

HALSTEAD ROAD ECO HUB

APPLICATION SUMMARY REPORT

LAND ADJACENT TO HALSTEAD ROAD, KIRBY-LE-SOKEN, ESSEX

ON BEHALF OF NATURALIS ENERGY DEVELOPMENTS LTD

**TOWN & COUNTRY PLANNING ACT 1990 (AS AMENDED)
PLANNING AND COMPULSORY PURCHASE ACT 2004**

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 **DESIGN**  **ENVIRONMENT**  **PLANNING**  **ECONOMICS**  **HERITAGE**

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1. INTRODUCTION

- 1.1 The purpose of this report is to provide a summary of the main planning considerations assessed by the Applicant (Naturalis Energy Developments Ltd) in the preparation and submission of the planning application for the proposed development of a ground-mounted solar photovoltaic (PV) development, an Electric Vehicle (EV) charging station and a battery storage system.
- 1.2 The report provides an assessment of the proposed development against the relevant planning policy requirements, firstly considering whether the development can be supported in this location in principle and then considering both the benefits that would be delivered from the development being granted planning permission and any potential adverse impacts. Following this assessment, consideration will be given to whether, on balance, planning permission should be granted.

2. SITE SELECTION AND ALTERNATIVES

- 2.1 There are multiple factors relevant to considering whether development such as that proposed is suitable at a particular location. First and foremost, due to size requirements, a solar farm of the scale proposed can only be accommodated outside of urban areas at an edge-of-town or rural location. Technical matters are a pertinent consideration which affect deliverability and/or environmental and planning considerations. Consideration as to whether a site could realistically be developed for a solar farm is also an important consideration. This includes consideration of the economic viability of such a development and physical factors to determine if a solar farm could technically function at that location.
- 2.2 For a large scale solar farm project to be deliverable, it is necessary for the development to be located within close proximity to the electricity network with sufficient capacity to accommodate the proposed developments electricity generation. As a general rule, the further the point of connection from the development site the less feasible (and more costly) is the connection. This is due to the additional costs of cables, their installation, greater third-party landowner negotiations, environmental management and mitigation.
- 2.3 Accordingly, prior to the submission of the planning application, the Applicant undertook a site selection exercise.

- 2.4 Firstly, the Applicant conducted a technical assessment of potential sites in Tendring District that are similar in nature and scale to the Eco Hub proposal from an electrical connection perspective. As noted above, the availability and cost of a project's grid connection is fundamental to the viability of renewable energy projects in the post-subsidy era (i.e. from 2016 onwards) and it is therefore a critical locational factor for new renewable energy projects. The assessment undertaken used current, publicly available information from UK Power Networks ("UKPN"), the relevant Distribution Network Operator.
- 2.5 The grid connection scheme secured with UKPN for the Halstead Road project would provide a direct connection into an existing, robust 33kV over-head circuit which links Frinton Primary Substation (a "Primary") to Clacton Bulk Supply Point ("BSP") Substation. BSP's typically feed several smaller Primaries. The Halstead Road project is located to allow a direct connection in to the 33kV circuit which runs through part of the application site. This would mean that the connection into this circuit does not require a new, grid link circuit with the associated cost (adversely affecting viability) and environmental impact (adversely affecting planning prospects). The 33kV circuit into which the Halstead Road project would connect is rated to carry circa 22MW and the proposed development would utilise almost all of this capacity (20MW). The loads fed from Frinton Primary are relatively small, so most of the output from the proposed development will flow into the Clacton BSP, approximately 4km away.
- 2.6 Within Clacton BSP there are two 132/33kV transformers and these link the UKPN 33kV system to the UKPN 132kV system. These two transformers are rated at 60MW each and consequently they can facilitate the transfer of 120MW from the local 33kV system up to the wider 132kV system, but only when both transformers are in service. For operational reasons, UKPN design their system so that it can still function with only one of these transformers being available. The Clacton BSP is therefore able to accommodate 60MW of generation. There is already 27MW of existing generation connected into Clacton BSP leaving 33MW of spare transfer capacity. The Halstead Road project has secured 20MW, leaving 13MW available. Any new project above 13MW that connects into the local 33kV system would need to be controlled by an inter-trip arrangement adding to cost and increasing the amount of grid-induced project curtailment.
- 2.7 Clacton BSP is connected to the wider UKPN system via dual 132kV circuits which connect Clacton BSP to Lawford BSP. Each of these 132kV circuits is rated at

circa 83.5MW meaning that the link between Clacton and Lawford is capable of transferring 167MW. However, the output from the off-shore wind farm (Gunfleet Sands [127MW]) is split across these two circuits and there is an additional 27 MW of existing generation connected on the local 33kV circuit. Therefore, the link between Clacton and Lawford only has 13MW of spare capacity left ($167 - 27 - 127 = 13$).

- 2.8 The proposed development, at 20MW, would exceed the 13MW of spare capacity on the link between Clacton and Lawford. The connection of the project is only possible with the addition of an Active Network Management (ANM) scheme. This would effectively only need to control roughly one-third of the potential output from the proposed development (7MW of the total capacity of 20MW). Taking account of diversification (local demand and existing variable generation from wind and solar farms) the Applicant expects the curtailment to be small and infrequent with negligible impact on viability. Any additional connections would require all of the connected capacity to be subject to an ANM with progressively greater levels of curtailment (on a "last in, first off" basis).
- 2.9 It is clear from the technical analysis undertaken that that grid connection capacity in Tendring District is very limited. Further, it is plain that additional generation would have to rely wholly upon ANM schemes. This assessment indicates that there are currently no opportunities available in Tendring District to connect a scheme of a similar scale and nature to the proposed development to UKPN's existing network that would not face constraints and the associated capital costs and curtailment to generation required to mitigate such constraints.
- 2.10 Conversely, the proposed development would connect to UKPN's existing network with minimal new infrastructure (the point of connection is within the application site) providing a viable connection with low environmental impact. Further, the ANM scheme necessary to facilitate Halstead Road project's connection would have only a negligible effect on the project's level of generation.
- 2.11 With that locational requirement in mind, the Applicant engaged a reputable and experienced Land Agent to identify landowners within close proximity to the grid connection associated with the proposed Eco Hub between the playing field and Halstead Road in Kirby-le-Soken with a view to a potential solar energy project.
- 2.12 This exercise was undertaken by Brooks Leney over a period of 15 months (between May 2020 and July 2021, inclusive) to identify landowners. During this

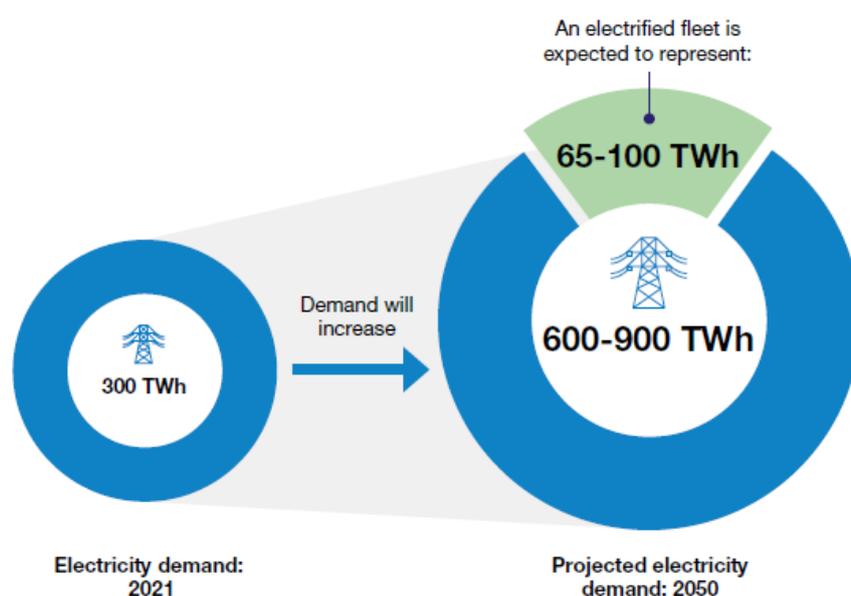
period, three landowners were approached, covering all of the land in the vicinity of the application site that would be suitable for the proposed development, including land outside of the Strategic Green Gap. However, none of the landowners were willing to enter into a land agreement in respect of a potential solar energy project.

- 2.13 Accordingly, there are no alternative sites in the area that are available and deliverable for the proposed development.

3. PRINCIPLE OF DEVELOPMENT

- 3.1 The principle of the development is supported at a national level in policy and legal commitments to achieve a reduction in carbon emissions. The national policy states, subject to sensitive siting of proposals, applications should be approved. The generation of renewable energy is a significant material consideration which weighs substantially in the applications favour.
- 3.2 Paragraph 152 of the NPPF is clear that the planning system should support transition to a low carbon future and specifically renewable and low carbon energy and associated infrastructure. Granting planning permission for the proposed solar farm would comply with these requirements and demonstrate support for such schemes.
- 3.3 The NPPF states that there is no requirement for an applicant to demonstrate overall need for renewable and low carbon energy and LPAs are directed to approve such applications if impacts are (or can be made) acceptable.
- 3.4 Accordingly, there is no "needs test" for the Applicant to satisfy unlike housing where a Local Authority is required to maintain a 5 year supply of deliverable housing land. Targets relating to the deployment of renewable energy are not maxima or "quotas", rather, a sustained increase in the deployment of land-based renewables is required in order to meet the overall demand for electricity, which is forecast to double or triple by 2050¹ (see graphic on the following page), driven by a shift to EVs and electricity replacing gas for heating. At the same time increasing the contribution of renewable electricity generation to this growing aggregate requirement.

¹ The Climate Change Committee's Sixth Carbon Budget, 9 December 2020
(<https://www.theccc.org.uk/publication/sixth-carbon-budget/>)



- 3.5 The UK Government has committed to ending coal in the electricity mix no later than 2025 and decarbonising the electricity system by 2035, but the retiring capacity will need to be replaced in order to meet existing levels of demand and the forecasted future demand. The Government expects wind and solar to be the key building blocks of the future generation mix and sustained growth in the capacity of these sectors in the next decade will be needed to ensure that we are on a pathway that allows us to meet net zero emissions in all demand scenarios.
- 3.6 Furthermore, with the ban on sales of new petrol and diesel cars from 2030, EVs will replace the combustion engine vehicles as the main transportation solution for mass transit. A significant barrier to be addressed is the provision of a viable EV charging network including new EV charging infrastructure at appropriate sustainable locations along the national and regional highway network. It is estimated that the UK will need 400,000 public charge points when the sale of new conventionally fuelled cars and vans is prohibited in 2030. To reach this total, the annual rate at which new charge points are being installed must increase from around 7,000 over the past three years to 35,000 over the next decade; a five-fold increase in the rate of deployment. In order to have the world-class infrastructure required for 2030, at least 700 public charging points must be installed each day until 2030, a c. 17-fold increase on the current rate of c. 42 a day.
- 3.7 Finally, the proposed battery storage system will provide more flexibility in the grid system allowing greater levels of renewable energy generation in the future.

It will increase the resilience and efficiency of the proposed development, balancing the export of electricity produced from a renewable source (via the solar farm) on to the electricity grid and/or into the EV charging station.

- 3.8 While there is no "needs test" to pass for the proposed development, there is an immediate and pressing need to deploy, as set out above and in preceding chapters, and it will be demonstrated, through the assessment of the environmental effects, that the impacts are limited so that the proposed development accords with the provisions of national policy and the NPPG where these specifically refer to environmental effects. The proposal is therefore in compliance with national policy.
- 3.9 Whilst at a local level, there is clear policy support for the proposed development in the Development Plan. Policy EN13a of the 2007 Local Plan supports development proposals for renewable energy generation subject to consideration of the usual planning considerations and emerging Policy PPL 10 of the TDLP2 is similarly supportive.
- 3.10 This type of development at the proposed location therefore has clear in principle support from relevant planning policy.

4. GREEN GAP

- 4.1 The application site is not subject to any statutory landscape designations but it is located with a Green Gap as designated in the 2007 Local Plan. However, when the planning application comes to be determined, it is expected that the TDLP2 will be adopted and the Green Gap designation – to be known as a Strategic Green Gap (SGG) – will only cover land to the eastern side of Halstead Road, which the larger parcel of land for the proposed solar farm is located within. Emerging Policy PPL 6 in the TDLP2 is therefore relevant and states:

"The Strategic Green Gaps...will be protected in order to retain the separate identity and prevent coalescence of settlements. Any development permitted must be consistent with other policies in the plan and must not (individually or cumulatively) lead to the coalescence of settlements."

- 4.2 The supporting text to the policy at Paragraph 7.6.1 advises that the SGGs have been identified in specific locations between settlements and are valued for the role they play in preventing the coalescence of settlements and retaining the

distinct identity or settlements. The SGGs identified, which includes the land to the eastern side of Halstead Road between Kirby Cross and Kirby-le-Soken, have the following characteristics:

- The open and undeveloped character of the land;
- They form a visual break between settlements;
- Their boundaries follow physical features on the ground; and/or
- Only land required to secure the objectives of the Strategic Green Gaps has been included.

4.3 The role of the supporting text in a Local Plan is to provide descriptive and explanatory matter in respect of the policies and/or reasoned justification of the policies. The text is plainly relevant to the interpretation of a policy to which it relates but it is not itself a policy or part of a policy, it does not have the force of policy and cannot impose a policy requirement that the policy does not contain.

4.4 The starting point is therefore the detailed wording of Policy PPL 6 itself which aims to protect the SGG to retain the separate identity and prevent coalescence of settlements. It however does not preclude development from taking place within the SGG. On the contrary, any development must be:

- Consistent with other policies in the plan – this will be demonstrated elsewhere in this chapter; and
- The development must not lead to coalescence of settlements.

4.5 It is acknowledged that the application proposes development within the SGG and it is understood that the SGG designation between Kirby Cross and Kirby-le-Soken has been subject of a number of speculative planning applications in the past for residential development. The majority of which have been refused on the grounds of, *inter alia*, their contribution to the coalescence of settlements, their adverse effect on the distinct identities of adjacent settlements, the urbanising impact that new homes would have on the SGG and the permanent change accruing to the rural character of the locality.

4.6 The very nature of housing development is likely to be more visible resulting in permanent and irreversible erosion of the rural character of the SGG bringing the two settlements closer together threatening their separate identities. This would

be reinforced by the level of activity and paraphernalia associated with residential development and the additional pressures it would put on the resources in and around the area. It is clear why residential development in the SGG have been resisted in the past without good reason.

- 4.7 The proposed solar farm element of the proposal is however materially different to residential development. Firstly, it has a much lower vertical scale and impact. The solar farm uses a simple, ground mounted metal framework that avoids significant ground disturbance. The panels are a maximum of 2.5m in height and similarly the associated buildings are no higher than single storey. Secondly, all of the equipment and buildings associated with the solar farm are temporary in nature so at the end of the 40 year permission the land can be returned to agricultural use. The agricultural use of the land would however not be lost in the meantime as sheep will be able to graze underneath and around the panels. Solar farms are also becoming common features in the countryside throughout the UK where, given the nature of the development, they are expected to be accommodated. Thirdly, once operational, there is negligible activity (vehicle movements and human activity) associated with a solar farm, with only the occasional visit by maintenance staff. Accordingly, the solar farm will not be introducing a use into the area that would increase the level of activity in the area.
- 4.8 It is these attributes, individually and cumulatively, that differentiate the solar farm from residential development, which plainly has a much greater, permanent impact. Unlike a residential development, the deployment of a solar farm in the SGG between Kirby Cross and Kirby-le-Soken will ensure that the two settlements maintain their separate identities and will not coalesce in the traditional sense. The solar farm is also a temporary development so the SGG will be maintained throughout the lifetime of the development and remain in place after the site has been decommissioned. It can also be viewed as a mechanism to resist any further speculative applications for residential development in the SGG.
- 4.9 The proposed solar farm would therefore not:
- Lead to the sprawl of urban areas;
 - Threaten the coalescence of towns;

- Give rise to encroachment of development into the countryside, given that it is a temporary installation; or
- Threaten the setting or separate identities of the settlements.

4.10 It is therefore concluded that the proposed solar farm would be an acceptable form of development in the SGG and compatible with its objectives as it would not lead to the coalescence of Kirby Cross and Kirby-le-Soken thereby enabling them to still maintain their separate identities.

4.11 Notwithstanding the above, the proposed solar farm is in the public interest, being supported by national planning policy and guidance for the development of renewable energy sources. The solar farm is also part of and integral to the wider development proposals in delivering the Eco Hub to increase the deployment of much needed EV charging infrastructure and resilience of the electricity system through the battery storage units.

4.12 The proposed development would therefore accord with aims and objectives of Policy EN2 of the 2007 Local Plan and emerging Policy PPL 6 in the TDLP2.

5. SOCIAL, ECONOMIC AND LOCAL COMMUNITY BENEFITS

5.1 In summary, the benefits arising from the proposed development include:

- Opportunity to meet existing and growing infrastructure demands of local EV users, owners and operators;
- Increased renewable energy generation, equivalent to provide electricity to approximately 6,500 homes, and assistance towards reducing CO₂ emissions;
- Economic benefits associated with investment and jobs on-site during peak times of the construction period and once operational jobs relating to the EV charging station, hub/cafe; and
- Appropriate biodiversity and landscape enhancements via increased boundary planting and species-rich grassland.

5.2 The local economic investment and community benefits of the proposed scheme gains support from Policy SP1 of the TDLP1 (presumption in favour of sustainable

development) due to the improved economic and social conditions in the area as outlined above.

- 5.3 The above outcomes associated with the scheme progressing, and associated Local Plan support, are considered to cumulatively represent very substantial benefits. These are material considerations which weigh greatly in favour of planning permission being granted.
- 5.4 Additionally, Policy EN13a of the 2007 Local Plan and emerging Policy PPL 10 of the TDLP2 supports renewable and low carbon energy generation, provided that any adverse impacts are addressed satisfactorily.
- 5.5 Planning permission should therefore be granted unless adverse effects of the development outweigh these beneficial impacts. Consideration of the environmental impacts is provided below in order to make this judgement.

6. LANDSCAPE AND VISUAL EFFECTS

- 6.1 Landscape and visual effects are considered in the Environmental Statement that accompanies the planning application. It considers the potential effects of the proposed development on the existing landscape character, landscape components and features, and visual amenity.
- 6.2 An initial desk-top study was carried out to review published information relating to the application site, including planning policy of relevance to landscape and visual matters, landscape designations, published landscape character assessments and the accompanying guidance. A detailed landscape and visual survey, including photography of winter views, was undertaken in December 2021 to review the findings of the desk-top study and to determine the extent of the visual influence of the application site guided by viewpoints agreed with the Council.
- 6.3 The application site is surrounded by settlement to the north, east and south, and lies within an area of undulating, predominantly agricultural landscape interspersed with frequently occurring woodland blocks, mature trees and hedgerows. This vegetation, built settlement, and subtle changes in topography combine to limit or expose views towards parts of the application site from different directions, and effect which has been used to guide the extent and design of the proposed development.

- 6.4 The application site does not lie within any statutory designated landscape, but parts of it – the larger eastern parcel – lies in a locally designated SGG. The landscape and visual assessments have identified that there would be no significant adverse landscape effects upon the landscape character and the surrounding settlement, and will not impact the green gap policy.
- 6.5 The impact on neighbouring properties would be limited and where effects have been identified these would be offset by the management and maintenance of landscape elements including mature trees and hedgerows and a new native woodland and hedgerow planting which would deliver significant beneficial effects over the lifetime of the proposed development
- 6.6 On balance it is considered that solar development could be successfully accommodated within the application site and surrounding landscape without unacceptable on landscape character or visual amenity as a whole.
- 6.7 The proposed development therefore accords with Policy EN1 of the 2007 Local Plan, Policy SP3 of the TDLP1 and Policies SPL 3, HP 3 and PPL 3 of the emerging TDLP2.

7. ECOLOGY

- 7.1 A detailed Ecological Assessment Report has been prepared by Avian Ecology to accompany this planning application. The Assessment details, inter alia, the desk study undertaken to identify any known existing features or species of ecological importance within and the area results of the ecological surveys undertaken in 2020 and 2021. The Ecological Assessment summaries:
- The application site is not located within any statutory or non-statutory designated site for nature conservation;
 - Wintering bird surveys revealed that there is no evidence that the application site is functionally linked to any of the statutory designated sites in the wider area, given that no qualifying species were recorded using the site;
 - The main habitat within the proposed development footprint comprised of arable fields which has low value to wildlife;
 - Birds - the habitats onsite provide nesting habitat for a number of bird species, including farmland and woodland species. The breeding bird

assemblage found within the Breeding Bird Study Area was typical of a farmland site, consisting principally of common species and small numbers of notable species. Five notable species were recorded considered breeding within the site. These species were cuckoo, dunnock, house sparrow, kestrel and starling. Species were recorded in low breeding numbers. All species considered breeding onsite were associated with vegetation along field boundaries, with no ground-nesting species recorded;

- Bats – the proposed development layout is sensitive to those habitat features that have the most suitable bat foraging and commuting potential onsite, particularly the hedgerows and tree lines;
- Badgers – good practice measures will be adopted during construction to protect badgers and other wildlife. The proposed development footprint will typically avoid field boundary habitats and therefore avoid impacts on those habitats most used by badgers for foraging and commuting and potentially sett creation. In light of this and the absence of badger setts found on site, it is considered unlikely that badgers will be negatively affected by the works;
- Amphibians – no ponds exist with the site. However, a wet ditch is present in the central part of the site. Three ponds lie within 250 m of the site with all three ponds associated with a property off Halstead Road, Hill House Farm, and lie approximately 60 m from the Site to the south. Consideration will be required for great crested newts, particularly for any essential works associated with the proposed development close to any of the ponds near to the site;
- Reptiles – the dominant habitat type which will be impacted by the proposed development will be arable land which has negligible value for reptiles. The field margins are considered to provide moderate value for reptiles;
- Dormouse – the hedgerows onsite are suitable for supporting dormouse. Habitat loss as a result of the proposed development will mainly involve the development of arable land, which has negligible potential to support dormice. Where hedgerow removal is required, around existing gates to widen field entrances and provide appropriate visibility splays, new hedgerows will be provided of a more biodiverse nature to support dormouse populations on the site;

- Other species – habitats within the site may support hedgehog, brown hare and water shrew. The hedgerows and wet ditch onsite which provide suitable habitat for hedgehog and water shrew will be retained and protected (with an appropriate buffer to ensure hedgerow roots are also protected). The open fields (principally arable and poor semi-improved grassland) may support brown hare. It is likely that brown hare will continue to use the fields during post-development; and
- Invasive non-native species – no invasive species were recorded within the site and given the habitats present on site, it is considered unlikely that any invasive species will establish on site.

7.2 The proposed development will secure BNG specifically a net gain of approximately 123% for area derived units (habitat) and approximately 68% gain for linear derived units (hedgerow). This is due to a large proportion of the baseline habitat consisting of low value habitat (arable) being replaced with higher value grassland that will be managed to achieve at least moderate condition. For linear units, the gains are due to protecting the majority of existing habitat, alongside some habitat enhancement and substantial habitat creation. Full results of the BNG assessment for the site can be found within the Biodiversity Metric 3.0 spreadsheet which accompanies the planning application.

7.3 The habitat enhancement and creation measures proposed will consist of:

- newly-created lightly grazed pasture under and around the solar panels;
- newly-created species rich grassland towards field boundaries and outside of the perimeter fence;
- creation of five new ponds/scrapes;
- scrub creation; and
- enhancement through 'gapping up' of hedgerows within the site.

7.4 Other proposals to enhance the site for wildlife include:

- a minimum of 10 bird boxes erected on mature trees located within the fields and hedgerows within the site;

- bat roost provision will be made through the inclusion of a minimum of 10 bat roost boxes on mature trees located within the fields and hedgerows;
- Creation of refugia and hibernacula for amphibians and reptiles; and
- Creation of 'insect hotels'.

7.5 The base of the perimeter fence around the proposed solar farm will be designed to allow the free movement of wildlife around the site, allowing species such as badgers, brown hare and Western hedgehogs access to relatively secure and undisturbed habitat for refuge and foraging and maintaining connectivity between the site and other nearby habitats.

7.6 In light of the above, the proposed development accords with Policies EN6, 6A and 6B of the 2007 Local Plan, Policy SP3 of the TDLP1 and Policy PPL 4 of the emerging TDLP2.

8. HERITAGE

8.1 A Heritage Statement has been prepared by Pegasus Group, to support this planning application.

Archaeology

8.2 The Heritage Statement explains that there is some evidence for prehistoric activity in the area, although none recorded within the application site itself. A single ditch containing early Bronze Age and late Iron Age pottery was recorded c. 100m south-west of the eastern site parcel, but it is not considered likely that this feature continues into the site based on its orientation. The site is not considered to be the focus for prehistoric activity. On this basis, the potential for significant archaeological remains of prehistoric date within the site is considered to be low.

8.3 There is scarce evidence for Romano-British activity in the wider area, and none recorded within the application site or in its immediate vicinity. The site is not considered to be the focus for Roman activity. On this basis, the potential for significant archaeological remains of Roman date within the site is considered to be low.

8.4 The application site was historically located in the parish of Kirby-le-Soken and most likely formed part of the agricultural hinterland to this settlement during the

medieval period. Ditches and pit clusters were recorded during the evaluation to the south and west of the eastern site parcel although are not considered to extend into the site. These features were indicative of nearby settlement activity. The potential for significant archaeological remains of medieval date within the site is considered to be low.

- 8.5 The application site was in use as a mixture of arable land, pasture and wood during the mid-19th century and continued predominantly in arable use until the latter half of the 20th century, when the eastern extent of the eastern site parcel comprised orchard planting. Any below-ground remains of the former barn and yard in the north-eastern extent of the eastern site parcel are not considered to be of heritage interest. The potential for significant archaeological remains of post-medieval to modern date within the site is considered to be low.

Built Heritage

- 8.6 The Heritage Statement confirms an appropriate and proportionate level of settings assessment has been undertaken for designated heritage assets identified in the vicinity of the site.
- 8.7 It concludes that the proposed development would result in less than substantial harm at the lowermost end of the spectrum to the Grade II Listed Hill Farmhouse through an alteration to setting and no harm to the heritage significance of the Grade II* Listed Church of St Michael.
- 8.8 The proposed development therefore accords with Policy EN29 of the 2007 Local and Policies PPL 7, PPL8 and PPL9 of the emerging TDLP2.

9. TRANSPORT AND PUBLIC RIGHTS OF WAY

- 9.1 A Transport Statement and Construction Traffic Management Plan (CTMP) have been prepared by Pegasus Group to accompany this planning application. The CTMP sets out how any potential transport impacts of construction and operation will be managed and mitigated.
- 9.2 Access to the proposed solar farm will be off of an existing field gate on the eastern side of Halstead Road improved where necessary to accommodate the largest vehicles associated with the proposed solar farm. The new access will be used by construction and maintenance vehicles associated with the solar farm. All vehicles will enter and exit the site in a forward gear and will turn in an internal site compound.

- 9.3 While a new priority T-Junction will be constructed on the western side of Halstead Road to serve the EV charging station. The new access will be used by construction vehicles associated with the EV Charging Station and periodic visits by maintenance vehicles as well as providing public access to the EV charging station. Again all vehicles will enter and exit the site in a forward gear.
- 9.4 It is expected that there will be around 874 movements by large vehicles for the construction of the solar farm (i.e. 437 arrivals and 437 departures) over a six month period. For the EV charging station there will be up to 30 HGV deliveries (60 two-way movements) per week. Assuming a three-month construction phase, this could equate up to approximately 360 deliveries in total and five deliveries per day on average. Depending on the type of work this is happening this may increase or decreased over certain periods. The level of traffic during the construction phase is not considered to be material and it is considered that this will not have a detrimental impact on the safety or operation of the local or strategic highway network.
- 9.5 After commissioning, it is anticipated that there will be around one visit to the solar farm per month for equipment maintenance. These visits would typically be made by light van or 4x4 type vehicles. Whilst the contractor's compound will have been removed, space will remain within the site for such a vehicle to turn around to ensure that reversing will not occur onto the adjacent access track. The proposed operational life of the project is 40 years.
- 9.6 A construction compound will be established and remain on site throughout the construction phase. This will be where all HGV deliveries are made throughout the construction process and smaller vehicles will distribute materials and plant to the remaining sections of the site.
- 9.7 There are number of PRowS within the site of the proposed solar farm and around its boundaries and similarly around the northern and western boundaries of the Eco Hub site. As noted previously, new permissive footpaths will be provided within the solar farm part of the site connecting existing routes and on to the wider network.
- 9.8 Pedestrian access to the solar farm will be restricted for security purposes to prevent theft and vandalism, however the existing routes of the PRowS will remain and new permissive footpaths introduced. When construction plant and machinery are accessing the site, a banksman will be employed to control both pedestrian movements and traffic control throughout the duration of the construction phase.

9.9 In conclusion, the CTMP confirms that there are no valid highway or transportation reasons which would prevent the proposed development of the site.

9.10 The proposed development therefore accords with Policy TR1 of the 2007 Local and Policies CP1 and CP2 of the emerging TDLP2.

10. FLOOD RISK AND DRAINAGE

10.1 This planning application is accompanied by a Flood Risk Assessment (FRA) prepared by PFA Consulting. The FRA includes a surface water drainage strategy for the site.

10.2 The FRA confirms the entire site falls within Flood Zone 1 and is fully in accordance with the aim of the sequential approach set out in the NPPF which is to steer new development to areas of lowest probability of flooding (i.e. Flood Zone 1).

10.3 All sensitive control equipment (e.g. inverters) in the proposed solar farm are restricted to areas of very low surface water flood risk and only solar arrays, security fencing and access tracks extend into the areas of elevated surface water flood risk. Finished floor levels for the proposed building in the Eco Hub will be set at least 150mm above surrounding ground level to prevent the ingress of surface water. With these mitigation measures in place the proposed development is safe from surface water accumulations and compatible with the low flood risk in these locations.

10.4 An assessment of the proposed development on surface water runoff has also been undertaken for the proposed solar farm and Eco Hub.

10.5 With respect to the proposed solar farm, the panels are raised above the existing ground allowing a permanent grass sward to be maintained underneath. Rainfall falling onto the panels would runoff directly to the ground beneath and infiltrate into the ground at the same rate as it does in the site's existing greenfield state, and access tracks will be semi permeable in nature. The extent of impermeable cover as a result of the proposed solar farm is minimal – circa 0.06% of the solar farm site area.

10.6 A sustainable drainage strategy, involving the implementation of SuDS in the form of swales, is proposed for managing surface water runoff on the solar farm site. Swales are proposed at the low points of the application site to intercept

extreme flows which may already run offsite. The swales have no formal discharge arrangements but will gradually empty by a process of infiltration, evaporation, and evapotranspiration and provide runoff pathway management. The volume of storage provided within the proposed swales is greater than the additional runoff generated as a result of the extreme 1 in 100 year storm event, including an allowance for climate change, and is an appropriate form of mitigation given the temporary (40 year) life of a solar farm and the need to be able to readily reinstate the land at the end of its lifespan.

- 10.7 With respect to the Eco Hub element of the development proposals, it is proposed that runoff will be drained to ground via shallow infiltration features. The infiltration features include the provision of porous asphalt (or similar permeable surface) with areas of deepened porous sub-base and infiltration basins. The preliminary designs are based on infiltration rates established by on-site infiltration testing. The infiltration features have been designed to manage the 1 in 100 year storm event, including an allowance for climate change.
- 10.8 The proposed surface water drainage strategy will therefore ensure that surface water arising from the developed site will be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development, while reducing the flood risk to the site itself and elsewhere, taking climate change into account.
- 10.9 With respect to foul drainage, it is proposed to connect to the foul sewer in Halstead Road.
- 10.10 The FRA concludes that future users of the development would remain appropriately safe throughout the lifetime of the proposed development, and that subject to a suitably worded planning condition, requiring the proposed drainage arrangements to be implemented and maintained, the development will not increase flood risk elsewhere and will reduce flood risk overall.
- 10.11 The proposed development therefore accords with Policy QL3 of the 2007 Local Plan and Policy PPL 1 of the emerging TDLP2.

11. AGRICULTURAL LAND

- 11.1 An Agricultural Land Classification (ALC) Report has been prepared by Soil Environment Services Ltd and accompanies the planning application. The ALC confirms that the majority of the site (92%) is Grade 3b 'moderate quality

agricultural land' with the remainder (8%) as Grade 3a 'good quality agricultural land'. Predominantly, the site does not form Best and Most Versatile agricultural land.

12. ARBORICULTURE

12.1 An Arboricultural Impact Assessment (AIA) has been prepared to accompany this planning application by Barton Hyett Associates. As part of the assessment a total of 70 trees, groups of trees and hedgerow were surveyed. The results of the tree survey are provided below:

	Total	A - High quality trees whose retention is most desirable.	B - Moderate quality trees whose retention is desirable.	C - Low quality trees which could be retained but should not significantly constrain the proposal.	U - Very poor quality trees that should be removed unless they have high conservation value.
Trees	36	4	22	10	-
Groups	19	-	7	12	-
Hedgerows	15	-	6	9	-
Total	70	4	35	31	-

12.2 The impact assessment carried out considers the effect of any tree loss required to implement the proposed development as well as any reasonably foreseeable potentially damaging activities proposed in the vicinity of retained trees.

12.3 The AIA concludes that the proposed development has been designed in response to the arboricultural considerations identified within the tree survey. The proposed layout largely respects the RPAs of retained trees, and the retained trees can be adequately protected during the construction process in order to sustain their health and longevity.

12.4 On the basis that the construction process is carried out appropriately, the proposed development can be implemented without significant impact on the site's arboricultural resources. The proposed development is therefore acceptable from an arboricultural perspective and there would be no conflict with Policy SP7 of the TDLP1.

13. NOISE

13.1 A Noise Assessment has been undertaken by LF Acoustics which presents an assessment of the noise levels associated with the operations of the proposed

development upon surrounding noise sensitive receptors, located to the west, south and east of the development.

- 13.2 Baseline noise monitoring has been carried out for the purposes of the planning application to establish the typical background noise levels upon which an assessment has been made in accordance with the relevant requirements.
- 13.3 The Noise Assessment presents calculations and an assessment of the noise levels that would be generated by the operation of the proposed Eco Hub at surrounding noise sensitive receptors.
- 13.4 The assessment concludes that the operations of the Eco Hub would generate an acceptable level of noise at surrounding properties throughout the day and night-time periods.
- 13.5 Accordingly, no unacceptable noise levels would arise as a result of the proposed development.
- 13.6 The proposed development therefore accords with Policy SP7 of the TDLP1 and Policy SPL 3 of the emerging TDLP2.

14. GLINT AND GLARE

- 14.1 A Glint and Glare has been undertaken by Pager Power to ascertain the possible effects of glint and glare from the proposed solar farm upon road users, dwellings and a high level overview of aviation activity.
- 14.2 Pager Power has considerable experience of undertaking such assessment in the UK, Europe and internationally based of industry experience and extensive consultation with industry stakeholders including airports and aviation regulators. Accordingly, a well-tested and comprehensive methodology has been used to utilised in the process of determining the impact upon road safety, residential amenity and aviation activity.
- 14.3 The study undertaken for the proposed development concludes that no significant impacts are predicated upon dwellings and roads users, therefore no mitigation is required. Similarly, no significant impacts are predicated upon aviation activity associated with Great Oakley Airfield and Clacton Airport, and no further details modelling is required.
- 14.4 Accordingly, the proposed development therefore accords with Policy SP7 of the TDLP1 and Policy SPL 3 of the emerging TDLP2.

15. NATIONAL POLICIES

- 15.1 There is significant support for the principle of renewable energy developments in the NPPF. Paragraph 152 is clear that the planning system should support transition to a low carbon future and specifically renewable and low carbon energy and associated infrastructure. Granting planning permission for the proposed development would comply with these requirements and demonstrate support for such schemes.
- 15.2 The NPPF also directs that planning applications for renewable development should be approved if impacts are (or can be made) acceptable. As outlined above, the assessments of environmental effects have been shown to be limited and would also accord with the provisions of national policy and the NPPG where these specifically refer to environmental effects. The proposal is therefore in compliance with national policy.
- 15.3 In light of the commitments made by the UK Government to ban the sale of new petrol and diesel cars by 2030, decarbonising the electricity system and reducing greenhouse gas emissions by 78% (compared to 1990 levels) by 2035, and achieving net zero by 2050, a presumption in favour of increasing the number and output of low carbon energy sources, such as solar farms, is entirely appropriate and necessary.

16. PLANNING BALANCE

- 16.1 To summarise, the above planning assessment has demonstrated the following:
- This planning application is in broad compliance with the Development Plan and national planning policy and guidance. Policy compliance strongly supports planning permission being granted;
 - The development and operation of the solar farm and EV Charging Station would give rise to a wide range of environmental and economic benefits which amount to very substantial weight in favour of planning permission being granted; and
 - The impacts associated with the development at this location are potentially limited, and the proposal is in compliance with relevant, issue-specific planning policies in the Development Plan, so do not weigh against the development.

16.2 In consideration of compliance with the Development Plan and other planning policy requirements, the significant benefits associated with the proposed development and limited adverse effects, it is clear that this development is, on balance, acceptable in planning terms.

16.3 The proposed development has been shown to achieve the main objectives of sustainable development (environmental, social and economic) without causing undue detriment. The presumption in favour of sustainable development set out in the NPPF therefore applies here. As the NPPF at paragraph 11 directs, in such circumstances and where the application complies with the Development Plan, the application should be approved without delay.

17. SUMMARY AND CONCLUSIONS

17.1 The proposed development supports the UK Government's intention to move to a low carbon economy, which represents a substantial benefit.

17.2 The impacts of the proposal have been shown to be acceptable and, where necessary, mitigation measures have been set out to reduce the potential impacts of the proposed development.

17.3 The significant benefits associated with this proposal provide a valuable contribution towards meeting the challenging commitments of the Government, some of which are legally-binding, regarding greenhouse gas emissions, renewable energy generation and electric vehicle infrastructure. In addition, the economic investment and ecological and landscape enhancements associated with the proposal are factors which weigh heavily in favour of this development.

17.4 The proposed development, on balance, falls well within the scope of acceptability:

- Broad compliance with the Development Plan and National Planning Policy guidance;
- Accrual of significant benefits associated with the scheme; and
- The relatively benign impacts associated with the development (some of which can be made acceptable through mitigation).