessment. This applies to the PEIR and Appendices 10D and 10E. A clear distinction should be made between the baseline landscape character and the assessments of value, susceptibility, and sensitivity in relation to the proposals.

All levels of published landscape character assessments (as referenced in Appendix 10D) should inform the baseline studies within the Local Landscape Character Area (LLCA) Assessment (Appendix 10E). This assessment should describe how the LLCAs nest within the wider assessments, which elements and qualities of the landscape,

found locally, represent/ relate to the wider assessments and which are a-typical. If it is apparent that the boundaries of the LLCA do straddle the boundaries of wider areas/typologies, this should be explained and justified. Once a clear and coherent picture of the local landscape character is established, this can form the basis, together with the regional level character assessments for assessing the landscape effects.

The boundaries around the character areas defining the villages are far too tight. The settings of the villages and the features which define the boundaries of the villages are not adequately identified and described.

Whilst the principle of a detailed local landscape base is welcome, this should be developed and agreed in consultation with the relevant local authorities prior to its use in the Environmental Statement. This is essential if it is not to become an area of uncommon ground at a later date.

Action required –

1. Set out methodology, based on existing guidance (such as Natural England's, 'An Approach to Landscape Character Assessment', October 2014), for defining LLCAs and agree with LPA
2. Provide references to all levels of published Landscape Character Assessments and set out how the LLCAs are representative of or different from the wider character areas and provide justification where LLCAs do not nest within wider character areas and boundaries are re-defined
3. Base justifications for value, susceptibility and resulting sensitivity on sound methodology, that is agreed with LPAs (see LPA comments on Appendix 10C LVIA Methodology)
4. Restructure the assessment of the landscape effects to improve the communication of findings.
5. All aspects of landscape need to be assessed, not just physical elements.
6. Refine the presentation of figures (maps) so they visually aid the interpretation of the landscape character across the study area.

Design

The proposals have evolved (and continue to do so), and the red line has changed significantly. This means that some of the earlier comments made by the local authorities may have become obsolete. However, it also means that the following new concerns have arisen:

1. The proposed areas for PV panels are encroaching too close towards Isleham, and the proposals (including mitigation) do not respect the fenland edge character of this area.
2. The proposal is encroaching too close to the avenue leading to Chippenham Hall, affecting the setting of a registered park and garden.
3. Further landscape concerns are around the U6006 road, Worlington, West Row, La Hogue Road, the B1085 and the view from Newmarket (Limekilns), E18 and E33
4. Despite the significant changes to the red line, Sunnica West A would be a vast expanse of uninterrupted solar plant.

5. All boundary changes should be reviewed as they could result in additional effects on receptors, for example at Biggin Farm (close to Grade II Listed Fordham House) and at Chippenham Fen (additional encroachment on avenue).

Action Required – In order to minimise and eliminate adverse landscape impacts from the revised layout of the scheme, a creative and iterative approach to the design of the solar farm and landscape mitigation is necessary to resolve these issues.

Mitigation

The mitigation proposals across the scheme are too homogenous and, in some areas, inappropriate to the extent that the adverse effect of the proposed mitigation planting is potentially greater than the adverse effects of the solar plant proposals. (Isleham / La Hogue Road/ Golf Links Road/ B1085 view out of Chippenham and possibly other locations).

Further details are required about specific mitigation planting that is suitable for the different identified landscape character areas. Planting proposals should be based on the landscape character and observed existing vegetation.

Action Required – an effective and locally appropriate scheme of mitigation reflecting the local characteristics of the different areas in which the project is built is essential if the project is to be made acceptable – Detailed discussions with the LPAs is essential if these issues are to be resolved.

Public Rights of Way

There are concerns about the visual impact on PROWs. This includes the various different users of the network, with viewpoints not being covered for equestrian use as previously agreed.

The closure of all Rights of Way within the red line boundary for the duration of the construction phase seems excessive and needs to be reconsidered. There is concern that Worlington and Freckenham will effectively be cut off from recreational routes in the area during the construction phase. A phased approach should be adopted, and routes should only be closed for a minimum period, when works require it. Alternative routes should be provided. There are areas of the network that should remain open at all times due to routes being around the edge of the scheme area and not physically affected by works.

The closure of routes could potentially have a negative impact on other recreational areas in the wider area, including areas designated for their ecological value. These impacts will need to be assessed in the report and in the Habitat Regulation Assessment.

The public access has not sufficiently increased. The suggestions from the Rights of Way Officer for desired additional routes were not taken further; some of the

proposed additional permissive routes may interfere with ecological aims, for example in stone curlew areas.

There are concerns over noise from inverters, switchgear and other associated equipment disturbing equestrian users, for example on Bridleway 204/5. Such equipment needs to be located a sufficient distance away from PROW.

Because permissive paths either cross or are bordered by the proposed DCO area, it is recommended that the works promoter seeks clarification from the Cambridgeshire Asset Information service as to the lateral width of PROW and highways in the affected area. This will help to ensure that any works proposed or undertaken within the DCO area do not encroach upon the PROW or have a negative impact on the users of the network.

LVIA Methodology

The methodology for the assessment of landscape and visual effects of the scheme is fundamentally flawed and therefore leads to conclusions that the Councils cannot agree with. This needs to be addressed. It would have been preferable to do this prior to the PEIR, but the Councils are happy to give further detail as to what changes to the methodology are necessary (see also below).

Action required - methodology should be agreed prior to preparation of Environmental Statement to avoid uncommon ground in this area.

Visual presentation

The viewpoints have not been updated to reflect changes to the DCO red line and the scheme design that has occurred. A number of viewpoints which previously were representative are now redundant as they no longer focus on the application site, while other viewpoints that would focus on the most intrusive parts of the development are missing or focused away from these features.

The viewing angles of some of the photographs go much beyond the human field of vision, resulting in a fish-bowl effect for some views. This also leads to the proposed development appearing smaller within the photograph.

Some important views (photomontages) are presented across two pages, with the result that the important and central elements of the views, the solar installations, are effectively pushed to the edge and/or split in half. This makes it harder to read the photomontages and to understand the effects of the proposals in the landscape.

The photomontages do not appear to have location maps. The remaining viewpoints have small location maps that are difficult to read, especially as all viewpoints in the area have been left in and it is near impossible to identify which viewpoint relates to the photograph. The relevant viewpoint should be highlighted on the location map for clarity.

For each viewpoint three photographs are included in the figures, a summer and a winter panorama and a more focused view. However there does not appear to be any explanation as to why this is the case, and it is not clear whether the assessment is undertaken in the context of the panorama or the more focused area. The photographs have hardly any annotations, and the focused view has none; description and assessment have to be found in the appropriate appendix, which is cumbersome. The focused views are unusual, but could provide additional insight and be very useful, if they were annotated so the location, extent and context of the proposals are clear.

Information clarifying how/at what size the photographs should be viewed is missing, and the photomontages are to be viewed at A1 size and at a comfortable arm's length according to the note. Given that this statutory consultation is taking place exclusively online and that officers, Councillors and many members of the public are likely to continue using the online material, the visual representation should be made much more user friendly.

It would be useful to add to Year 15 visualisations a succinct comment of when this level of mitigation can be expected to be reached. For some mitigation planting (e.g. reed beds or hedges) this could be much earlier than in Year 15.

Action required - Reassess and agree the baseline methodology and the viewpoints in light of changes already made to the DCO site and scheme design and any future changes prior to preparation of Environmental Statement to avoid uncommon ground in this area.

Inter- and Intra-Cumulative effects

The assessment addresses the potential interaction of effects (chapter 17) caused by the scheme and has also identified other developments in the area that may lead to cumulative effects (section 10.11). It has, however, not sufficiently addressed and reported on the potential intra-cumulative effects.

The proposal now effectively consists of four sites, plus interlinking cable routes. Therefore, the most relevant results from both the landscape character and visual assessments are those described in the PEIR as the 'combined' effects. However, these assessments are lost in the volume of information presented, although it is noted that these assessments are used in chapter 16. However, in chapter 16 effects on landscape character and visual environment should be differentiated and the view reference used.

It is not sufficient to state that from no visual receptor can the entire development be viewed and bury the findings within the appendices that assess landscape and visual effects and not summarise them in the main report.

It is further necessary that the sequential aspects of moving through the area are thoroughly assessed for all users, and that it is fully understood how the perception, that users have of the landscape within and around Sunnica, is affected by the proposals.

Action required – methodology for dealing with intra and inter cumulative effects of the project should be agreed prior to preparation of Environmental Statement to avoid uncommon ground in this area.

Glint and Glare

There is concern as to the impact of glint and glare, noting proposals to use planting to mitigate the impact will take a number of years to establish.

There is concern regarding glint and glare for equestrian users south of Sunnica West site A. Proposals should investigate methods to mitigate these impacts in the years before the planting is established.

Receptor heights have not been covered fully for equestrian use for the public rights of way network, with a number of routes not assessed at the increased height detailed in the assessment.

Action required – Review the issues associated with glint and glare for equestrian receptors.

Other concerns

It is concerning that many suggestions and recommendations previously made by the Councils do not seem to have been taken on board, for example:

- No reference can be found in the PEIR for assessment of views for equestrian users as visual receptors (separate from glint and glare).
- The proposed permissive paths are not what was asked for.
- Some additional viewpoints are still missing (most importantly along the avenue towards the entrance of Chippenham Hall, but also from B1085 looking south-east into the Sunnica West A (slightly north-east of viewpoint 32)).
- The directionality of viewpoints on maps is still inaccurate in places and double arrows are unhelpful.
- The impact of lighting has not been sufficiently considered in the landscape section.

Comments in more detail

More detailed comments with regard to these key issues as well as additional comments on Chapter 10 of the PEIR are detailed below. Given the fact that the design is still evolving and the Councils are seeking fundamental changes to the methodology, assessment and mitigation, the Councils reserve the right to raise additional matters of detail beyond the statutory consultation period.

The Councils are happy to collaborate in updating the approach to the LVIA between now and the submission of the DCO application.

Within West Suffolk, the assessment concluded that the proposals would have a significant effect on the landscape character of the Sunnica East site A and B and on the local landscape character for Sunnica East site B, and that the effects would persist in the long term and at decommissioning. Visual effects would be significant during the construction phase; however, these would be short to medium term and

would be reduced as the landscape planting matures. In the long term there would continue to be significant visual effects which would be experienced by recreational users and users of the training ground at the Limekilns located on the northern side of Newmarket.

Within East Cambridgeshire the assessment concluded that the proposals will have a significant effect on the landscape character of the Sunnica East site A, as well as Sunnica West sites A and B, and that the effects would persist in the long term and at decommissioning. Visual effects would be significant during the construction phase for all three sites; by Year 1 these would be reduced for Sunnica East site B, and by Year 15 also for Sunnica East B, as the mitigation planting matures. In the long term there would continue to be significant visual effects for Sunnica West site A.

PEIR Assessment assumptions

Groundworks: An assumption within the PEIR is that localised ground levelling will be required. It is not clear what the scope of this would be, for example would the ground levels be manipulated by +/- 0.5m such that they would be imperceptible, or would changes in ground levels be more significant and therefore have an additional impact on landscape character and visual amenity. The assumptions include that the excavated material from the cable route and other excavation will be stored within the DCO site. However, it is not clear where this will be stored, and how it will be accommodated both in the short term and during operation. This has the potential to contribute to the landscape effects of the proposal.

Ground preparation: There does not appear to be any provision for de-compacting the soil after use of heavy machinery during construction and prior to mitigative seeding/planting (10.3.7).

Perimeter fence: An assumption is that the perimeter fence will be a 2m high deer proof fence constructed early in the construction period to help protect retained vegetation. Chapter 3 suggests that this could be up to 2.5m in height. Whilst the early construction of the perimeter fence is welcomed, it is not clear what the design (noting that plate 3-11 is a typical example of a deer fence) or alignment of the perimeter fencing will be. These factors will contribute to the landscape character and visual effects – the fence itself has the potential to have a significant effect on its own if not aligned carefully in relation to existing landscape features. More detail is required. It appears that the BESS, substations and other infrastructure such as the solar stations would require more substantial security fencing and it is not clear whether this has been taken into account.

Appendix 10B High Level Tree Constraints Report

The PEIR and design of the proposals to date relies on a High-level tree constraints report, **Appendix 10B**. The methodology used relies on approximate tree height and canopy spread information taken from the National Tree Map (NTM) data set and a walk-over assessment for accessible areas. The data has been used to derive underground and above ground constraint buffers for trees and to identify trees likely to be of higher value. Whilst it is agreed that this high-level assessment may be suitable for this early-stage design and planning purposes, focusing on the likely quality and benefits of the trees, there are likely to be gaps that will come to light at

later stages. The PEIR confirms that further survey is required, and this should be undertaken to inform the ES and the DCO application.

The mitigation hierarchy must be applied to trees and hedges. The LPAs expect that the proposals will be reviewed, and tree losses avoided and minimised, for example along cable route A, between Sunnica East Site B and Sunnica West Site A at Heath Plantation; here the cable route is still shown to cut through a woodland, which the High-Level Tree Constraints Plan identifies as a group likely to be of high Value (Sheet 14). The alignment of the cable route corridor should be amended so that it avoids the woodland entirely.

It is essential that a suitably qualified arboriculturist is appointed as soon as possible to advise on tree matters at the detailed design stage, to supervise any tree works throughout the construction of the scheme (including installation of tree protection fencing, tree work, construction within close proximity to trees) and to produce a post completion inspection report detailing the condition of all trees that may have been affected by the works carried out.

PEIR Assessment methodology

Study Area

The study area should continue to be reviewed by the promoter if the parameters of the scheme change including the footprint and the height of the structures.

A large area of the original site area of Sunnica East around Freckenham has been removed from the scheme; instead, the scheme now comes much closer to Isleham. Sunnica East is now split into A and B. While this brings much needed relief in the area between Worlington and Freckenham, the location of solar panels in close proximity to Isleham may not be appropriate. Although this area is still within Rolling Estate Chalklands, the landscape here is beginning to change and transition into the settled fenland character type, being quite flat with wide open views.

Methodology

The methodology for the LVIA is derived from the Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3), 2013 and the photomontage methodology is derived from the Landscape Institute's TGN 06/19: Visual Representation of Development Proposals, 2019 which are considered to be the industry standard. The methodology is set out in **Appendix 10C** (see below). Reference is also made to the glint and glare assessment **Appendix 16A** (see below).

The scheme design has evolved and the viewpoints that have been chosen will need to be adjusted to ensure that the visual effects of the more intrusive infrastructure elements such as access points, BESS, substations and security fencing are also assessed.

Residential Visual Amenity Assessment has not been considered necessary (section 10.4.24 -28). However, in light of the concerns about the methodology this should remain a matter for review.

The potential effect of lighting during construction, operation, and decommissioning of the proposals does not appear to have been considered. The need for lighting is

detailed on page 8-70 of the PEIR, however, it doesn't appear to have been considered in the landscape section. West Suffolk planning policy JDMPD DM13 requires that development should protect and enhance the nocturnal character of the landscape.

Appendix 10C LVIA Methodology, August 2020

Table 1-2: Landscape susceptibility, p.2

- The susceptibility criteria are ill defined and generic rather than specific.
- All assessments should be carried out against the current proposals as they stand (bearing in mind the Rochdale Envelope).
- The 'likelihood of undue consequences' is not a criterion for susceptibility. It is the susceptibility of a particular site to the changes resulting from a specific scheme that determines the likelihood of undue consequences.
- In order to establish the susceptibility of a specific area of a specific landscape to change caused by a specific development the criteria need to be landscape based and should include aspects like landform, location (valley – valleyside – plateau), characteristic vegetation, local landscape character, tranquillity. GLVIA 3rd states on pp.88f. that susceptibility "means the ability of the landscape (whether it be the overall character or quality/condition of a particular landscape type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of planning policies and strategies."

Table 1-3: Landscape Sensitivity, p. 2

- The criteria to discern 'medium' and 'low' sensitivity seem to be too similar and we suggest losing the 'very low' category and use its criteria for the 'low sensitivity' category. Otherwise, there is a danger that landscapes of community and local value may slide too easily into the 'very low sensitivity' category.
- Looking at the provided tables more holistically, we cannot see much difference between Landscape Sensitivity and Landscape Value. There are no categories for landscapes/ sites that have limited or very low value, because they are degraded, yet have little capacity for further adverse change, but could benefit from improvement. Nor does there appear to be a category for highly valued landscapes of national importance that may be able to accommodate a certain degree of change, because of factors in the landscape.
- There is concern that the methodology is calibrated in a way that may put more of the expected effects into the non-significant bracket. This could be mitigated by the professional judgement in the narrative. However, this cannot be verified for Viewpoint 33, north-west of La Hogue Road, at the junction with La Hogue Farm. It is difficult to follow the judgement that the change of view by year 15 from wide open landscape to looking up close onto the edge of a tree belt as far as the eye can see can result in a negligible effect.
- There is a need to question statements such as:
10.6.201 The susceptibility of the LLCA mainly ranges between low to high. The low susceptibility is due to many developed areas or fields without landscape features such that development could be accommodated. The high

susceptibility is due to Conservation Areas, or defined 'stud' landscapes, with limited ability to accommodate change. (PEIR, p.10-55)

In particular around Isleham, but also south-west of La Hogue Road, wide open spaces with few features are part of the character and highly susceptible to change.

Appendix 16A Glint and Glare Assessment

The mitigation embedded in the proposals has been accounted for in assessing glint and glare; this could be problematic, as the mitigation philosophy and resulting mitigation measures have not been agreed with the LPAs and are subject to change. In addition, the mitigation will take some time to establish and become effective. Re-assessment may be required once mitigation planting is finalised and agreed.

- Paragraph 16.3.29 mentions native and non-native evergreen species to be planted next to the temporary hoarding; clarification is required which species are proposed here, particularly which- non-native species.

There is also concern over the impact on equestrian use on the PRoW and impact on viewpoint 40 with regard to early morning impacts when this route receives high use.

- All PRoW that have equestrian access, as shown in Section 5.4, should be assessed at a height of 3.5 metres of horse and rider to reflect the equestrian receptor.
- The geometric calculation results do not give a true interpretation of the impact for the Public Right of Way network as detailed in 8.8 of the assessment.

PEIR Stakeholder engagement

Consultation with EDCD, CCC, WSC and SCC Landscape Officers and other consultees has been undertaken to discuss some technical issues ahead of the PEIR. However, many details of the scheme including the parameter plans, and the DCO outline were evolving at that time. As a result, those early comments may not now be relevant to the design currently being assessed and similarly comments made in relation to the PEIR are focused on the current scheme which may be different to the final scheme submitted.

PEIR Baseline conditions

The GLVIA 3 is clear (section 5.41-5.42) that sensitivity of a landscape may be based on a published 'intrinsic' sensitivity study (such as those in the landscape character assessments) but should be an assessment of the susceptibility of the receptors in relation to change arising from the specific development proposals. The GLVIA 3 advises that the assessment of sensibility should not be recorded as part of the landscape baseline. The methodology used does not appear to have followed this principle.

The PEIR does not take into account that West Suffolk policy DM13 identifies the Brecks as a valued landscape which has "by reason of their landform, historic

landscape importance and/or condition, a very limited capacity to absorb change without a significant material effect on their character and/or condition." The evidence documents behind this are the Norfolk and Suffolk Brecks Landscape Character Assessment and the Brecks special qualities study which Officers have already made the consultants aware of.

Appendix 10D Local (Published) landscape character assessment

The Sunnica development is located across three national landscape character areas, as clearly shown in figure 10-5 illustrating the National Character Areas. The various regional and county character assessments reflect these, each refining the boundaries, and describing landscape character types/typologies in more detail. Unfortunately, this is not demonstrated in the presentation and organisation of the baseline information. The mapping could better illustrate the compatibility of the landscape assessments at the different levels if the colours used were more carefully selected.

- The boundaries between baseline studies and proposal assessment are not sufficiently defined. The sensitivity of the landscape to this project is not a part of the baseline but forms part of the assessment.
- The assessments and judgements of value and susceptibility are not adequately evidenced and explained.
- Perceptual, aesthetic, cultural and social aspects of landscape do not appear to be considered; the focus is on physical features, which is important, but not sufficient.

Appendix 10E Local landscape character areas

The fine-grain approach to local character areas is welcomed as a baseline for assessment. Paragraph 1.1.1 states that the LLCAs have been identified via fieldwork. The methodology for this field work, based on existing guidance (such as Natural England's, 'An Approach to Landscape Character Assessment', October 2014), for defining LLCAs should be clearly set out, i.e., which criteria were used to subdivide and, in some cases redefine the boundaries of the landscape types and areas of the published Landscape Character Assessments.

It is expected that the Local Landscape Character Areas would be based on ("nest in") and developed from all available layers of published Landscape Character Assessments (see Appendix 10D). In Appendix 10E reference is made only to the National Landscape Character Areas, which is not comprehensive enough. As the grain of assessment gets finer on the local assessment level, it is important to further refine and adjust the assessments of coarser grain assessments, where available, and to analyse where the local character is congruent and where it is different from the wider landscape character. These likenesses and differences need to be presented with more than a one-or-two-word reference to key characteristics of the respective National Character Area. More evidence and justification are required to answer the following:

- How far are the key characteristics identified in other Landscape Character Assessments present in the local area?

- How is the local area similar or different from the wider landscape area?
- To what extent is the local character area representative of the various character areas/typologies in which it sits (define: representative – somewhat representative – less representative - not representative; should there be other categories?)?

The paragraphs relating to value, susceptibility and sensitivity should not form part of the baseline, as they are part of the assessment. The justifications for Landscape Value, Landscape Susceptibility and Landscape Sensitivity

- are too formulaic,
- are based on a methodology which the LPAs consider to be fundamentally flawed,
- need to be more descriptive and detailed (for example a description should be included of the potential changes in the local area resulting from the proposals, and the ability of the landscape to accommodate these changes (susceptibility)).

There are concerns about the boundaries of some of the LLCAs, particularly around settlements, and where they cut across landscape typologies defined in other higher-level studies.

The colours representing the Local Landscape Character Areas appear to have been chosen mainly for ease of *telling apart*; for this transitional landscape it may be more useful if the colours were also to illustrate this transitional character and, if possible, use colours akin the those of the wider area assessments. This would then provide an additional visual layer of information to the text, and unusual pockets of character different from the wider areas could be more easily recognised.

The paragraphs relating to susceptibility do not adequately analyse how the proposed development (or the elements of the development present within this area) would affect certain elements of the landscape. For example, the area around Isleham, which is named: East Fen Farmland (LLCA 11): no explanation is given as to what effect the proposals have on the baseline of particular aesthetic and perceptual qualities of this area; it only briefly refers to landscape features: *"1.1.51 The LLCA is an open, very gently undulating arable landscape with limited vegetation cover, such that the extent of features with the potential to be impacted is low. the LLCA is therefore assessed as being of low susceptibility to the type of development proposed"*.

Appendix 10F Visual baseline

Visual baseline methodology

The information included in the visual baseline appendix goes beyond baseline description to include assessment, and the boundaries between baseline studies and assessment are blurred. Sentences such as 'no part of the scheme is visible' are considered to be part of the assessment, as would the assessment of susceptibility, value and sensitivity. Whilst it might be convenient to group this information together with the baseline description, the status of this information should be clear through appropriate labelling.

The descriptions of the existing views skip to the detail of the views without properly setting the scene; for example, neglecting to note if it is a *rural view of open countryside*. The descriptions only extend as far as they can be related to the proposals, often from the first sentence. They do not explain which qualities of the landscape, if any, contribute to the view. The GLVIA suggests that the nature, composition and characteristics of the existing view are described and goes on to give examples of visual characteristics as the nature and extent of the skyline, aspects of visual scale and proportion, especially with respect to any particular horizontal or vertical emphasis, and any key foci.

The methodology for assessing sensitivity is flawed – see above. In addition, the assessment is not consistent throughout the viewpoints.

When valuing viewpoints consideration should be given to the features of the Brecks as a valued landscape. The special qualities of the Brecks are described in: <http://www.breakingnewground.org.uk/assets/LCAP/Brecks-Special-Qualities-Report-low-res.pdf#:~:text=The%20Brecks%E2%80%99%20special%20qualities%20study%20is%20an%20extension,the%20Brecks%20national%20landscape%20character%20area%20%28NCA%2085%29>

Viewpoints

The viewpoints have not been updated to reflect changes to the DCO red line and the scheme design that has occurred. A number of viewpoints which previously were representative are now redundant as they no longer focus on the application site, while other viewpoints that would focus on the most intrusive parts of the development, for example the BESS and other infrastructure at E18, E33 and (insert re cambs) are missing, or focused away from these features.

- An additional viewpoint is required from Devil's Dyke.
- An additional viewpoint is required from the avenue leading from the original main entrance to Chippenham estate looking in all directions, from a suitable location, where the extent of the PV panels on either side of the avenue and the resulting effects on the setting are evident. This should be a Type 4 visualisation (photomontage).
- An additional viewpoint is required from B1085 looking south-east into the Sunnica West A.
- An additional viewpoint is required for the proposed redline change at Biggin Farm A142. Fordham House is a Grade II Listed Building and will need to be assessed as a visual receptor. Any potential effects on the setting of Fordham House will also need to be assessed (Cultural Heritage).
- View to E33 from the road to West Row.

There is still concern that the location and field of view of viewpoints is not precise on the plan and the direction of view is not always consistent with the photographs. The use of double arrows instead of a fan indicating the visual field is not useful. The PINs scoping opinion drew attention to this matter in the scoping opinion (4.5.13).

For example: Viewpoint 9, shown on the plan to be looking north-west, while the photo does appear to be looking north; in addition, the caption on the photo page

refers to trees visible along the B1102, which is impossible as the B1102 is situated south of the viewpoint. The trees may be located along Beck Road.

The title of the viewpoint should include the viewing direction.

The provision of photomontages does not appear to be sufficient, particularly for Sunnica West and around Burwell substation. It is suggested that Viewpoints 41, 46 and 54/55 are reconsidered.

Comments on the visual presentation are included above.

PEIR Embedded Design mitigation

- The assessment of the effects of the various infrastructure elements, for example the BESS relies on tonal rendering of the infrastructure elements to reduce their visual effects. Landscape colour is likely to vary along with the main landscape character areas. There is no evidence that a colour study has been undertaken. This should form part of the design code for these built features.
- The embedded landscape mitigation in 10.7.5 in general lacks detail. There are no minimum offsets and the minimum width of tree belts is not detailed. A tree belt of 5m in width will perform differently from one of 15m or 30m wide.
- The landscape proposals should respond to the landscape character typology.
- The mitigation does not always appear appropriate for the local landscape character/type, in some cases, to the extent that the mitigation planting itself has a greater adverse effect than the development proposals.

PEIR Assessment of likely impacts and effects

This section of the report is the assessment of likely significant effects of the scheme. Effects on both landscape character (***Appendix 10G***) and visual amenity (views) (***Appendix 10H***) are covered.

The effects of the individual elements of the project areas are assessed individually and of the project as a whole, for example where there are two site areas within a character area, or a view is of more than one component part.

- The description of the construction activity across the landscape is underplayed. The presence of the construction materials within the landscape is not included, nor the presence of the workforce and the vehicle movements that would be required across the project areas and on the network. The assessment states that *individually the construction equipment and excavation within the fields would not be uncharacteristic within an agricultural landscape* – this is not entirely true as many of the vehicles and machinery that will be present are not generally associated with farming and the increased activity in the rural area would be widespread across a large area of farmland leaving a visible footprint.

- The assessment of construction effects on the published landscape character assessments relies on the fact that the effects are focused on only a small part of each of the landscape character areas. Whilst the GLVIA allows for the geographical extent of the effects to be part of the consideration, in this assessment, significant weight is given to the fact that the effects would only be on small and localised in relation to the wider extent of the published landscape character area.
- The quarry close to Rectory farm is not perceptible in the landscape because of mature tree belts and the farm is typical of its rural location. The BESS, substation and compound at E18 is likely to have a significant visual effect and this is not picked up in the assessment and additional viewpoints are required.
- Golf links road, which is a quiet country lane between Worlington and Barton Mills, is used by pedestrians for recreation as well as motorists. The sensitivity of receptors should reflect this.
- The effects of the elements of the project areas are assessed individually and then the interconnectivity of the project as a whole, for example where there are two site areas within a character area, or a view is of more than one component part.

Cumulative effects are those that result from additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate from it). The study does not consider whether the total effect of the individual development parcels is greater than the sum of the parts. The study should consider whether the cumulative landscape effects would change the landscape character of the area to the extent that it becomes a significantly different character type. This might be the case if the proposals are likely to change aesthetic and perceptual qualities of the landscape such as scale, pattern and colour, sense of naturalness, remoteness and tranquillity which would lead to modification of key characteristics (GLVIA 7.28).

Whilst combined visual effects may have been considered, sequential visual effects are potentially more relevant in this case. The concern is that residents in some settlements, for example Worlington, would have a series of sequential views when travelling to or from their home by either car or when walking for recreation. The geographical extent of this development suggests that a more thorough assessment of the combined effects of the development areas is required.

Landscape officers requested that a narrative on the overall effects of the proposals on each village and identifying within each village how the effects might vary. The promoter has responded (PEIR page 10-30) "A local landscape character assessment has been undertaken to assess the likely impacts and effects on the villages. This has been undertaken by a local landscape character assessment of the villages and identifying their sensitivity to the Scheme".

This appears to refer to Appendix 10E Local Landscape Character Areas (see comments above), which falls short in describing the potential effects for each village in a meaningful way. The settings of the villages and the features which define the boundaries of the village were not identified and described. The sensitivity analysis

and the further assessment of landscape and visual effects do not provide the narrative requested.

Appendix 10G Landscape effects

The organisation of information in Appendix 10G Landscape effects, whilst it has a logic, provides an assessment that is over-complicated and fragmented, to the extent that it risks becoming unintelligible.

In assessing the impact of the proposed development separately for each published and local landscape character assessment, the PEIR (and the associated appendix 10G) present a fragmented picture of the impacts of the proposal on landscape character, based on the scale of the assessment used rather than on the important and valued components of the landscape in and around the study area.

Five levels of landscape character areas and types (in total around 60 areas) are assessed separately against each individual site or cable route section and at each phase (construction, year 1, year 15, decommissioning) of the scheme. It may be more effective to assess the individual sites and cable route sections and assess which landscape character areas they would affect and how, over time. Intra-project effects could then be assessed at the end.

West Suffolk planning policy requires that landscape effects resulting from a scheme are based on the county landscape types and the local landscape character. East Cambridgeshire expects that the East Cambridgeshire Landscape Guidelines (1991) form the basis for detailed local character assessments. As the Sunnica proposal straddles two counties it is considered most appropriate for the assessment of landscape effects to be focused on the regional and local levels.

The assessment is selective about the elements of the various landscape character areas/types that would be undermined by the development. In particular the significant effect on agricultural land through the change in land-use and land-cover is underplayed, and the effects dismissed because it would be reversible and/or would only occupy a small part of any one large landscape character area. A more consistent and systematic approach should be taken, based on the characteristic elements of the landscape highlighted in the assessment of baseline conditions including perceptual, aesthetic, cultural and social aspects of landscape as well as physical features.

Year 15 assessments should be compared to the baseline situation as well as the year 1 situation.

Consideration should also be given to whether the proposed scheme would have any impact on landscape character across the different landscape character areas/typologies, for example associated with the change of land-cover across such a diverse area.

Appendix 10H Visual effects

The assessment of visual effects does not fully explore the impact of the proposals. Whilst a general description of the elements of the development is given, the

description does not go far enough in providing detail on size and scale, geographical extent and duration of effects.

The year 15 situation should be assessed both against the year 1 situation but also against the baseline to ensure that changes are fully considered, particularly where an open view is to be lost.

The viewpoints for Public Rights of Way and the U6006 have been set at 1.6 metres for pedestrian view. A higher equestrian view has not been provided as previously requested. This does not give a true interpretation of visual effects for all recreational users.

PEIR Additional mitigation measures and enhancement measures

There were no additional landscape and enhancement measures identified (10.9 of the PEIR). Officers disagree that further mitigation measures are not practicable and are of the opinion that innovative design could find solutions to at least some of the effects identified.

It is noted that retention of existing landscape features will be implemented through the CEMP and this is welcomed, as is monitoring of the establishment of the landscape through the OLEMP (**Appendix 10I**).

There may be a requirement for assessment of the landscape effectiveness at a future point to see if the proposed measures are effective or whether additional planting is required.

Appendix 10I - Outline Landscape and Ecology Management Plan

The content of the OLEMP should closely reflect that set out in the British Standard BS42020-2013 Biodiversity — Code of practice for planning and development. In this draft document a disproportionate part of this document deals with a description of the site and existing features. This would be more useful if it were accompanied by detailed plans.

The OLEMP sets aside only 5 pages to detail the management of the DCO site which is insufficient given the complexity and size of the site. The management detail should be site specific, cover both the short and long term and must reflect the nuances of the different parts of the site. BS42020:2013 requires the following detail which will be expected with the DCO OLEMP:

- Aims and objectives of management.
- Appropriate management options for achieving aims and objectives.
- Prescriptions for management actions.
- Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five-year period).
- The plan shall also set out (where the results from monitoring show that conservation aims and objectives of the LEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme.

If the Vision is for 'The Scheme', it should reference the main purpose which is to provide energy. The network of environmental features is largely existing, and the vision should include for the retention and enhancement of these along with new features that are required/proposed. Together these will form the framework in which the development will sit. However, a key component in the success of the GI will be appropriate management in the short and long term and this should be part of the vision. If the intention is for the GI to reflect the surrounding landscape character and context, this should also be part of the vision.

It is noted that existing woodland, treelines, and hedgerows are to be retained and additional woodland and hedgerows are to be planted. However, it is not clear where hedgerow losses will occur, these need to be defined and quantified. Concern is that significant hedgerow removal will be required to provide visibility splays at access points, and that this will have significant habitat and visual consequences, which will need to be mitigated (for example with hedges along the returns into the site).

Further, the proposals for woodland and hedgerow planting are not clear. The scale of the parameter plans, at 1:18000, does not provide an acceptable level of location detail. The details provided of landscape planting presented in the OLEMP, including tree species and sizes trees, hedgerow planting and replacement are too generic, and therefore not acceptable in their current form. Landscape proposals including tree planting, and new grassland creation should be tailored to the location and conditions, noting that these change across the DCO site. Specific management prescriptions will be required. Both landscape proposals and management prescriptions should be detailed.

Where hedges are being retained and relied on for mitigation of landscape effects, the condition of the hedgerow needs to be established and management prescriptions should be made clear.

5m buffers around panel fields – please confirm that these will not be used for access. In previous iterations this offset was applied to features on internal boundaries with no visibility. Along external boundaries with roads, settlements, and PRoW a buffer/offset of more than 20m was proposed and this strategy should be retained.

It is essential that a suitably qualified arboriculturist is appointed as soon as possible to advise on tree matters at the detailed design stage, to supervise any tree works throughout the construction of the scheme (including to sign off tree protection fencing, tree work, construction within close proximity to trees) and to produce a post completion inspection report detailing the condition of all trees that may have been affected by the works carried out.

Noise and Vibration

11.2.9 of the report states "The DCO application will include a statement of statutory nuisance." It is unclear what such as a statement will address.

Section 158 of the Planning Act 2008 advises that in developments of this size the statutory authority for carrying out a development provides a defence in any civil or

criminal proceedings for nuisance under Part III of the Environmental Protection Act 1990 i.e. the nuisance was the inevitable consequence of what has been authorised. This is termed the statutory authority defence but only applies to actions that are a nuisance and not those determined to be prejudicial to health.

Although statutory noise nuisance does not provide for a maximum level of noise to be attained, the spirit of the legislation is the prevention of an unreasonable and substantial interference to a person's quality of life. This is the threshold at which a nuisance is assessed. Although EN1 advises it is very important that, at the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the 1990 Act and how they may be mitigated or limited are considered so that appropriate requirements can be included in any subsequent order granting development consent, it is the PH&H view that the DCO application needs to address adverse amenity impacts and satisfy the aims of the Noise Policy Statement for England in that the development will mitigate and minimise adverse impacts on the quality of life, and not only be required to demonstrate the prevention of an unreasonable and substantial interference from noise and other nuisances.

Therefore, if the DCO application includes a statement advising that a statutory noise nuisance will not be caused from this development then this is not considered to go far enough.

That said the report does go on to categorise amenity impacts using the recognised concepts of LOAEL and SOAEL against which the sensitivity of receptors is compared.

11.4.11 of the report correctly references E.3.2 of BS5228-1 to identify noise threshold levels during construction. However, the report has not correctly addressed the variation between threshold daytime noise levels and the threshold levels at weekends, namely Saturdays after 1300 hours. Although the calculated range of predicted construction noise at all the receptors is calculated to be below a threshold level of 65dB(A) some are above the weekend threshold value of 55dB(A). Taking into account this issue the levels categorised as appropriate for describing a LOAEL and a SOAEL must be revisited as it is not a single threshold level of the noise that is to be considered but also the day of the week that construction is occurring and when elevated noise levels may occur.

Further explanation to expand on the details in 11.8.5 are required. Does the maximum period of 1 month for high construction noise levels at any of the receptors relate to levels below 65dB(A)?

Agree with the determination of LOAEL and SOAEL levels for vibration impacts in 11.4.13 but cannot comment on the acceptability or otherwise of the guideline values for cosmetic damage to buildings. The information provided with respect to human responses to vibration from 11.8.7 onwards and the determination of negligible or minor adverse impacts is accepted. However, the human response to vibration is very sensitive, even at low levels. Concerns are often raised about breaches of acceptable standards and damage to property, so it is recommended that as part of the noise monitoring procedures to be adopted within the detailed CEMPs and any S 61 applications, that vibration monitors are also installed at key sites during specific periods, to enable reassurance to be provided to residents and the LA that guideline limits are being met.

Baseline Noise Survey – It is noted that for the long-term monitoring survey several of the sites chosen were immediately adjacent to roads. Practical considerations may have required this, but would expect ambient and background noise levels at domestic properties in many of the villages, particularly those sited away from roadsides or screened by buildings, to be lower. The development sites are positioned in isolated fields often some distance from roads, with construction plant and operational plant potentially having a line of sight to rural dwellings with no intervening existing noise sources, particularly at night. It is noted that L90 levels at 6 of the long-term monitoring sites is measured to be 40 dB(A) or higher at night, with only 5 sites showing a L90 of below 40 dB(A). The lowest measured ambient level during the daytime is 49dB(A), with the highest 4 ambient levels being shown at roadside monitoring positions. That said it is noted that the predicted construction and traffic noise assessments calculate the noise to be sufficiently below the reported ambient levels to allow for some uncertainty whilst still demonstrating a negligible impact. It will be important when developing the detailed CEMP(s) to have regard to the rural nature of many of the dwellings in this area which are not adjacent to roads leading into or out of villages (therefore experiencing lower ambient levels) and to fully consider the adequate protection of their external amenity areas during construction phases.

Operational Noise Monitoring -

- a) Clarification required of the figures being quoted for sound power levels of the substations (sound power levels referenced may be sound pressure levels). Clarification is required on the difference in sound power of the transformers proposed on East A, West A and East B compared to that of the proposed extension to the existing Burwell Substation.
- b) Information as to worst case noise levels should be provided. The data appears to be suggesting that the sound power of the transformers increases from 90 dB(A) to 92 dB(A) with +50% load. Rational of accepting this as representative and information as to the sound power and potential resultant noise levels at sensitive receptors with greater than 50% loading is required.
- c) Clarification as to the noise levels being quoted are for externally sited transformers or internal ones housed in solar stations. If solar stations are to be used to house all the equipment how will they be cooled and what noise impacts would result from cooling units serving these?
- d) Low frequency hum from any of the proposed fixed plant is an issue that needs to be considered, and technical evidence provided in any final report if predictions show negligible adverse impact. Measurements of the existing Burwell substation did not identify distinguishable low frequency components from transformers already on site, but no data has been supplied to provide confidence that low frequency hum will not be an issue at any residential properties in the West Suffolk area, taking into account potential maximum loading scenarios and the number and type of proposed inverters, transformers, and battery units that will be stationed at each of the proposed sites. In addition, the promoter should be providing confidence that the significance of operational noise impacts are sufficiently low that they will remain negligible under all weather conditions such as temperature inversions, positive downwind scenarios etc, and will not impact those properties who

may experience lower background noise levels at night than those reported in the Baseline Noise Survey.

- e) The assumptions made for the generation of the construction and operational noise models require further exploration and assessment. Plant items were modelled as point sources at a standard height of 1m above ground levels. Some of the fixed plant will be 3.5 m high with the battery storage containers 6m high. The proposals suggest that such items of plant will be grouped together and therefore confirmation that the cumulative effects of the equipment, in addition to their increased heights, will not affect the modelling results is required. Receptor points were set at 1m above ground. Night time receptor points would be bedrooms at 4.5m high and so account should be taken of this issue in any modelling scenarios.

Noise issues concerning the proposed extension to the Burwell substation (within East Cambridgeshire)

- a. There appears to be some inconsistencies in the rating noise level (L_{A,r},Tr) at R1 that is quoted in Table 11-20 compared to that predicted in 11.8.24 and a different predicted L_{A,r},Tr is then referenced in 11.8.26. Clarification of the actual rated noise level is required.
- b. Taking the figure quoted in Table 11-20 it identifies R1 as having a medium magnitude of impact under the operational noise assessment, during the night, early morning, and late evening periods. These are considered the most sensitive periods for noise impacts, as persons are more likely to be at home, enjoying their gardens during later summer evenings or resting. In any assessment of future noise impacts undertaking a BS4142 assessment on an industrial/commercial noise source and recording a +5dB difference between specific noise source and background levels could indicate complaints being likely. Referring to the implications of Section 158 of the Planning Act 2008 it is vital that all means are taken to not only be confident in predicted noise levels but also to mitigate them to the extent where sufficient noise impact protections throughout the lifetime of the development are in place. The mitigation being proposed is that of the building envelope of the residential properties in the vicinity (not able to be influenced by the promoter), with the conclusion that whilst noise may be audible inside properties, the absolute noise level is considered not to be of a sufficient magnitude (once assessed from inside the property), to warrant a significant noise effect. A minor adverse effect internally is therefore quoted.

Residents who currently experience low background noise levels outside their homes and correspondingly a quiet internal environment with windows open for ventilation, may consider otherwise and I therefore require further exploration of noise reduction measures in addition to the reliance on the efficiency of individual building structures, to provide the mitigation required to result in negligible significance internally and minor or negligible adverse impact externally.

- c. The rated noise level externally has been calculated in accordance with BS4142 to be 34 L_{A,r},Tr, as per Table 11-20. In 11.8.20 it states that as the plant will be designed to have no tonal, impulsive, or intermittent features no

penalty/correction has been applied to this predicted level. 11.7.6 advises that the use of enclosures, local screening, silencers etc will be used as appropriate and should there be any such acoustic features present in the operational phases then a correction in accordance with BS4142 will be applied. This appears to contradict the earlier assertions. Any correction will increase the specific sound level and therefore the exceedance over background will increase. Such a scenario would therefore require further mitigation measures to be adopted to any currently anticipated. My question is also how is the operational noise, identified as a rated level of 34 in Table 11-20, described if it has no acoustic features? For example, is it a continuous drone, hum, buzzing sound etc and if so why is it not considered appropriate at this stage, for any correction factor to be added?

- d. A measurement of existing tonal noise environment, and a calculation of future potential low frequency components of cumulative noise impacts an extension to the existing Burwell substation would have, was requested in early stage discussions. Background noise monitoring was undertaken between 12.45 pm on 5th Nov 2019 and 10.30 am 12th Nov in the vicinity of the Burwell site. The report suggests long term monitoring at L1 did not identify distinguishable tonal features in the local noise environment, with the conclusion being that "an expansion of the Burwell site is not expected to result in noticeable changes to the character of the existing noise environment."
- e. The concerns I have with respect to this statement are:

The long-term spectrum results do not report on the third octave bands. Only octave band levels from 31.5 Hz to 8 kHz are tabled. Low frequency noise can often occur at 40 Hz and to identify if a low frequency component is present it is usually applicable to review the 10 Hz to 160 Hz range.

In addition, the results of the 7 days monitoring period are produced as an octave band day and a night average over the whole period. Plots of third octave Leq,5 mins over different 24 hour periods would reveal a more detailed pattern and allow more confidence in any conclusions that existing transformers on this site had no tonal content to be considered for cumulative low frequency impacts from an extension to the site.

The results that have been produced may suggest no tonal features, but I do not believe it fully addresses my original points of concern, that low frequency noise impacts from additional equipment must be fully considered and measures taken to mitigate any adverse impacts. Low frequency noise from transformers on large substation sites is an area of concern for many people living close to such sites. It is often reported that low frequency sounds vary in their audibility possibly during certain weather conditions or the number of transformers operating at any one time or the loading on the transformers themselves. Reports from persons affected by low frequency sounds generally suggest it can have a significant detrimental effect on their wellbeing. I do not consider the data to be sufficient at this time, to provide confidence that an expansion to the transformers on this site will not have a cumulative effect on low frequency noise levels in the vicinity of the Burwell site.

Framework Construction Environmental Management Plan –

a) Hours of work during construction phases are proposed to be between 0700- and 1900-hours Mon-Sat. Construction hours on development sites are restricted in West Suffolk to be between 0800 and 1800 Mon-Fri, 0800 and 1300 Sat and at no time on Sundays or Bank Holidays. Extensions to these hours have been agreed during the pandemic, when Government policy encouraged the relaxation of construction working hours, but only when adverse noise impacts could be appropriately controlled. Extended hours have therefore been adopted on other development sites within the District but has required agreement to additional measures to minimise noise impacts outside of the normal working hours. Such measures should equally be applied to this site, for example a commitment not to undertake the noisiest works prior to 0800 hours Mon-Sat, higher noise impact works to be completed by 1800 hours Mon-Fri and if working through to 1900 hours on Saturdays I would wish to see additional methods employed so that those tasks with the potential for higher noise impacts are adequately mitigated between 1300 and 1800 hours and are not undertaken after this time.

b) There is the suggestion in this document that site works may need to be conducted outside the core working hours. There should be no working undertaken on Sundays or Bank Holidays and this authority would not be supportive of any such requests.

c) The general information provided in the framework CEMP is agreed with respect to noise and dust controls and it is acknowledged that detailed CEMP(s) will be provided at later stages for individual subsections relevant to specific sites within the development. Although the mechanism for liaison with local authorities, residents and other parties who may have concerns is clearly described we highlight the importance of recording the actions taken to resolve any justifiable concerns received about noise and/or dust deposits. Such a log can positively influence future work methods and controls moving forward into later stages of the construction.

d) Noise monitoring proposals have been identified in the framework CEMP as a future noise control measure. 11.9.1 of Chapter 11 of the report suggests no additional mitigation, enhancement or monitoring measures for the construction/decommissioning and operational phases are required given that no significant adverse impacts have been predicted. The promoter should refer to the points raised in this response and provide further assurances either through additional monitoring or evidence, to satisfactorily address these concerns.

At this stage there is insufficient detail provided in the documents to consider the location of the Solar Stations containing inverters, switchgear and other associated equipment. The Preliminary Environmental Information Report in section 4.7.5 predicts the effects of noise to be negligible. The British Horse Society advice on Solar Farms noise explains that noise from inverters can be intrusive. This could potentially be disturbing to equestrian users, for example on the Bridleway 204/5. It should be noted that a horse's range of hearing is wider than a humans and sounds are audible at lower decibels. CCC would recommend that Solar Stations are sited away from the Public Rights of Way and new permissive routes, and where this is not possible, that suitable sound insulation is used to mitigate against disturbance to equestrian users.

Socio-Economics and Land Use

Land Use

Chapter 12 of the PEIR states that effects related to agriculture and soils has not been assessed at this stage. Given that the vast majority of the development site is in agricultural use this is disappointing. The ALC soil survey indicates that the land within Sunnica East A and B is predominantly classed as Grade 3b and 4. We are concerned that these surveys seem to understate the land quality of these areas, as indicated for example by Natural England's Regional Agricultural Land Classification maps⁵. Though these are strategic-scale maps, they indicate that there may be areas of grade 2 land located within the scheme. The promoter should publish the surveys relied on in the PEIR to allow them to be scrutinised.

Even if correct, while the survey indicates that the promoter has met the requirement to minimise impacts on the best and most versatile agricultural land, the PEIR does not acknowledge that the site is mostly productive agricultural land used for the production of crops such as potatoes, sugar beet, onions, carrots and maize. The importance of local food production should not be underestimated, and it is considered that the assessment of the proposal on agricultural land should not be limited to its classification. The Agriculture Bill 2019-21 contains a requirement for Ministers to consider the need to encourage the production of food in England, in an environmentally sustainable way. A further measure requires a report on food security at least once every five years.

West Suffolk Council would question the conclusion that as the sites are currently in agricultural use the scheme will not result in any employment loss (albeit that the PEIR then concedes that an estimated two temporary jobs will be lost). The evidence obtained by the promoter to support this assessment should be clearly set out in the ES.

West Suffolk Council and East Cambridgeshire District Council have concerns that the size of the scheme and the subsequent loss of agricultural land may also impact the ability of the Councils to deliver future housing and employment growth, while maintaining a suitable level of agricultural land.

Economy

In this chapter the Councils would expect to see references to relevant local policy in paragraph 12.2.7, such as:

- Norfolk & Suffolk Local Industrial Strategy
- Local Energy East Strategy
- Suffolk County Council's Raising the Bar Strategy
- Suffolk County Council's Suffolk Growth Strategy
- Transforming Suffolk: Suffolk Community Strategy 2008-2028

Section 12.4 is aimed at setting out the methodology for socio-economic assessment of impacts of the scheme.

⁵ See:

<http://publications.naturalengland.org.uk/publication/127056?category=5954148537204736>

The use of baseline data and the assumptions made in this assessment are flawed to the extent that the figures produced cannot appropriately be used to assess impact. The use of the Cambridge Travel to Work Area (TTWA) as the area of impact is inappropriate for a number of reasons. First, the scheme covers a great deal of land in both the Cambridge TTWA and in the Thetford and Mildenhall TTWA and may include land in the Bury St Edmunds TTWA, so using only the Cambridge TTWA will not provide complete baseline. Second, the Cambridge TTWA will be distorted by the heavy weight of Cambridge's economy, which accounts for much of the travel within the TTWA. This distortion further reduces the relevance of this baseline to a scheme on the periphery of the TTWA with very different employment characteristics. Thirdly, the use of the Cambridge TTWA implies that workers from within West Suffolk are not local for the purposes of impact evaluations. This is clearly an undesirable outcome.

There is also a concern about the consistency of geography use. In section 12.6, East Cambridgeshire and West Suffolk are used for unemployment and economic activity rates. It would be preferable to be consistent in geography use to the extent possible.

For a project of this scale it would be more appropriate to define a bespoke TTWA using census data, perhaps using the two district geographies as a starting point. The selection of TTWA is relevant because it defines the leakage percentage used in economic additionality calculations.

The multiplier used in 12.4.19 to calculate indirect and induced employment gains (1.5) is high for a scheme like this. For example, the Scottish Power offshore wind projects have used a multiplier of 1.31 for indirect impacts and 1.21 for induced. The use of the ready reckoner from HCA Additionality Guidance Further is reasonable, but justification of the multiplier selected is necessary. Specifically, the assessment of supply chain linkages should be expanded on since it is expected that many components will not be sourced from the local or national economy.

Without justification for these assumptions, the calculations in section 12.8 are clearly unreliable and, by using an inappropriate statistical geography, are irrelevant to the real geography which will be impacted.

An assessment of the impact of the proposal on tourism should be undertaken. The proposal could result in visitors being deterred from seeking the solitude and long-distance views in many parts of the development. This would be to the detriment of both recreational and tourist objectives of the affected local authorities.

The PEIR does not appear to contain any reference to the Bay Farm Anaerobic Digester plant (ADP) and whether the scheme is likely to have any effect on the operation of the plant in terms of the production of feed to serve the plant and the associated traffic movements. It is anticipated that the loss of land areas E24 – E32 will have a direct effect on the ADP operations, which in turn will affect the surrounding villages through the resulting increase in traffic arising from the importation of feed to the ADP from further afield. An assessment of the impact of the scheme on the gas conversion plant located on land parcel E30 and the high-pressure pipeline crossing this area towards Gold Links Road is required

Site allocation policies in the former Forest Heath area Site Allocations Local Plan (SALP) 2019, including allocations of employment land, should be given considerable weight in the EIA process and referred to in the report as appropriate.

Sunnica East Site B is adjacent to existing and allocated employment land at Red Lodge. In addition, the site includes/is adjacent to SHELAA sites WS455 – deferred residential, and WSE04 – included economic.

Evidence to support the West Suffolk local plan review includes the 2020 SHELAA⁶ Site WSE04 is shown as an 'included' site in the 2020 SHELAA: 55ha of land for employment uses, land north of Elms Road and A11 northbound exit slip road to Red Lodge.

An Employment Land Review (ELR October 2016), produced to support the former Forest Heath area Local Plan (Single Issue Review of Policy CS8 [SIR] and Site Allocations Local Plan [SALP] 2019) recognises that a wide range of employment sites in the area rely on their proximity to the A11 corridor (and connected A14 Newmarket Bypass) for strategic road access, providing a route down to London in the South and Norwich in the East. It is a long-term aspiration of West Suffolk and adjoining authorities to achieve employment growth in this location.

The suitability of the site for employment uses was recognised at paragraph 6.45 of the ELR which refers to the site 'having excellent strategic road access being located on the A11 and relatively few other identified constraints.' The ELR also recognises at paragraph 8.37 that 'this could provide a good opportunity for a new employment site proposition of a genuinely strategic scale that does not exist elsewhere in the District and could benefit from its location on the A11 to capitalise upon growth corridor opportunities. This could also provide the potential to develop a critical mass of business occupiers and benefit from a greater level of operational flexibility away from incompatible uses such as residential...'. The site was not included in the emerging Site Allocations Local Plan as there was already a sufficient supply of employment sites at Red Lodge. However, the creation of West Suffolk has resulted in a review of the local plan, and the West Suffolk Issues and Options Draft Local Plan was published for consultation on 13 October 2020. Part Three – Settlements, section 3.6 Red Lodge includes a settlement map for Red Lodge showing SHELAA included sites with WSE04 clearly shown in green.

Insufficient consideration has been given as to whether Sunnica East would prejudice the council's long-term cross boundary aspirations for employment growth along the A11 corridor through the review of its Local Plan (West Suffolk Issues and Options Local Plan published for consultation 13 October 2020).

Insufficient or no evidence is provided or has not been addressed adequately in the PIER on the impact on some of the areas set out in EN1 – 5.12.3 (particularly those in ***bold italics***):

- *the creation of jobs and training opportunities;*

⁶ See: https://www.westsuffolk.gov.uk/planning/Planning_Policies/shlaa.cfm

- ***the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities;***

- ***effects on tourism;***

- *cumulative effects – if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.*

West Suffolk Council has clear aspirations for infrastructure improvements to support existing communities and future growth. The following are of particular importance:

- A11 Fiveways – Highways England have previously expressed concerns regarding the at grade junctions on the A11 south of Fiveways. Longer term improvements for Fiveways Roundabout (for example at grade separation) and the at grade junctions will be considered for Highways England's RIS3 funding cycle, however there is no guarantee of funding at this stage.
- Improved transport links to the West of Mildenhall.
- Junction 38 - where the A14 meets the A11.
- Ipswich to Cambridge railway line – ability to deliver increased passenger or freight services.

The promoter should consider whether the project would compromise future growth opportunities and improvements to these key infrastructure points.

East Cambridgeshire District Council note that the Grid Connection Corridor goes very close to site allocations FRD6 and FRD7 (see adopted Local Plan 2015) in Fordham and the developer will need to show that its proposal will not damage the ability of these existing business to operate/expand nor would it affect any planning conditions that these land owners are required to comply with. The developer will also need to demonstrate that the proposal does not result in any detrimental impact to the horse racing industry in the local area (as required by Policy EMP6 within the adopted Local Plan 2015). In regards to policy EMP6 the comments in regards to Public Rights of Way (see below) hold greater weight, as any perceived or temporary loss of bridleways may harm the horse racing industry.

Community Impacts

NPS EN-1 highlights the need for equality, community cohesion and well-being to be assessed. Based on the information contained within the PEIR it is unclear whether these matters have been fully considered. In particular, the impact on the local communities affected should be explored further.

There is no reference in the PIER to legacy benefits, i.e. education and training opportunities, or a visitor centre. In addition, there is insufficient evidence that construction and operation jobs will be filled locally or that there will be long-term benefits in the form of skills enhancements. Further assessment of future skills development is required.

Transport and Access

Reference to Suffolk County Council and Cambridgeshire County Council as the relevant local Highway Authorities should be made with section 13.2, together with any associated national or local policy or guidance employed by the authorities.

Assessment Baseline and Impacts

Neither local Highway Authority has received meaningful engagement from the promoter in advance of the consultation period, so many of the details set out are being examined for the first time. Therefore, the highway authorities have not been able to agree in advance the baseline data used in the project's Transport Assessment. As a general point, the councils would advocate that the promoter looks to agree relevant assessment methodologies with the highway authorities prior to submission of the DCO.

Chapter 3: Scheme Description

It is understood that the construction programme will be 24 months; further information is sought as to whether this has impacted on any conclusions based on the 'temporary' nature of construction activities and whether an extended programme would affect these conclusions.

Further details of the connection of the access tracks will need to be provided to show that they are safe to use, with the need for an adequate length of access road that is of a suitable width to allow two vehicles to pass safely and that this is not obstructed by gates preventing vehicles leaving the public highway. The access roads will need to be designed to prevent trafficking of mud and debris or the flow of water onto the public highway.

The promoter states in 3.5.6 that open cut trenching will be the primary method used for crossing the public highways. The councils would prefer trenchless techniques to be used under highways to protect the fabric of the highway and reduce disruption to road users by temporary traffic management, except where this would have an unacceptable impact on archaeology.

We note that there is no preferred route published by DfT for high and heavy loads to travel between local ports and Burwell substation. Therefore, there is no protection against changes to such routes to permit future use for this purpose. Paragraph 3.6.12 sets out that the peak construction workforce is expected to be 1,260 on the average day. This has been assumed to mean the average day at peak construction and information is sought as to what the peak workforce day is, or at least how much variance there is likely to be between the average and the absolute peak.

The promoter states that workers will work 12-hour shifts (3.6.13). The councils request further evidence that this is practical, particularly in winter, and what measures will be in place to monitor and control this behaviour. The promoter places

much reliance on workers trips being outside typical peak travel times and failure of the shift system would result in transport impacts that will not be assessed in the ES.

Table 3-2 sets out the peak traffic figures; however, HGV figures are set out as movements, whilst light vehicle figures are not clarified whether they are movements or vehicles. It is worth noting that apart from the transport of materials, which equates to a peak of 160 HGV movements and average of 88 movements across all of the sites, there are also 61 additional HGV movements on average per month (i.e. 2 per day (plus potential variances) that need to be included in the assessment).

Within the DCO submission further evidence of the size and operation of the temporary construction car parks should be provided as evidence they are suitable for their proposed purpose.

Chapter 13: Transport and Access

Comments on access and HGV routing, including the movement of AILs are included within the response to the Transport Assessment and Access statement below.

Paragraph 13.3.1 of the PINS Scoping Opinion identifies a number of limitations to the assessment method due to the current pandemic, and the highways authorities recognise these limitations; however the promoter sets out that the use of certain traffic sources and the methodology used was agreed with SCC, which is said to be identified in the scoping opinion. SCC are not aware of agreeing this methodology, and on reviewing the scoping opinion the response on traffic data sets out that we *"would expect to be consulted on the scope of the baseline traffic collection"*; this was in response to paragraph 13.6.2 of the scoping report that set out that *"the extent of the traffic data and scope of any traffic surveys that may be required will be agreed with the County Highway Authorities, as statutory consultees, where possible"*. It is somewhat disconcerting that these limited statements would be taken as acquiescence of the method identified. Therefore, we would state that the methodology has not been agreed, but we are happy to work with the promoter to come to agreement on a reasonable method especially given current limitations and recognise that some of the methodology may be considered reasonable following further discussions.

Some of the minor access roads leading to secondary access points have not been considered in paragraph 13.4.5. The promoter has not demonstrated that trips using these accesses are low enough for them to be scoped out. We are concerned about the absence of data on pedestrian and cycle movement and any conclusion that is drawn from impacts on this basis, especially when concluding that impacts would not occur due to the absence of pedestrians and cycles.

The assessment is based on an assessment of change in development peak hours, rather than network peak hours. These peak hours are identified as 06:00 to 07:00 and 19:00 to 20:00, which is said to reflect construction shift patterns. Little evidence is submitted to confirm that these hours of assessment are reasonable, especially considering that a large number of the conclusions that have been drawn by the promoter are based on impacts occurring during these hours (i.e. not the network peak hours). It is the councils' opinion that the environmental impacts

should be assessed more widely as for example peaks in receptor movements such as walkers or cyclists may not correspond with movements of construction traffic.

A plan showing the links identified for the assessment and the sensitivity of these links should be provided prior to agreement of the extent of the study area and categorisation of each link. The extent of links and the categorisations of links is not considered to be clear.

The proposed dismissal of impacts (paragraphs 13.4.7 and 13.4.8) of A142 / Landwade Road / Snailwell Road or A14 junction 38 are not accepted without further understanding of the development impacts, albeit that the A14 junction is the responsibility of Highways England. Absence of data is not considered a reasonable justification for not undertaking relevant assessment. Junction 38 has been modelled for local plans (e.g. Forest Heath Site Allocations Cumulative Traffic Impact Study) and past projects (e.g. past projects, for example for the Forest Heath Local Plan 2016⁷ and for the Hatchfield Farm) development and the councils disagree with the removal this junction from the transport assessment and ES. SCC would accept scoping out of the A142/Landwade Road/ Snailwell Road junction (paragraph 13.4.7), as stated by CCC in their scoping response.

The proposed assessment method is based on a worker vehicle car share factor of 1.5 persons per vehicle. Evidence of this level of car share being achieved at a similar development in a similar location should be submitted. Monitoring, enforcement and controls for achieving this level of car sharing needs to be embedded in relevant management plans, such as travel plan, otherwise the methodology cannot be agreed.

Severance

The existing levels of severance on each linked should be determined, so that a baseline level of severance can be presented.

All areas where a 10% change in traffic flows occur should be identified and those areas that require further assessment on this basis should be agreed with the highways authorities.

Consideration needs to be given to how severance is assessed within Design Manual for Roads and Bridges (DMRB) document LA112. For clarity, the changes between traffic flows that result on a low, medium and high impacts are not agreed, as they are coarse and are assumed figures rather than having been tested.

The methodology fails to assess impacts on different groups (e.g. young, disabled and elderly).

Pedestrian and Cycle Delay

The highways authorities are not certain where the proposed determination for impacts on pedestrian delay originate from; there are limited recommendations within Institute of Environmental Management and Assessment (IEMA) Guidelines for the Assessment of Road Traffic, and therefore the origin of these figures should be submitted.

⁷ Forest Heath

The assertion that the PROWs have generally low pedestrian flows is not agreed. This is also excluding the consideration of cyclists and equestrian users, for example on bridleway 204/5. We would require surveys to be carried out on all PROW impacted by the proposals to quantify the actual amount of usage, so a reasonable assessment of the impact can be made. This would better inform the conclusions in the PEIR Non-Technical Summary which suggests the impact on PROW as being moderate (Pp 44 Paragraph 4.11.7).

There are recommendations that the baseline level of pedestrian and cycle movement be determined. For clarity, the proposed assessment method is not agreed.

Pedestrian and Cycle Amenity

No justification is given for the lack of a proposed method to assess the relative amenity of journeys that are affected by the development. Indeed, we note that The Transport Assessment Paragraph 3.9 notes that the roads surrounding the site are generally lightly trafficed and therefore could encourage cycling. For clarity, the proposed assessment method is not agreed.

Driver Delay

The proposed omission of the assessment of driver delay is not agreed. Statements such as 'it is not anticipated that the delay an Elms Road T-junction will be significant' have not been evidenced.

Further clarification is needed over the potential for and number of Abnormal Indivisible Loads that are expected to be generated by the proposed development.

Fear and Intimidation

Consideration should be given to the baseline characteristics and the existing level of fear and intimidation based on existing flows. LA112 could be used to do this. The method for assessing change is considered to be reasonable, albeit that consideration needs to be given to those locations where impacts could easily change from one level of significance to another based on small changes in impacts.

Accidents and Safety

Paragraphs 13.6.45 and 13.8.17 claim to demonstrate that there are no road safety concerns. This is not agreed. The analysis of links is very subjective and does not consider frequency of use or length of link. Nor are thresholds given to indicate what level of collision rate is considered to constitute an issue. Detailed analysis of causation has not been undertaken. The impact of construction traffic on future collision rates has not been discussed in the PIER.

When assessing links as done at Table 3-10, it is useful to report this in number of incidents per km per miles travelled to then allow assessment against national data.

The councils would not agree that the data presented in the Transport Assessment (3.63 and 3.68) does not show incidents frequently occurring at any particular location. Specifically, there is a cluster at the A14/A142 junction proposed for use for access to the sites. This concern has been raised in past planning applications. At this stage the promoter has not commented on the influence of construction traffic on road safety.

Within the application the councils would expect to see more details regarding the access arrangements (swept path analysis, visibility, access widths and layout) to

show that they can be used safely by the proposed construction traffic. For example, access to the temporary car park east of Elms Road will require a significant number of light vehicles to execute a right-hand turn into the site against local and other construction traffic.

We have raised concerns about the narrow width of many of the access roads e.g. Elms Road. The councils would consider that surveys of the widths are necessary to allow an evidenced position to be made about their suitability and the effectiveness of any proposed mitigation such as passing spaces or widening.

Speeds of vehicles through local communities has yet to be analysed in detail. As the Local Highways Authorities, we have been made aware of local communities concerns that speed limits are not observed by a significant number of drivers.

Combined Impact

Consideration needs to be given to how the combined impacts of these topics interact; whether a number of minor adverse impacts would result in a moderate adverse impact in combination. This should include consideration of impacts on Public Rights of Way.

Link Sensitivity

Although the method of categorisation does not appear to be unreasonable, given the relatively small number of links being assessed, and that an absence of facilities does not necessarily mean an absence of users; the categorisation of each link should be agreed with the relevant highway authority.

Traffic growth

The method for assessing traffic growth is acceptable assuming that confirmation is obtained from the relevant planning authorities over any specific developments that should be considered as committed within the traffic assessment.

Peak Hour factors

Confirmation is sought on the method used for factoring to the assessed development peak hours.

HGV Controls

Limited evidence is submitted to support the assessed number of HGV movements. Further details are sought on how the network peak hours have been determined and what controls and enforcement will be in place to ensure HGV movements do not use the local highway network during the peak hours and stick to the proposed routing. It is expected that some form of GPS or ANPR system is used, as set out in the construction management plan and that this is enshrined in an appropriate legal agreement.

AILs

Further clarification is needed over the potential for and number of Abnormal Indivisible Loads that are expected to be generated by the proposed development. Including by relevant categorisation as follows:

- Category 1
- Category 2
- Category 3

- Special order movements.

It is understood that no AILs will travel to/from the site at present. Confirmation is sought that this is all AILs and not just special-order movements. As above, full details on all AILs should be provided.

More details of the routeing and dimensions of AILs, including overhangs and swept path analysis at junctions and sharp bends should be provided with appropriate topographic details of the existing highway infrastructure. The LHAs is concerned that the trimming of hedges will not be enough to facilitate AIL movements safely within the constraints of the existing highway.

Staff Vehicles

The project makes no attempt to encourage or achieve staff travel by pedestrian, cycle and public transport. The sites are in reasonably close proximity to a number of built up areas, and although may not be considered to be within walking distance are likely to be accessible by cycle. The distribution of workforce has been assessed based on a 30km spread of staff and by population density; on this basis it is reasonable to assume that proportions of staff will be travelling from similar built up urban environments, and given that the development start and end hours are suggested to be the same for all staff, it seems reasonable to assume that buses and mini buses could be used to move reasonable numbers of staff. A minibus should also be provided to/from the nearest railway stations to create the potential for longer distance journeys to be undertaken sustainably.

It is expected that there will be a commitment in a travel plan to achieve the assessed 1.5 persons per vehicle car share, with relevant enforcement and monitoring. It is suggested that this is done by monitoring the total vehicle movements arriving and departing each access. A Travel Plan must be submitted as part of the DCO and relevant commitments made with the Construction Traffic Management Plan.

Further information will be needed on the staff parking permit system and how this will be enforced.

Shift Patterns

No evidence is submitted to support the shift patterns assessed nor relevant proposals on enforcement to ensure that the impacts are commensurate with those assessed. This brings into question the validity of the assessment and all of the conclusions on impacts that are subsequently drawn.

Staff Numbers

Limited evidence is submitted to support the number of workers that is being projected for the sites' construction.

Staff Origins

For the assessment of transport effects, the distribution of population within the immediate MSOA has been used, clarification is needed on how this compares to the socio-economic assessment and use of the Cambridge Travel to Work Area for distributing staff. Further clarification is sought as to whether this workforce is expected to be drawn from the existing population or from in-migrant population.

Trip Generation

Limited evidence base is submitted to support claims about the number of operational staff that is being assessed. It is expected that relevant controls and monitoring is in place to ensure that the development does not exceed those figures has been assessed.

Overall Assessment Methodology

It would be helpful if the method of assessment included a tabular format highlighting the proportional change in traffic flows on each link, the sensitivity of each link and then compare these to the outlined criteria that are being assessed. It is not clear how the impact of vehicle flow changes on links is affecting their categorisation.

However, it is not accepted, as proposed within the assessment, that a change in traffic flows is considered to be reduced from major adverse to minor adverse purely because it brings those traffic flows closer to peak hour flows, without any indication for what this means for users of the network. It may be that significant severance occurs during the peak hour and simply bringing another hour to this level of severance and assuming that this is not considered to be an impact, is not considered to be acceptable.

It is not accepted that changes in flows have a minor adverse impact purely because there are not walking and cycling facilities. Further understanding of users of the network would be needed to reach any conclusion.

No evidence is submitted to support the arrival and departure profiles for HGV movements.

Often the change in flows is not considered to be significant as it occurs outside of the peak hours; however, no evidence is submitted to conclude that this would be the case, and so any conclusions drawn on this basis are not considered acceptable. There appears to be very little consideration of the impact of vehicles on cyclists, with most impacts dismissed due to the absence of pedestrian infrastructure. No assessment of decommissioning has been undertaken.

Appendix 13A: Transport Assessment

Transport

Evidence will need to be provided to demonstrate the promoter's assessment of the peak hour in paragraph 3.31 is accurate. If development traffic peaks are to be outside background peak times measures in the CTMP must embed this as a mitigation measure. The councils would seek greater comfort that HGV deliveries will be equally split across a 10-hour day as presumed in paragraph 6.14. Experience from other projects suggests that deliveries are focused in the morning.

Paragraph 3.3.1 sets out the staff working hours, as set out above, no evidence is submitted to support these travel times being assessed nor any controls proposed to ensure that this is the case. Therefore, this method of assessment is not currently accepted. The councils seek supporting evidence to support the comments made in paragraph 5.3 that shifts will last for 12 hours particularly in winter months. It also

notes that these shift patterns are generally incompatible with existing public transport timetables, particularly buses.

Confirmation is required that minibus trips are included in the trip assessment or scoped out by not using the local highway network.

Paragraph 3.3.4 identifies that it was agreed at scoping that the traffic flows within the Forest Heath District Council Site Allocation Cumulative Impact Study would be utilised. The document was actually highlighted to draw attention to capacity issues that have already been identified in the area – it was not agreed that these traffic flows could form a sufficient baseline dataset. Therefore there are limitations for this assessment which should be discussed with SCC. SCC do recognise the current limitations on the availability of data; however, for clarity, absence of data is not considered a reason for absence of assessment.

Confirmation is sought over the treatment of committed development sites as background growth. The potential exists that a number of sites should be treated as committed development and assessed accordingly. Further discussion is needed on this and clarification from relevant planning authorities on what should be included in the assessment.

Further detail is needed over the assessment method use for factoring to the assessed development peak hours, albeit noting above our concerns regarding the use of these hours for the assessment.

As above, paragraph 5.1 sets out the determined number of full-time staff during operation, no evidence is submitted to support this conclusion.

Paragraph 5.2 of the Transport Assessment sets out the assessment of trips for the operational and decommissioning phase has not been undertaken, as agreed at scoping; further clarity is needed on this, as scoping comments suggest that the application should include the assessment of decommissioning.

Further discussion is needed over the HGV numbers set out at Appendix G, it is understood that the busiest months are months 3 and 4 where there are 793 total HGVs, equating to on average 40 HGV movements per day. Further detail is needed on:

- the determination of these numbers
- the potential that other activities that have not started in Month 3 and 4 (such as Panels) could be going with this work still ongoing
- the potential day to day variation in HGV numbers
- What size of vehicles this includes (e.g. does it include LGVs)?

Paragraph 5.28 sets out details on how the origin/destination of staff has been determined; further information is sought on this, as well as the estimated proportions from each MSOA.

Paragraph 6.9 outlines the distribution of HGVs, whilst the absence of information on HGV origin is appreciated there are some concerns that it may result in an under assessment of impacts (particularly within the ES) on certain corridors. Further understanding of the potential implications of different splits in origins is sought. It is noted that the impacts on local roads are not included.

Further information is sought on Table 6-3 where the 'base + construction movements HGV' movements at the B1085 should be reviewed. Justification of impacts is based on a comparison of traffic flows with those set out in the Forest Heath Local Plan; this is not currently accepted as a reasonable method without further understanding of the impacts and appropriate controls.

On reviewing the traffic flow changes at Appendix I, further understanding is needed on the impacts at the following junctions (depending on the absence of controls as well as other factors, this might include junction modelling), these include:

- B1102/ B1085 junction
- B1102 / Elms Road junction
- A11 Slip / Elms Road
- B1085 / Warren Road dumbbell roundabouts
- B1085 / A11 slip roundabout
- A14 / A142 junction
- B1506 Station Road junction
- B1506 / Herringswell Road junction
- A14 / A11 junction

Based on the above, the councils dispute the conclusions drawn at paragraph 6.13 and further understanding is needed.

Public Rights of Way

The councils' position is that PRow should only be closed when absolutely necessary for safety reasons. Commonly on similar sites (EA1) rights of way have remained open except for when construction work is being undertaken across the route. Where closure is unavoidable suitable temporary diversions should be agreed with the relevant authority.

The councils note a reference in Fig 4.3 of potential permissive routes. As such routes can be removed at any time should not be considered to constitute mitigation.

The list of PRow closures during construction, (Pp24 of the Transport Assessment) includes footpath 204/1, assumed for the purpose of being crossed by secondary access F to West Site B W02, (as shown in the Transport Assessment, Fig 5-1, Pp28). Clarity is needed as to the exact alignment, to confirm if this impacts footpath 49/1. Provisions should be made either to enable safe crossing of either footpath throughout the works or if this is not possible, for the construction work to be scheduled to close this route for the shortest possible period. Secondary Access F to Sunnica West site B (as shown in the Transport Assessment, Fig 5-1, Pp28) is referred to elsewhere as G, and shown in various figures as not extending to connect to Chippenham Road.

Other Public Rights of Way comments are included on Page 34 of this response, under Landscape and Visual Amenity.

Access

The councils have concerns about the widths of the public highways being proposed as access routes by HGVs in paragraph 5.7 for both construction and operation of the project.

While access may have been used by agricultural vehicles, the intensification of use is likely to require improvements to make them acceptable. Improvements to the operational accesses shall be permanent whereas temporary access may require reinstatement. The promoter's attention is drawn to the requirement to prevent water and debris being brought or allowed to flow onto the public highway. It is presumed that the HGVs for fuel and waste mentioned in paragraph 5.18 will be to the primary access and that more details will be supplied in the application.

Construction Transport Management Plan

Paragraph 5.19 provides additional detail on this suggesting 101 HGV deliveries per day and further understanding is needed as to whether this figure should be assessed within the Environmental Statement. It implies that the peak deliveries across Sunnica West, Sunnica East, Cable Routes and Substation will be staggered. Further details of the vehicle movements during the construction of the project will be required to demonstrate this and to aid selection of appropriate controls in the CTMP

As above, further evidence or controls and monitoring is needed for the figures associated with the following:

- Construction workforce
- Workforce car share
- Workforce shift patterns
- Minibus proposals

The CMTP should cap HGVs to 10 per hour as assessed (7.2) and staff vehicle trips (7.3) should similarly be controlled.

Parking

Some information is provided at the on the provision of car parking at paragraphs 5.30. Further details are required on the proposed provision and facilities.

At 7.5 a profile of access to / from car parks should be provided – 434 in and out in an hour, 7 / min on a single track road.

Transport Assessment: Appendix G

Does not appear to include workers and vehicle movement for Burwell Substation only internal substations. Not clear if civil engineering and / or electrical work refer to this or to the cable corridors.

Transport Assessment: Appendix H Access Strategy

Accesses

It is noted as part of the boundary changes there is an additional access near to the Burwell substation entrance described as Weirs Drove. It needs to be made clear the routing of construction traffic for this additional access. It is worth noting the nearest adopted highway to the access is via Anchor Lane which is in a residential area. Alternatively it could be via Weirs Drove and Byway (35/7b). This route passes residential properties as well as Burwell Recreation Ground. The impact on Weirs Drove and the Byway and/or routing to Anchor Lane will need to be assessed for their suitability.

As they relate specifically to accesses in Suffolk, SCC makes the following comments:

- U6003/6004 Elms Road is used to travel from the A11 to access points A, B and C is signed as unsuitable for heavy goods vehicles due to its narrow width. Evidence of vehicle over-run is present. In the LHA's opinion, the provision of passing places alone will not be sufficient to allow safe passage of vehicles along Elm's Road particularly during peak periods and that significant lengths of this road will need to be widened, which may in turn require removal of hedgerows. Fig J1 and J2 show workers trip using the access to the west of Elms Road (B) while all other documents show the car park is to the east (A). Due to the proximity of the temporary construction area adjacent to Sunnica East access B and the temporary car park at access A, the option of walking between sites appears practical provided safe access can be provided across Elms Road.
- C610 Newmarket Road to Sunnica East accesses D and H narrows travelling north away from the A11 and also shows signs of vehicles overrunning the verge, but is generally wide enough for most vehicles to pass each other. Removal of vegetation is likely to provide visibility for safe use of the access.
- C613 Golf Links Road leading to Sunnica East access I is also narrow with a relatively tight junction onto Newmarket Road.
- The C603 leading off the B1102 to Sunnica East access E is also a narrow single-track road, while the width of the C608 leading to accesses F and G allows two cars to pass but not HGVs.
- The C753 Snailwell Short Road reduces in width travelling north from the A142 towards Sunnica West access B and F with significant traffic calming adjacent to Plantation Stud and a hump backed bridge over the rail line. While widths are adequate for two cars to pass it would not allow two HGVs to pass.

In many cases the roads proposed to be used for access do not allow two cars to pass safely and certainly not HGVs. Significant improvements may be required to provide safe access for the construction and operational phases.

The majority of the local roads are bounded by hedgerows. The creation and amendment of accesses might require removal of significant trees and hedgerows to provide adequate visibility for example. These will need to be assessed within the Landscape & Ecology chapters

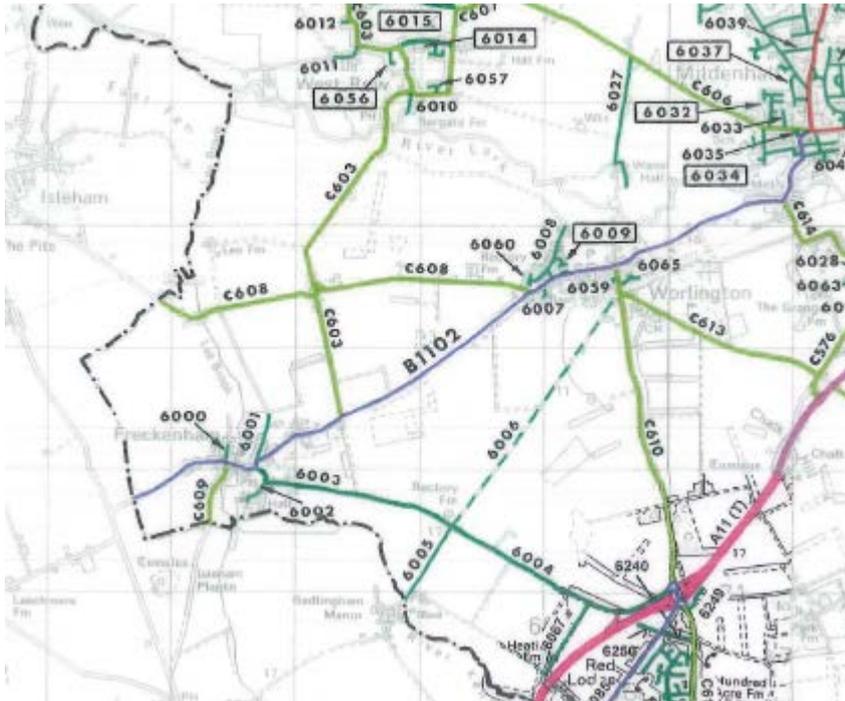


Figure 3 does not clearly show how HGV traffic from the A14 East accesses Sunnica West accesses A, C, D and E, but it is clear that many HGV routes use the A14 / A142 junction 37 at Newmarket. Understanding traffic movements at this junction are important not just in capacity terms, but also the impacts on road safety as there have been a number of accidents recorded at this location.

Road Safety

Areas where collisions have been recorded are:

- A11NB slip onto B1085/U6004 Elms Road (cluster at junction)
- B1102 Freckenham Road (number west of Worlington)
- A11 slip to C576 Newmarket Road
- A11 C623 Herringswell Road crossover
- A11 / A1101 roundabout Mildenhall and A11 south of this location
- A14 / A142 J37 Newmarket.

The scope for investigation should be agreed with the LHAs. While it is accepted that there are few alternatives to traffic U-turning at the A14/A142 junction this shows the importance of assessing impacts of the project at this location.

Abnormal Loads

With regards to Burwell Substation, the councils note that while special order AIL movements have been made between the Port of Ipswich and Burwell there is no preferred DfT route to this site. Therefore, this route has no protection for long term availability for this purpose.

Construction Traffic Management Plan

Some of the points below are repeats of points made on the documents above, but have been included for completeness.

The construction traffic management plan does not include any objectives for staff vehicle traffic; but does contain information on the assessment and number of staff vehicle movement. It is assumed that this would be covered by a staff travel plan; however, either way, it is expected that efforts will be made to reduce single occupancy vehicle movements by staff either through the Construction Traffic Management Plan or through a Travel Plan.

Paragraph 2.2.16 sets out a maximum number of HGV movements associated with the site. It is expected that monitoring and controls will be in place to ensure that these figures are not exceeded. This will be required to be enshrined through a relevant legal agreement within the DCO.

Paragraph 2.2.21 sets out the total staff employees and vehicle movements. It is expected that monitoring and controls will be in place to ensure that these figures are not exceeded. This will be required to be enshrined through a relevant legal agreement within the DCO.

Paragraph 2.2.22 sets out the assumed staff car share. As previously stated, information is sought on how this will be achieved, including what monitoring will be in place.

Paragraph 2.2.24 sets out the staff shift patterns. It is expected that monitoring and controls will be in place to ensure that these shift patterns are used. This will be required to be enshrined through a relevant legal agreement within the DCO.

Paragraph 3.2.2 and 3.2.3 provides details of the Delivery Management System; the mechanism for ensuring HGV numbers, timing restrictions, identification, emissions standards and routes will need to be enshrined in an appropriate legal agreement within the DCO, including relevant enforcement measures.

Paragraph 3.2.7 sets out timing restrictions so that HGVs avoid peak traffic hours, but does not state what the earliest and latest time an HGV can access the site on weekdays would be. This information should be provided.

Paragraph 3.2.9 sets out details of monitoring system with information on management provided at paragraphs 3.3.1 and 3.3.2. It is expected that all monitoring data will be recorded and reported quarterly to the relevant authorities, including any breaches that occur. Paragraph 3.2.14 states an average car occupancy is assumed to be 1.5 people per car. Monitoring of this will be required to ensure that this assumption is valid and thus car trips do not exceed those forecast. With regard to the parking permit system set out at Paragraph 3.2.19, thought will need to be given on the working of the permit system to avoid drivers not in possession of a permit parking inappropriately in nearby communities. This may require monitoring.

An estimate of the minibus movements on the public highway should be included within the transport assessment.

Details are sort on how HGV traffic will be managed in the event of an incident; including communication with contractors and the potential for rerouting movements to/from the site.

Aside from applying a generic car share factor, no consideration is given to minimising staff vehicle movements on the local highway network. It is expected that consideration be given to facilitating:

- Staff cycle movements to/from site.
- Potential bus/minibus pick up/drop off from key employment locations
- Potential bus/minibus pick up/drop off from relevant public transport hubs.

Further information is needed on expected AIL movements.

No details have been provided to show which access points will also be used as crossing points between work areas. The same level of detail will be required for these crossing points, as for the main access points off the public highway. This is necessary as different methods of traffic management may be required to make this manoeuvre safe.

Other Highways issues

Highway condition surveys should be undertaken before, during and after construction work that will include the construction traffic route from the strategic road network to the various development sites. The survey should include main carriageway surfaces, footways, verges, and any adjoining access points. Any areas identified to be in poor condition, especially those near to residential properties, should be improved prior to the commencement of the development. During construction routes should be monitored and remedial works undertaken where necessary.

All access points off the highway need to be appropriately designed and constructed to the relevant highways authority standards. Early engagement with highway engineers is encouraged.

Where existing accesses are to be utilised, further detail in respect of any upgrades or improvements required should be included in the DCO submission.

Golf Links Road is a narrow road, used by recreational walkers and cyclists and is, therefore, not suitable for HGVs. The road has hedgerows tight to the carriageway in many places which limits the ability to mitigate highway impacts through increased width or passing places for example. This road should not, therefore, form any part of a routing plan for HGVs.

The Councils question why existing farm tracks and accesses are not being utilised, for example, the internal road network in and around Bay Farm could be utilised instead of Golf Links Road. The suitability of an access point at E33 is also questioned, with access via E10 appearing more logical.

The proposal is close to Mildenhall which has considerable growth planned. For example, works are already underway for the Mildenhall Hub. There remains concern about constraints at key junctions within Mildenhall which will be difficult to mitigate. Cumulative traffic impacts need to be taken into account, not just for projects with planning permission but also allocated in local plans. Evidence is available through

the cumulative impact transport study produced by AECOM for the former Forest Heath area Local Plan⁸.

In the long term, constraints at key junctions within Mildenhall will become more difficult to mitigate without further modal shift and the potential for some form additional road capacity has been raised, including a relief road at paragraph 8.4.89 of the Transport Study. The Sunnica proposal should not compromise this longer-term aspiration or longer-term development potential of Mildenhall that might be brought forward through the emerging West Suffolk Plan.

Air Quality

The various legislation and guidance that is referred to within the report is acceptable. The report considered the construction phase road traffic emissions but does not consider the impacts from operational road traffic as the scheme will create little traffic once operational. We agree with this approach.

The application of Institute of Air Quality Management (IAQM) guidance to the assessment of construction dust is appropriate and the approach to mitigation, in which IAQM guidance is embedded in the CEMP, is also appropriate.

The report confirms that the maximum number of construction vehicles (including Light Duty Vehicles (LDVs) and Heavy Goods Vehicles (HGVs)) during the peak of construction will exceed 200 vehicles per day (anticipated to be over 200 HGV movements and over 500 LDV movements per day). The existing road network in the proposal is relatively low and the anticipated number of HGV and LDV movements will significantly increase traffic.

A detailed dispersion modelling exercise will take place to assess the impact of this change in traffic movements. Discrete receptors will be identified for the dispersion modelling. A scheme-specific nitrogen dioxide monitoring survey will take place for verification of the dispersion model, which was due to start in September 2020. It should be noted that the traffic flows for a monitoring survey starting in September 2020 may not reflect the long-term traffic flows and therefore levels of air pollution in the area and this should be considered during any subsequent assessment.

At this stage no assessment of the impact on local air quality from construction traffic has been carried out, however, it is acknowledged that an impact is possible, and an appropriate assessment based on site specific information is proposed. We accept this methodology, but we would recommend caution with the use of baseline data collected during 2020 and early engagement on the selection of sensitive receptor locations.

Human health

⁸ See:

https://www.westsuffolk.gov.uk/planning/Planning_Policies/local_plans/upload/AECOM-Cumulative-Impact-Study-with-appendices.pdf

Battery Safety

The promoter will need to demonstrate that safety and security risks associated with the development have been thoroughly assessed. The councils are concerned that the risks associated with battery storage fires have not been fully explored and it is imperative that an outline Battery Fire Safety Management Plan is submitted with the DCO application.

Suffolk Fire and Rescue Service (SFRS) will work and engage with the developer as this project develops to ensure it complies with the statutory responsibilities that we enforce.

Sunnica should produce a risk reduction strategy as the responsible person for the scheme as stated in the Regulatory Reform (Fire Safety) Order 2005. It is expected that safety measures and risk mitigation is developed in collaboration with services across both counties.

The strategy should cover the construction, operational and decommissioning phases of the project.

During the construction phase the number of daily vehicle movements in the local area will significantly increase. The services will want to view the transport strategy to minimise this impact and prevent an increase in the number of road traffic incidents. Any development should not negatively impact on the services' ability to respond to an incident in the local area.

The use of batteries (including lithium-ion) as Energy Storage Systems (ESS) is a relatively new practice in the global renewable energy sector. As with all new and emerging practices within UK industry, the SFRS would like to work with the developers to better understand any risks that may be posed and develop strategies and procedures to mitigate these risks.

The promoter must ensure the risk of fire is minimised by:

- Procuring components and using construction techniques which comply with all relevant legislation.
- Developing an emergency response plan with both counties fire services to minimise the impact of an incident during construction, operation and decommissioning of the facility.
- Ensuring the BESS is located away from residential areas. Prevailing wind directions should be factored into the location of the BESS to minimise the impact of a fire involving lithium-ion batteries due to the toxic fumes produced.
- The emergency response plan should include details of the hazards associated with lithium-ion batteries, isolation of electrical sources to enable firefighting activities, measures to extinguish or cool batteries involved in fire, management of toxic or flammable gases, minimise the environmental impact of an incident, containment of fire water run-off, handling and responsibility for disposal of damaged batteries, establishment of regular onsite training exercises.
- The emergency response plan should be maintained and regularly reviewed by Sunnica and any material changes notified to SFRS and CFRS.

- Environmental impact should include the prevention of ground contamination, water course pollution, and the release of toxic gases.

The BESS facilities should be designed to provide:

- Automatic fire detection and suppression systems. Various types of suppression systems are available, but the Service's preferred system would be a water drenching system as fires involving Lithium-ion batteries have the potential for thermal runaway. Other systems, such as inert gas, would be less effective in preventing reignition.
- Redundancy in the design to provide multiple layers of protection.
- Design measures to contain and restrict the spread of fire through the use of fire-resistant materials, and adequate separation between elements of the BESS.
- Provide adequate thermal barriers between switch gear and batteries,
- Install adequate ventilation or an air conditioning system to control the temperature. Ventilation is important since batteries will continue to generate flammable gas as long as they are hot. Also, carbon monoxide will be generated until the batteries are completely cooled through to their core.
- Install a very early warning fire detection system, such as aspirating smoke detection.
- Install carbon monoxide (CO) detection within the BESS containers.
- Install sprinkler protection within BESS containers. The sprinkler system should be designed to adequately contain and extinguish a fire.
- Ensure that sufficient water is available for manual firefighting. An external fire hydrant should be located in close proximity of the BESS containers. The water supply should be able to provide a minimum of 1,900 l/min for at least 2 hours. Further hydrants should be strategically located across the development. These should be tested and regularly serviced by the operator.
- A safe access route for fire appliances to manoeuvre within the site (including turning circles). An alternative access point and approach route should be provided and maintained to enable appliances to approach from an up wind direction. Please note that SFRS requires a minimum carrying capacity for hardstanding for pumping/high reach appliances of 15/26 tonnes, not 12.5 tonnes as detailed in the Building Regulations 2000 Approved Document B, 2006 Edition, due to the specification of our appliances.

Electromagnetic effects

The PEIR states that the scheme is unlikely to interfere with telecommunications and television reception but does not explain how this conclusion has been reached.

The promoter should consider the issue of electromagnetic fields in relation to human health, in consultation with Public Health England. The National Policy Statement for Electricity Networks Infrastructure (EN-5) highlights that whilst putting cables underground eliminates the electric field, they still produce magnetic fields, which are highest directly above the cable and can have both direct and indirect effects on human health.

Other health and wellbeing impacts

The Councils, as Public Health Authorities, have not had the opportunity to review the documents at this stage but reserve the right to make comments in due course.

Sunnica Ltd. is required to satisfy the EqIA requirements when they submit their application to the Secretary of State. This assessment must account for people with protected characteristics and, in particular, must consider whether impacts of the scheme such as glint & glare or noise might affect people with physical or mental health conditions.

The PEIR does not seek to address the impacts of the scheme on the mental health and well-being of the affected populations. This is especially relevant in respect of the elderly and those residents that are vulnerable. In particular the construction and decommissioning phases will result in significant amounts of disruption to existing communities and this needs to be considered in relation to mental health and well-being.

Waste Management

The amount of waste requiring managed disposal following decommissioning is substantial. Reusing or recycling old panels would be required before material is disposed through landfill. While the PEIR refers to the possibility of components being recycled it is unclear on current and likely future techniques and whether these would be more costs effective than disposal.

The PEIR proposes a Construction Resource Management Plan (CRMP) to form part of a Construction Environmental Management Plan (CEMP) to deal with the management of waste. Suffolk County Council, as the waste planning authority for Suffolk, consider that this is an acceptable approach and does not expect the quantities of waste to warrant objection. The Councils would appreciate sight of the relevant management plans in advance of submission as the framework CEMP deals with waste very briefly.

Other Environmental Topics

The Councils do not feel that the Considerate Constructors Scheme is a robust enough standard to ensure that a project of this size and national significance is appropriate for managing and reducing the environmental impacts arising – especially in relation to the operational impacts from energy and waste, water.

The project should be setting out an approach that will have clear targets to meet for reducing emissions in relation to those set out and then the monitoring, management and verification systems in place to ensure that the project does deliver a net zero emissions development.

The Councils' main concerns are related to fuel use on site; in relation to vehicle journeys to and from site; waste volume arising, and recycling rate set out. This project should be setting an exemplary approach to waste management and recycling and this should be made clear as a target to be achieved.

Contaminated land is dealt with in Chapter 16 of the PEIR, and refers to a Preliminary Environmental Risk Assessment undertaken by AECOM dated December 2019, that is included as Appendix 16B.

The assessment includes the findings of a site walkover and a desktop review of pertinent geo-environmental information. The walk over identifies a number of minor potential sources of contamination on the site and in the surrounding area. The historical map review also identifies a small number of historical uses that are potentially contaminative, although the majority of the site has remained undeveloped throughout the historical period studied. Areas of note included a number of tanks; potentially infilled land; former agricultural structures with potential asbestos containing material and a generator with evidence of oil contamination surrounding.

The assessment recommends that there are intrusive investigations at post consent stage to further assess the contamination status of the ground. Predominantly this would be to assess the potential of impact on the controlled waters (underlying principal aquifer and surface waters). We are in general agreement that the risks have been appropriately identified and that it would be appropriate to undertake the intrusive investigations following consent (should consent be granted) to assess the identified risks.

Effect Interactions

Summary of Environmental Effects

In relation to Table 18-1, the Climate Change section of the table states "No significant residual effects on climate change are predicted during construction of the Scheme." We would like to see some information that quantified what the land use change impacts may be on soil carbon and carbon sequestration from vegetation as this could be significant locally. Similarly, the same point is made in respect of the Ecology Section and the water environment particularly soil run off during construction and its impacts on the water environment.

Other matters/General

Given the importance of The Brecks and the ecological interests found within them West Suffolk Council expected that specific reference to Natural England and the RSPB would be more frequent within the PEIR. The absence of such reference casts doubts over the involvement of these organisations in the development of the scheme and it is expected that the ES will address this.

The promoter should undertake an Equality Impact Assessment.

Where outline management plans are to be presented with the DCO application the promoter should ensure that, where relevant, interactions between the plans are considered. Where mitigation measures in one plan are reliant on measures in another plan this should be clearly referenced, and appropriate mechanisms put in place to secure delivery of such measures.

To date the promoter has offered very little detail with respect to community benefits.

The joint response of West Suffolk Council and Suffolk County Council to the non-statutory consultation (dated July 2019) contained reference to future growth in Mildenhall. These comments do not appear to have been addressed and the promoter's attention is again drawn to this matter. It is imperative that the proposed scheme would not prejudice future growth in and around Mildenhall.

Similarly, it should be demonstrated that the promoter has engaged with the Cambridgeshire and Peterborough Combined Authority in respect of the Cambridge Autonomous Metro.

Freckenham Parish Council are in the early stages of preparing a Neighbourhood Plan, with the neighbourhood area designated on 2 November 2018. Isleham is also in the early stages of preparing a Neighbourhood Plan, with its area being designated on the 21 February 2019 that includes some of the Sunnica site.

Effects on mineral resources were scoped out of the EIA by PINS, and Worlington Quarry has been removed from the red-line boundary. The promoter may wish to consider the effects of dust on the panels from Worlington Quarry.

Throughout this response the Councils have detailed where further information and/or assessment is required. The following is a brief summary of a number of requests for further information and should be read in conjunction with the remainder of this response:

- The need for local and regional perspective on GHG emissions evaluation to be undertaken – not just in relation to the national carbon budgets.
- The Net Zero Emissions trajectory for the UK and the need to balance energy generation alongside other issues such as soil carbon storage.
- The calculations in relation to soil carbon storage and sequestration that were used to determine the professional judgement as to the baseline GHG emissions.
- The details of the energy generation peak capacity, the battery energy storage system (BESS), its location and operation.
- A review of the stated energy generation and operational GHG benefits to ensure Completeness, Accuracy, Consistency, Relevance, and Transparency.
- Comparison to alternative technologies and how these achieve the development objectives and to aid our understand for diversification in energy generation in the Eastern Region.
- An improved management on the stated Considerate Construction Scheme (CCS) of the operational impacts of the development to ensure it delivers Best Practice and a demonstrable ambition for Net Zero Emissions from the development.
- A more detailed breakdown of the vehicle journeys for staff in relation to the development areas.
- A Travel Plan that will actually lead to a reduction in the proposed vehicle journeys.
- Confirmation as to whether the applicant intends to make provision for any temporary living accommodation on site for staff and/or make land available for privately owned accommodation to be sited?
- Targets for fuel, waste, water and energy consumption reduction for the construction and operation phase.
- A reporting mechanism that will demonstrate the progress against the targets.

- Details of how topsoil will be managed, retained, and reused onsite to enable local biodiversity improvements during the operation phase.
- How was the search radius of 15km from the Burwell substation arrived at?
- That the cumulative impact of other planned and existing solar development in the vicinity of Burwell substation has been taken into account.
- How have the geographical location, local weather patterns, pollution levels and damage or failure of the key components been considered in relation to the overall effectiveness of the scheme?
- The necessary corrections and/or additional assessment information should be included in the Cultural Heritage chapter.
- Further ecological assessment is required together with additional detail on the mitigation measures.
- Further detail and assessment work are required in respect of the socio-economic and land use chapter. In particular, the impact of the scheme on agricultural land should not be limited to its classification and consideration should be given as to how the scheme will impact upon future growth opportunities and the delivery of infrastructure improvements in the effected authorities.
- It is strongly advised that block plans at a scale of 1:500 are also submitted to allow for more detailed assessment of the proposal.
- Details of the decommissioning process are required prior to the submission of the DCO application and it should be demonstrated how this process will be financed and managed.