

22/00175/FUL

FIELDS TO THE NORTH OF A127 SOUTHEND ARTERIAL ROAD, WEST OF RAYLEIGH SUBSTATION, SOUTH OF RAILWAY LINE AND WEST OF A1245: EASTINGS (X) 578826; NORTHINGS (Y) 190710

PROPOSED DEVELOPMENT OF A SOLAR FARM, ACCESS, ANCILLARY INFRASTRUCTURE AND CABLE ROUTE

APPLICANT: AURA POWER SOLAR UK LTD

ZONING: METROPOLITAN GREEN BELT

PARISH: RAYLEIGH TOWN COUNCIL

WARD: WHEATLEY

1 RECOMMENDATION

1.1 It is proposed that the Committee **RESOLVES**

That planning permission be approved, subject to the following conditions:-

Commencement

- (1) The development hereby permitted shall begin no later than three years from the date of this decision.

REASON: Required to be imposed pursuant to Section 91 of the Town and Country Planning Act 1990 as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

Approved Plans

- (2) The development shall be undertaken in accordance with planning and document reference numbers: Module Array Layout GBR.2263.DEV.M4.001.0 Rev.L.f, Site Location Plan Issue 03 (JE), Proposed Site Access from A127 during Construction Phase 2999-01-SK03, Customer Switchroom/ Control Building AP.4, Typical Cable Trench Cross Section GBR.2263.DEV.E4.017.3 Rev 0, Typical Transformer Station GBR.2263.DEV.M4.014.1 Rev 0, Typical Fence and Gate GBR.2263.DEV.M4.016.3 Rev A, Indicative Solar Panel

Elevation GBR.2263.DEV.M4.018.3 Rev 0, Typical Spare Parts Container GBR.2263.DEV.M4.021.3 Rev 0, Typical Track Cross Section GBR.2263.DEV.M4.031.3 Rev 0, Typical Hedge Gate GBR.2263.DEV.M4.037.3 Rev 0, Indicative Bund Location Plan Version No. 1, New Junction SW Drainage Proposed Options Alternative 2, Appendix 5 of KRS Flood Risk Assessment KRS .0616.002.R.001.C, Tree Retention Plan 1 10819-T-03 Rev D, Tree Retention Plan 2 10819-T-04 Rev D, Tree Protection Plan 1 10819-T-05 Rev D, Tree Protection Plan 2 10819-T-06 Rev D.

REASON: To ensure that the development is undertaken in accordance with the approved plans as considered.

Time Limitation of Use and Site Restoration

- (3) The planning permission hereby granted shall be limited to a period of 40 years commencing from the date electricity generated by the solar panels is first exported to the National Grid. At the end of this 40-year period, the development shall be removed, and the land restored to its previous agricultural use in accordance with details that shall have been previously submitted to and approved in writing by the Local Planning Authority.

REASON: To ensure that the development (in the absence of any planning permission being granted otherwise to extend the time period of use) and the use ceases and the land restored to its former state in accordance with the time periods stated at condition 3.

Detailed Scheme of Removal of all Plant and Associated Infrastructure and Reinstatement

- (4) No later than six months prior to the expiry of the planning permission, or within twelve months of the cessation of electricity generation by this solar PV park, whichever is the sooner, a detailed scheme of works for the removal of the development (excluding the approved landscaping and biodiversity works) shall be submitted to and approved in writing by the Local Planning Authority (LPA). The scheme of works shall include the following: (a) a programme of works; (b) a method statement for the decommissioning and dismantling of all equipment and surfacing on site; (c) details of any items to be retained on site; (d) a method statement for restoring the land to agriculture; (e) timescale for the decommissioning, removal and reinstatement of the land; (f) a method statement for the disposal/recycling of redundant equipment/structures. The scheme of works shall be undertaken in accordance with the approved details and timescales. The operator shall notify the Local Planning Authority in writing within five working days following the cessation of electricity generation.

REASON: To reflect the temporary time period of the consent and the requirement of the reinstatement of the land to its former state.

Notification of First Electricity Generation and Exportation to the Network

- (5) The applicant/developer shall notify the Local Planning Authority in writing within 10 working days of electricity being generated from the development being first exported to the network.

REASON: To establish the triggering point time limit of operation of the Solar Farm and cessation of use coinciding with the requirements of condition 3.

Limitation of Hours of Construction and Decommissioning

- (6) No construction or decommissioning works shall take place except between the following hours: 0730 to 1830 Monday to Friday, and 0830 to 1300 Saturday and Sunday.

REASON: To safeguard the amenity of residential properties potentially affected otherwise by the development in the absence of such limitations in compliance with policy DM1 of Rochford Council's Development Management Plan (adopted 16th December 2014).

Submission of Further Landscaping Details for Approval and Implementation

- (7) Notwithstanding the details of the submitted Landscape Master Plan (reference 2999-01-03) and Site Layout Plan (reference GBR.2263.DEV.M4.001.0 Rev.L.f.) prior to the commencement of development a detailed Soft Landscaping Plan shall be submitted to the local planning authority for its written approval. This plan shall show the precise widths of all new hedges and woodland planting to be planted including additional planting required along the southern boundary of the site to compensate for the loss of verdure / vegetation required in connection with the revised construction details. The details to be submitted shall include: (a) Hard surfacing including pathways and driveways, other hard landscape features and materials; (b) Existing trees, hedges or other soft features to be retained; (c) Planting plans including specifications of species, sizes, planting centres, number and percentage mix; (d) Details of planting or features to be provided to enhance the value of the development for biodiversity and wildlife; (e) compliance with the biodiversity net gain metric. The details shall also provide a planting schedule and specification of all native species to be planted in connection with the required revised details together with details of a long-term maintenance schedule relating to all existing hedgerow and trees in addition to all new planting including hedgerow species and trees over the lifetime of the use. Subsequently the works shall be carried out as approved prior to the first exportation to the

National Grid, or in the first available planting season following such exportation and permanently retained and maintained in accordance with the agreed lifetime of the development.

REASON: To ensure that adequate landscaping is undertaken to minimise the visual and landscape impacts of the development and to enhance the value of the development for biodiversity and wildlife including compliance with the stated biodiversity net gain metric in accordance with the principles embodied within the National Planning Policy Framework (July 2021) and the Council's Local Development Framework Development Management Plan policies DM1 and DM25 and DM 26.

Submission of Further Landscaping Details for Approval and Implementation

- (8) During the operation of the development, in the event that existing hedgerows directly adjacent to the south of the development site, to the north of the A127, along the extent of the development site boundary are extensively removed and not replaced within 24 months of removal, a scheme for mitigation planting on the development site shall be submitted to and agreed in writing with the Local Planning Authority and implemented thereafter in accordance with the approved details.

REASON: To ensure that adequate landscaping is undertaken to minimise the visual and landscape impacts of the development and to enhance the value of the development for biodiversity and wildlife including compliance with the stated biodiversity net gain metric in accordance with the principles embodied within the National Planning Policy Framework (July 2021) and the Council's Local Development Framework Development Management Plan policies DM1 and DM25 and DM 26

Protection of Existing Trees on Site

- (9) The development shall be undertaken in strict accordance with the revised Arboricultural Assessment and Tree Protection Plan coinciding with the revised access visibility splay details - referenced: Tree Retention Plan 1 10819-T-03 Rev D, Tree Retention Plan 2 10819-T-04 Rev D, Tree Protection Plan 1 10819-T-05 Rev D, Tree Protection Plan 2 10819-T-06 Rev D. or otherwise in accordance with such minor variations as may be agreed in writing by the Local Planning Authority.

REASON: To ensure the development does not cause damage to the protected trees and that the trees can be adequately protected for the duration of the proposed development in compliance with principles embodied within the National Planning Policy Framework (July 2021) and the Council's Local Development Framework Development Management Plan policies DM1 and DM26.

Submission of Construction Environmental Management Plan and Implementation.

- (10) No development shall take place (including ground works or vegetation clearance) until a construction environmental management plan (CEMP) has been submitted to and approved in writing by the local planning authority. The CEMP shall include details for the control and management of noise and dust during the construction phase, and with respect to noise shall have due consideration of the guidance within BS 5228:2009+A1:2014. The CEMP will be adhered to by the contractor throughout the construction process. The CEMP shall include the following: (a) Risk assessment of potentially damaging construction activities; (b) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (c) The location and timing of sensitive works to avoid harm to biodiversity features. The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the local planning authority.

REASON: To ensure that potentially adverse environmental impacts are managed and mitigated during the course of development in compliance with Policy DM 1 of Rochford District Council's Development Management Plan (adopted 16th December 2014).

External Lighting

- (11) No external lighting, including lighting required for construction and decommissioning, shall be installed at the site until such time as a lighting strategy has been submitted to and approved in writing by the local planning authority. All external lighting shall be installed in accordance with the details agreed in the strategy and shall be maintained thereafter in accordance with the agreed details, subject to any such variation that may be agreed with the Local Planning Authority. No additional external lighting shall be installed without prior written consent from the local planning authority.

REASON: To safeguard highway users on the adjacent A127 from light glare to safeguard residential amenity within a 1 mile radius of the site and to protect the night sky from light pollution in compliance with Policy DM 1 of Rochford District Council's Development Management Plan (adopted 16th December 2014).

Archaeology (Archaeological Investigation)

- (12) No development or preliminary groundworks of any kind shall take place until a programme of archaeological investigation has been secured in accordance with a written scheme of investigation which has been

submitted by the applicant and approved in writing by the local planning authority.

REASON: To record and safeguard any archaeological artefacts which may be in situ within the development in accordance with Chapter 16 of the National Planning Policy Framework 'The Framework' Conserving and enhancing the historic environment.

- (13) No development or preliminary ground works of any kind shall take place until the completion of the programme of archaeological investigation identified in the Written Scheme of Investigation defined in 12 above. The work will comprise archaeological trial trench evaluation which may be followed by excavation or monitoring. A professional archaeological contracting team shall undertake any archaeological work.

REASON: To record and safeguard any archaeological artefacts which may be in situ within the development in accordance with Chapter 16 of the National Planning Policy Framework 'The Framework' Conserving and enhancing the historic environment.

Highway Access and Safety

- (14) Prior to development the areas within the site identified for the purpose of loading/unloading/reception and storage of materials and manoeuvring associated with the proposal shall be provided clear of the highway and retained at all times for that sole purpose.

REASON: To ensure that appropriate loading / unloading facilities are available in the interest of highway safety.

- (15) No unbound material shall be used in the surface treatment of the vehicular access within 20 metres of the highway boundary.

REASON: To avoid displacement of loose material onto the highway in the interests of highway safety.

- (16) Prior to commencement of the development details showing the means to prevent the discharge of surface water from the development onto the highway shall be submitted to and approved in writing by the Local Planning Authority. The approved scheme shall be carried out in its entirety prior to the access becoming operational and shall be always retained.

REASON: To prevent hazards caused by water flowing onto the highway and to avoid the formation of ice on the highway in the interest of highway safety.

- (17) The development shall accord, including any ground works or demolition, with the approved CEMP. The approved Statement shall be adhered to throughout the construction period. The Statement shall

provide for: i. the parking of vehicles of site operatives and visitors ii. loading and unloading of plant and materials iii. storage of plant and materials used in constructing the development iv. wheel and underbody washing facilities v. Routeing of vehicles.

REASON: To ensure that impacts of the development in highway safety terms is acceptable and to ensure that loose materials and spoil are not brought out onto the highway.

- (18) Prior to first beneficial use of the development, the access point on the A127 Eastbound shall be provided as shown in principle on Axis drawing no. 2999- 01-SK03. The vehicular access shall be constructed at right angles to the highway boundary and to the existing carriageway with 10m radii into an 8m carriageway and associated clear to ground visibility splays shall be provided before the access is first used by vehicular traffic and always retained free of any obstruction thereafter.

REASON: To provide adequate inter visibility between vehicles using the access and those in the existing public highway in the interest of highway safety.

- (19) Prior to operation of the proposed development, the temporary construction access junction from the A127 shall be modified to remove deceleration lane commensurate with the requirements of future servicing traffic. The subsequent surfacing and detail of the amended access arrangement shall remain in-situ during the operation of the development and shall be approved in writing by the local planning authority in consultation with the highway authority.

REASON: In the interest of highway safety.

- (20) Gates provided at the vehicular access shall be inward opening only and shall be set back a minimum of 20 metres from the back edge of the carriageway.

REASON: To enable vehicles using the access to stand clear of the carriageway whilst gates are being opened and closed and to allow parking off street and clear from obstructing the adjacent footway/cycleway/carriageway in the interest of highway safety.

Surface Water Drainage

- (21) The development permitted by this planning permission shall be carried out in accordance with the approved Flood Risk Assessment, document KRS.0310.038.R.001.b by KRS Environmental, dated June 2022 and the provision of:

- Shallow swales/bunds as shown on drawing entitled “Indicative Bund Location Plan” dated 17/04/23.

- Detailed engineering drawings of each component of the drainage scheme.
- A final drainage plan which details exceedance and conveyance routes, ground levels, and location and sizing of any drainage features.
- A written report summarising the final strategy and highlighting any minor changes to the approved strategy.

All measures shall be fully implemented prior to occupation and subsequently in accordance with the timing / phasing arrangements embodied within the scheme, or within any other period as may subsequently be agreed, in writing, by the local planning authority.

REASON: To prevent flooding by ensuring the satisfactory storage of/disposal of surface water from the site and to ensure the effective treatment of surface water runoff to prevent pollution in compliance with Chapter 14 of the 'Framework'.

- (22) No works shall take place until a scheme to minimise the risk of offsite flooding caused by surface water run off and groundwater during construction works and to prevent pollution has been submitted to, and approved in writing by, the local planning authority. This shall include measures to maintain public highways in the vicinity of the scheme free of site generated detritus. The scheme shall subsequently be implemented as approved.

REASON: The National Planning Policy Framework paragraph 163 and paragraph 170 state that local planning authorities should ensure development does not increase flood risk elsewhere and does not contribute to water pollution. Construction may lead to excess water being discharged from the site. If dewatering takes place to allow for construction to take place below groundwater level, this will cause additional water to be discharged. Furthermore, the removal of top soils during construction may limit the ability of the site to intercept rainfall and may lead to increased runoff rates. To mitigate increased flood risk to the surrounding area during construction there needs to be satisfactory storage of/disposal of surface water and groundwater which needs to be agreed before commencement of the development. Construction may also lead to polluted water being allowed to leave the site. Methods for preventing or mitigating this should be proposed.

- (23) Prior to the first generation of electricity on site a maintenance plan detailing the maintenance arrangements including who is responsible for different elements of the surface water drainage system and the maintenance activities/frequencies shall have been submitted to the local planning authority for its written approval. Should any part be maintainable by a maintenance company, details of long term funding arrangements should be provided. The development over the lifetime of

is use shall be managed in accordance with this agreed maintenance plan.

REASON: To ensure appropriate maintenance arrangements are put in place to enable the surface water drainage system to function as intended to ensure mitigation against flood risk. Failure to provide the above required information prior to occupation may result in the installation of a system that is not properly maintained and may increase flood risk or pollution hazard from the site in compliance with Chapter 14 of the 'Framework'.

- (24) The applicant or any successor in title must maintain yearly logs of maintenance which should be carried out in accordance with any approved Maintenance Plan. These must be available for inspection upon a request by the Local Planning Authority.

Reason: To ensure the SuDS are maintained for the lifetime of the development as outlined in any approved Maintenance Plan so that they continue to function as intended to ensure mitigation against flood risk in compliance with Chapter 14 of the 'Framework'.

Submission of Soil Management Plan

- (25) The development hereby permitted shall not be commenced until such time as a soil management plan has been submitted to and approved in writing by the local planning authority. This shall include, but not be limited to:-

- protection of topsoil and mitigation of compaction during foundation construction and panel installation.
- Explanation of the functioning of the proposed "mud mat".

The scheme shall be implemented in accordance with the details as may be approved.

REASON: Soil compaction can cause increased run off from the site. Therefore a soil management plan should show how this will be mitigated against. Failure to provide the above required information before commencement of works may result in a system being installed that is not sufficient to deal with surface water occurring during rainfall events and may lead to increased flood risk and pollution hazard from the site.

Details of Site Compound Boundary Treatment

- (26) Notwithstanding the details of the submitted Site Layout Plan, prior to the erection of any fences around any site compounds details shall have been submitted indicating the height, construction and colour finish of all fencing for the written approval of the local planning authority. The development shall thereafter be undertaken in accordance with the submitted and approved details.

REASON: in the interest of clarity and to minimise visual impacts during the construction and operational phase in compliance with policy DM1 of Rochford District Council's Development Management Plan and Chapter 12 and 14 of the 'Framework'.

2 PLANNING APPLICATION DETAILS

- 2.1 Full planning permission is sought for the construction and operation of a Solar Farm, ancillary infrastructure and cable route on land west of the Rayleigh Substation. The Applicant is proposing to construct and operate a Solar Farm for a period of 40 years (from first export of electricity from the site), after which the site would be decommissioned unless planning permission is secured for its continued operation.
- 2.2 The development would comprise an array of ground mounted photovoltaic panels. The fixed tilt panels will be orientated in rows over 8 parcels facing south at an angle up to 20 degrees with a maximum height of 3 m. The panels would be mounted on support frames that are either piled or surface mounted with anchors. Approximately 135 (in number) string inverters would enable the direct current (DC) generated by the panels to be converted to alternating current (AC) electricity with 7 (in number) transformer stations which step up the generated electricity to 33 kV to be provided. Six storage containers to house the control systems and spare parts / maintenance equipment would also be provided.
- 2.3 A substation (containing 2 control buildings for UK Power Network (UKPN) and a customer switch room) and cable to connect the site to the Rayleigh Substation would be sited towards the north east aspect of the site screened by new proposed woodland planting. Approximately 2,200m of new, crushed stone, internal access tracks and an associated site entrance remodelled further to testing under a Stage 1 Road Safety Audit off the A127 Southend Arterial Road would be provided.
- 2.4 Electrical cabling either mounted on the back of the panels or underground across the site and approximately 3,550m of perimeter fencing consisting of wooden posts supporting traditional wire stock fencing and barbed wire will be installed. New native hedgerow planting to provide some visual screening to the individual field parcels running mainly north to south along in part ditched systems and to increase the biodiversity value of the site will amount to approximately 1,261(one thousand two hundred and sixty one) linear metres.
- 2.5 The Solar Farm would export renewable electricity to the National Grid. It would generate sufficient electricity to power the equivalent of around 11,416 homes and save around 13,033 tonnes of CO2 per annum. This would be equivalent to providing sufficient electricity to power approximately 16,280 electric vehicles per annum.
- 2.6 Due to the presence of the two overhead electricity lines and associated pylons traversing the northern part of the site, dialogue has been undertaken

with National Grid's Asset Protection Team. This dialogue has confirmed that a 12m stand off is required around the towers for access and maintenance, plus any conductive material within 30m of the towers must be adequately earthed. Whilst the consultation was undertaken on the scheme proposed at the time, the Asset Protection Team confirmed (via letter, dated 28 July 2021) that subject to the above requirements National Grid had no objection to the proposal.

- 2.7 The site would be decommissioned with much of the infrastructure recycled at the end of its operational life and would be restored to full agricultural use following decommissioning.
- 2.8 It is noted that paragraph 3.2.3 of the supporting statement states that ' Due to the nature of the Solar Farm the final position of the panels, support frames, cable runs and inverter stations may move slightly in response to the further detailed design of the scheme and any constraints identified during construction. As such, a 'micro-siting' allowance of 5m is requested within each field to assist in mitigating any environmental / physical effects that cannot be identified until the construction stage. The potential micro siting of the panels has been taken into account in the environmental and technical assessments prepared in support of the planning application, on the basis the worse-case of complete coverage has been assessed'.
- 2.9 Consultation has also taken place with the Fairglen Interchange Project Sponsor at Essex County Council and representative from Jacobs. This dialogue has sought to ensure that the two schemes are not in conflict with one another, especially in relation to the access off the A127
- 2.10 An underground cable connection from the control building compound towards the Rayleigh substation is proposed as part of this planning application. The cable route cable would travel northwards from the control compound towards the site's northern boundary with the railway. At which point it would travel parallel to the railway line but offset from the boundary through an existing field access and thereafter the field between the solar farm and the substation. Upon reaching the eastern edge of the field, the connection would be constructed by a statutory undertaker and therefore this part of the route does not form part of the planning application. The cable will pass through a clearing in the scrub / gravel surrounding the Rayleigh Substation. The cable route would be located underground and there would be no above ground infrastructure required.
- 2.11 Once the proposed Solar Farm is constructed access to the site would be limited to routine maintenance operations and grazing. The Solar Farm would not be permanently staffed. Maintenance access to the site would be by a small van or similar and the storage containers would contain spare equipment and tools for routine repairs and maintenance. Should more major repairs be required, such as the replacement of inverters, more staff and specialist equipment (cranes and low loaders) would be required. However, this is not anticipated to be a regular occurrence. The main activity during the

operational phase could be grazing sheep below the solar panels and / or periodic mowing. In addition, the two eastern fields could be retained for productive agricultural use by the landowner.

- 2.12 Construction activities would take place 7 days per week, between 0730 – 1800 week days and 0830 – 1800 on weekends. Deliveries would be programmed to occur outside of the peak rush hour periods and noisy activities would only take place between 0900 – 1700 week days and 0900 – 1300 on a Saturday. No deliveries would occur on Sundays except for one off abnormal loads or large vehicles such as cranes (if necessary). Finally, piling would only be undertaken between 0900 – 1700 week days only.
- 2.13 The submitted application states that pre application advice under reference PA/20/00010/PREAPP was provided on 27/08/2020. The application is supported by a Design and Access Statement which sets out the development. This Design and Access Statement is also supported by the following documents:-
- Pre-Application Response
 - Statement of Community Involvement
 - EIA Screening Request
 - Landscape and Visual Assessment
 - Transport Statement
 - Noise Assessment
 - Environmental Assessment Report
 - Great Crested Newt Presence or Absence (eDNA) Survey Report
 - Badger Report
 - Biodiversity Net Gain Report
 - Breeding Birds Survey Report
 - Glint and Glare Assessment (3 Parts)
 - Flood Risk Assessment
 - Heritage Impact Assessment (3 Parts)
 - Agricultural Land Quality Survey
 - Surface Water Management Plan 24 June 2022

- 2.14 Additional and updated access and drainage arrangements have been submitted which have been considered and as reflected by condition 2 within the officer's recommendation.
- 2.15 A formal Environmental Impact Assessment (EIA) Screening Request was submitted to Rochford Council on 8 July 2021. The Council's EIA Screening Opinion (reference: 21/01107/EIA) was issued on 14 January 2022 which confirmed that an Environmental Impact Assessment was not required on the basis of the provisions of the regulations which only require an EIA to accompany a planning application where the development would have significant impacts within the meaning of the regulations which would need to be regionally significant in terms of environmental effects to trigger an EIA.

3 MATERIAL PLANNING CONSIDERATIONS

Site and Context

- 3.1 The site of the proposed development is designated Metropolitan Green Belt and occupies a series of arable fields to the west of the town of Rayleigh, Essex. It is bordered to the north by a railway line and to the south by the A127 from which and relative to the site during summer months, is relatively well screened by a mature hedge. To the east and west, the site adjoins other fields. The fields that comprise the site are delineated by a series of drainage ditches, and in some instances by hedgerows. Denser hedgerow vegetation runs along the northern and southern boundaries. The landform falls gradually in elevation by approximately 30m from east to west. Two overhead transmission lines run from east to west across the northern part of the site, and several electricity pylons are located within the site boundary. These connect to a substation located to the east of the site. A third overhead transmission line and associated pylons has recently been removed. The Rayleigh Substation, which the proposed development is seeking to connect into is located approximately 300m to the east of the site.
- 3.2 The site comprises an area of approximately 45.20 hectares which the site layout plans indicate is shared into eight parcels reflecting historical field boundaries. The length of the site along its north boundary with the railway line which is defined by a mature hedge boundary, is approximately 1,296m in length and 400m in length from north to south at its west aspect. The site does not extend as far west as the roundabout / interchange of the A127 with the A1245. The length of the site along its southern boundary with the A127 is approximately 757m, whilst at its east boundary (which does not form a straight line as the site projects further at its north aspect following the railway line) the extent is approximately 639m.
- 3.3 On the basis of the of the submitted plans the nearest part of the site to Great Wheatley Farm at parcel 8 is approximately 241m and 387m at the east aspect of parcel 5. A statutory Right of Way crosses land to the east of the application site (currently a Vineyard area) from the terminus of Great Wheatley Road to the A127. On the basis of the two occasions visited by the

site case officer, views of the site are most prominent from the style at the bottom of Great Wheatly Road which is an elevated position. From this vantage point the eye is drawn to the A127 Arterial Road (south and West) established built development located to the south of the A127 and to the west the commercial developments currently taking place at Michelin's Farm an allocated employment site and a transformer station.

- 3.4 The nearest residential properties are located beyond the A127 approximately 100m to the south of the site. In addition, properties off Heron Gardens and Polstead Close are located beyond the mainline railway approximately 100m to the north of the Site. Properties forming the edge of Rayleigh include Great Wheatley Farmstead and Beeches Farm located 241m and 350m from the site, whilst properties off West View Drive are located approximately 480m to the west of the site. It has been noted that a housing developer is promoting a residential-led development on land north of Great Wheatley Road. At the time of the submission of this application, it does not appear that a planning application has been submitted and therefore, it has not been considered further.
- 3.5 The site in landscape characterisation terms and also in landscape sensitivity (to change) terms, is the least sensitive of the three landscape characterisation areas identified within the councils Core Strategy. The site is not subject to any landscape, heritage or conservation area designations and there are no listed buildings on the site itself. Great Wheatley Farmhouse and adjacent barns form Grade II Listed Buildings noted for their architectural style rather than their curtilage or wider setting as acknowledged are located in close proximity to the site, although there appears to be no economic or cultural association between Great Wheatley Farmhouse as it exists today and the site. In terms of other heritage assets, central Rayleigh is located approximately 700m to the east where there are located numerous listed buildings, a Conservation Area and Rayleigh Castle which is a Scheduled Monument.
- 3.6 Thundersley Great Common Site of Special Scientific Interest (SSSI) is the nearest national ecological designation. The SSSI covers two separate parcels of land, the nearest of which is located circa 950m to the southeast of the Site. There are no other national designations within 2km of the site. With regard to Local Wildlife Sites: Kingley Wood, Thundersley Brickfields and Great Common Wood are located southeast of the site at circa 350m, 620m and 950m distance respectively. The site and cable route are located within flood zone one ('low risk' of river or sea flooding). The agricultural land quality survey, prepared in support of the planning application, has confirmed that the site has heavy wet soils, giving the land a subgrade 3b (not best and most versatile) agricultural quality.
- 3.7 Current access to the site is achieved from existing field access junctions located off the eastbound carriageway of the A127 Southend Arterial Road and/or via Great Wheatley Road. There are various farm tracks running across the site with associated gaps in the field boundaries to enable access.

There are no public rights of way (PROW) crossing the Site. In terms of the surrounding area: PROW 289_24 runs between Great Wheatley Road and the A127. It is located 100m circa (at its closest point) to the southeast of the site; PROWs 289_22 / 300_22 are located to the north of the railway line and Wheatley Wood; and PROWs BENF 1, 23 and 74 are all located to the south of the A127.

- 3.8 To the east of the site, the nearest property as highlighted is at Great Wheatley Farm. This property is set at a higher elevation than the site. Views in the direction of the site are restricted by intervening tree cover. Other nearby properties at the edge of Rayleigh are similarly elevated, but views from these are also well screened.
- 3.9 There are no public rights of way that run through the Site. Footpath Rayleigh 24 runs south-west from the end of public highway close to Great Wheatley Farm, crossing the adjacent field and heading downhill to the A127. From the more elevated eastern section of the route, views into the site are available. One can cross the A127 and access further public footpaths on the southern side, however these are difficult to find on the ground, and vegetation cover south of the road prevents views northwards.
- 3.10 Wheatley Wood, to the north of the site is an area of woodland and grassland between the railway line and the edge of Rayleigh. The area is managed by the Woodland Trust and is accessible to the public.

Planning History

- 3.11 The pre-application advice and a review of the Rochford Council online planning search highlighted no planning history. It is relevant to note that planning permission for the development of a Battery Storage Facility (BSF) on a parcel of land in the south eastern corner of the field nearest the Rayleigh Substation was approved in November 2017 (reference: 17/00437/FUL). The facility was supported by an access track which passed through several of the neighbouring fields before reaching the A127 Southend Arterial Road. As such, a previous energy related planning application has been approved within the vicinity of the Rayleigh Substation and the site, which included access onto the A127.

Principle of Development, the Development Plan and the 'Framework'

- 3.12 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires local planning authorities to determine applications in accordance with the provision of the 'Development Plan' unless material planning considerations indicate otherwise. In determining an application consideration also has to be given to the overarching principles and provisions of the National Planning Policy Framework hereinafter referred to as the 'Framework' in addition to relevant Planning Practice Guidance. Importantly Section 38(6) requires therefore that local planning authorities consider all material planning

considerations (as not to do so would be misdirected as a matter of planning law and in this regard) in arriving at a decision

- 3.13 Starting with the 'Development Plan'; these comprise the Rochford District Allocations Plan which was formally adopted by the Council on 25 February 2014 following confirmation from the Planning Inspector conducting the examination that the Plan was sound and legally compliant. The Allocations Plan allocates specific sites and sets out detailed policies for a range of uses, including residential, employment, education and open spaces, and has been prepared in accordance with the general locations and policies set out in the adopted Rochford Core Strategy.
- 3.14 Also included is the Rochford District Development Management Plan which was formally adopted by the Council on 16 December 2014 following confirmation from the Planning Inspector conducting the examination that the Plan was sound and legally compliant. The Development Management Plan sets out the detailed day-to-day planning policies which planning applications will be assessed against, for example design of new developments, housing extension limits in the Green Belt, trees and woodlands, and equestrian facilities.
- 3.15 The Rochford District Core Strategy was formally adopted by the Council on 13 December 2011 following the Planning Inspectorate's decision that the Plan was sound and legally compliant. The Rochford District Core Strategy is the main document of the Local Development Framework (LDF) and sets out the overall strategy for the future development of the district.
- 3.16 In review of the council's policies relating to Green Belt Development, policy GB1 (Green Belt Protection) reflects the national policies which prevailed at that time which are not changed at this current time in terms of their fundamental principles and objectives. Although there is written in preface and overview in those documents which comprise the 'Development Plan' that there will be endeavour over the plan period to address climate change the nearest reference to large scale renewable energy projects (which is not defined in terms of what is large or small scale) is at Core Strategy ENV6 – (Large Scale Renewable Energy Projects) which states that:-

'Planning permission for large-scale renewable energy projects will be granted if:

- the development is not within, or adjacent to, an area designated for its ecological or landscape value, such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar Sites, Sites of Special Scientific Interest (SSSI's), Ancient Woodlands, Local Nature Reserves (LNRs) or Local Wildlife Sites (LoWSs); or if it can be shown that the integrity of the sites would not be adversely affected; there are no significant adverse visual impacts'.

- 3.17 What can be deduced from this policy is that the Council at the time it conceived and adopted the policy sought to steer development away from the areas which it considered to be most sensitive in terms of likely effects. The policy emphasis although it offers no specific guidance or steer to developers, in truth appears to be on protecting ecological sites and biodiversity in addition to the landscape. On the basis of policy ENV 6 there would be no fundamental basis for finding this proposed development unacceptable. However, it made no assessment or specific allocation as part of the Allocations Plan process of land (whether Green Belt or otherwise) which would be least sensitive and potentially suitable for large solar farm applications.
- 3.18 There was no duty to do so whilst the likelihood was and is in the case officer's opinion, that sites large enough to accommodate a significant renewable energy project such as solar technology was always likely to be located within the Metropolitan Green Belt. This has proven to be the case, noting the approval this council granted in respect of a Solar Farm at South Farnbridge Hall under planning application reference 21/00605/FUL in a much more sensitive landscape than the site of this current application. Notwithstanding all other material planning considerations the precedent for accepting Solar Farm development within the Metropolitan Green Belt of the district has already been established.
- 3.19 The preamble to the policy states that the Council is keen to reduce impacts of development on the environment through a variety of measures. Whilst recognising the contribution renewable energy can make, if plans for developing large-scale renewable energy schemes were to be proposed, the impact of such development on the character of the landscape would be a concern but the Council will endeavour to be supportive. The Council will refer to the Essex Landscape Character Assessment as a guide particularly in areas designated for their landscape and nature conservation value. To balance nature conservation and the promotion of renewables will seek to reduce carbon emissions through supporting the development of small scale renewable energy projects and through its commitment towards zero carbon for all new housing developments.
- 3.20 The National Planning Policy Framework 'The Framework' sets out the Government's planning policies. At the heart of the document is a presumption in favour of sustainable development. There exists an established principle that any adverse impacts of granting permission would need to significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole or Specific policies in that Framework.

Green Belt Considerations

- 3.21 The proposed development is located within the Metropolitan Green Belt. Section 13 of the National Planning Policy Framework (the Framework) establishes the national policy objective to protect the Green Belt. Paragraphs

149 and 150 define different types of development that would not be inappropriate development in the Green Belt.

- 3.22 Paragraph 147 and 148 of the Framework state that inappropriate development in the Green Belt is, by definition, harmful and carries substantial weight. Such development should not be approved except in very special circumstances. It continues that very special circumstances will only exist if the harm to the Green Belt by its inappropriateness, and any other harm, would be clearly outweighed by other considerations.
- 3.23 Large scale solar farm installations are not listed as exceptions and as such it is recognised by officers and the applicant that the proposed development as a matter of definition is inappropriate development. The 'definitional harm' by reason of inappropriateness is not disputed. In relation to the other harm set out by the 'Framework' it is the case that the very presence of development whereas once there was an absence of such, is enough in itself to trigger the second 'other' consideration of harm.
- 3.24 The fundamental aim of the Green Belt is to prevent urban sprawl and keep land permanently open. Openness has both visual and spatial qualities. Although the site is screened from the A127 and from Beeches Farm at the time of the year when the foliage is prominent and although it appears flat along its southern and central section, it does rise in levels in a north easterly direction increasing the prominence of the site when looking down at it from raised land near Great Wheatley Farm or when looking at the site as approaching from the west along the A 127 in a westerly direction.
- 3.25 The proposed planting along some of the field edges will create green ribbons providing spatial and visual enclosure to some of the parcels such that the visual impact of the development upon openness will not be as pronounced as it may be otherwise whilst there is a case to consider that in mitigation is required (which serves more than to provide visual screening) then this recognises as a default position that there is a harm which needs to be or justifies some form of mitigation.
- 3.26 Although there is a secondary harm by reason of the very presence of the proposed development, it is the officers opinion that the harm in openness terms given the relative height of the solar panels and their supportive frames combined with the planting – the harm is somewhat mitigated. It is considered that the landform, and extent of field boundary screening, would reduce the overall visual effect of the proposal from wider views. It is officer's opinion that the impacts in terms of Green Belt openness would be localised. Furthermore, it is considered that the perceived openness has largely been eroded by the presence of existing built infrastructure including the construction of the A127 and highway network, the railway line, residential built form to the north and east, developments to the south of the A127 together with the development taking place at Michelin's Farm. As such the contribution of the purpose of the site to the key purposes of including land within the Metropolitan Green Belt

and the impacts of development at this site given these facts is open to question.

Very Special Circumstances

- 3.27 Given the definitional harm identified and the other harm which officers consider however is at the lower end of the scale in ‘harm’ terms, as a matter of principle therefore it is clear to pass the first test on Green Belt grounds very special circumstances would need to prevail in this case sufficient in magnitude and significance to outweigh the harm found by inappropriateness and the other harm.
- 3.28 Neither the Framework nor the adopted Local Plan provide guidance as to what can comprise very special circumstances (VSC), either singly or in combination. However, some interpretation of VSC has been provided by the Courts. The rarity or uniqueness of a factor may make it very special, but it has also been held that the aggregation of commonplace factors could combine to create VSC (i.e. ‘very special’ is not necessarily to be interpreted as the converse of ‘commonplace’). However, the demonstration of VSC is a ‘high’ test and the circumstances which are relied upon must be genuinely ‘very special’.
- 3.29 A local planning authority has the scope to define what it considers to constitute a very special circumstances which may vary depending on the specific development in question, the circumstances in question together with any prevailing national planning policies or planning practice advice, precedents and appeal decisions which are all relevant to support and inform the consideration of not only whether there are prevailing very special circumstances and how much material weighting should be afforded to such in the planning balance.
- 3.30 From the Council’s perspective, it is considered reasonable to state that no land within the district is available for such large scale development other than land within the Metropolitan Green Belt. Much of this land would neither from a flooding, landscape and biodiversity perspective be suitable. The case officer noted the total land mass of the district as being approximately 16,800 hectares. Of this total land mass approximately 12,763 hectares comprises Metropolitan Green Belt whilst 12,986 hectares comprise areas of high ecological importance. The three landscape characterisation areas include the Crouch and Roach Farmland, Dengie and Foulness Coastal and South Essex Coastal Towns. The site in question is within the latter characterisation area.
- 3.31 It is the view of the case officer that despite the fact that there is no requirement as a matter of planning guidance and law for a developer (on a development which is not defined as EIA development which applies different tests relating to alternative sites) to demonstrate that the site’s selection is justified more so than another location (as there is no established sequential test which applies to solar farms in this respect); site selection is always going to be limited given the limited land area within the district which is capable of

being developed. Of material relevance also is the fundamental requirement to connect to the grid which reduces further the number of potential development sites when taking into account the constraints of transport and accessibility and highway access to and off the main road networks, flooding risk, and biodiversity as some considerations. Sites coming forward within this plan period or any further plan period represent optimum sites in terms of grid connectivity, and mitigating impacts, however they are likely in the absence of strategic release as part of the development plans process to be designated Green Belt.

- 3.32 The applicant has submitted the case relating to the 'very special circumstances' which are as follows:-
- 3.33 The need for solar development is well established, overwhelming and continuing to grow. In the third instalment of their Sixth Assessment Report (AR6) released in April 2022, the Intergovernmental Panel on Climate Change (the 'IPCC') stated that there is a chance that the worst effects of climate change can be avoided by keeping global warming below 1.5 degrees; and to achieve this, the entire globe must be carbon neutral (net-zero) by 2050 or earlier. The IPCC advised that, to achieve this, carbon emissions must reduce globally by at least 45% by 2030, as compared to 2010 levels.
- 3.34 The 2020 Energy White Paper, jointly published by the Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy, describes both wind and solar energy generation as "key building blocks" of the future energy generation mix of the UK. Following this, the most recent (2021) update to the Framework provides a presumption in favour of renewable energy developments (Paragraph 158), thus making it clear that applicants should not need to demonstrate need. Paragraph 152 of the same document affirms that the planning system should support renewable and low carbon energy and associated infrastructure. This is further supported by the (currently) draft Overarching National Policy Statement for Energy (EN-1), which states that solar is the most cost-efficient way of generating electricity, reducing costs for households and businesses, whilst providing a clean and secure source of electricity supply (as they are not reliant on fossil fuels for generation).
- 3.35 This is based on modelling undertaken by the National Government, which shows that a secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of solar. As such, and as laid out in the 2021 Net Zero Strategy (which affirms that the United Kingdom will be powered entirely by clean energy by the year 2035), infrastructure is required to be replaced at an "unprecedented scale", with the Government forecasting a 40-60% increase in demand over this same time period. This includes a five-fold increase in solar capacity from 14 GW to 70 GW by 2035. Schemes, such as the one at Rayleigh, play a key part in achieving such ambitious targets, and ultimately in striving towards Net Zero.

-
- 3.36 Aside from the urgent need to reduce emissions for environmental reasons; the April 2022 British Energy Security Strategy and latterly the Energy Security Plan of March 2023, lays out a requirement to diversify and localise the United Kingdom's energy supply in order to reduce our reliance on foreign energy; thus ensuring a reliable supply into the future, and especially in times of international political turmoil.
- 3.37 The Energy Security Plan was published on Energy Security Day (30 March 2023) and presents the rise in energy prices in the aftermath of the COVID-19 pandemic and Russia's invasion of Ukraine as key evidence of the fragility of our current energy supply. This Plan builds on this by stating that, without the renewable energy projects developed to date (including existing solar), energy bills would be higher still than they are at present; and as such, "we need to be bolder in removing the red tape that holds back new clean energy developments and exploit the potential of all renewable technologies".
- 3.38 This is all set against a recent announcement from the Department of Business, Energy and Industrial Strategy ('BEIS'), who confirmed that the UK's binding target of attaining a decarbonised power system by 2035 is in jeopardy. The submission summarises the following benefits:
- 3.39 With a capacity of 30 MW, Rayleigh Solar Farm will power the equivalent of around 11,416 homes and save an estimated 13,033 tonnes of CO₂ annually, compared with electricity generated by gas. In other terms it could power approximately 16,280 electric vehicles every year; The proposed development will help to meet the Government's binding targets on decarbonising the electricity generation network and achieving net zero. The development will also provide a significant contribution towards the authority of Rochford District Council to achieving net zero and Essex County Council's target of being carbon neutral by 2050; It will contribute towards strengthening the UK's energy security position, reducing reliance on importing expensive fossil fuels from overseas; Ecological enhancements across the site are substantial.
- 3.40 A biodiversity net gain of 141% over baseline conditions will result following completion of the development and establishment of all planting and mitigation; The site comprises entirely of sub grade 3b agricultural land, which is not best and most versatile land. Furthermore, it is proposed that sheep grazing will form an integral component of the biodiversity management regime of the site; The biodiversity management proposed will mean that no fertilisers or pesticides will be used across the site, allowing the soil to regenerate and sequester carbon.
- 3.41 The development will contribute over £50,000 in business rates to the Council every year, as well as creating jobs directly and indirectly, providing a boost to the local economy; and although not a material planning consideration, if approved, an index linked benefit fund of £12,000 per year will be provided to the local community, equating to £480,000 over the lifetime of the development.

3.42 The applicant's supporting statement refers to a vast array of recent appeal decisions relating to the proposed development of solar farms. The submission makes reference to an appeal decision for the development of Land east & west of A130, Chelmsford (PINS reference: APP/W1525/W/22/3300222). In this case the Inspector recognised that the proposed development was located within the Green Belt and it was by virtue of its nature, inappropriate development. On this basis, the development was required to demonstrate the existence of very special circumstances. It was also identified that the development could have harm on the following:-

- Setting of the Grade II* listed Church of St Mary and St Edward and the Grade II listed building Church House;
- Landscape character and appearance of the area;
- Agricultural land; and
- Integrity of a nearby Special Protection Area. 15.

The Inspector concluded that the benefits associated with the development (i.e. sustainable energy generation and biodiversity enhancements) would "attract very substantial weight in favour of the scheme". In this regard, the harm to the Green Belt and other impacts identified were outweighed by the benefits of the proposed development.

Landscape:

3.43 The applicant indicates that significant benefits in terms of energy production can only be achieved by large schemes. With a large land take comes adverse effects in landscape and visual terms. However, a series of Inspectors have confirmed that some harm in relation to sizeable greenfield solar farms is "inevitable" and should not be a ground for refusal in principle, given the national level support in policy and guidance for such schemes. The supporting statement states Solar schemes are time limited. Once the project is decommissioned, there will typically be no or very minimal residual adverse landscape effects.

3.44 Draft NPS EN-3 is clear that any harm must be set in context of the time-limited nature of solar schemes. Solar development is low lying permeable to a degree and sits on top of, rather than within, the landscape (it does not require substantial foundations or topographical changes). That is important when assessing the susceptibility of the receiving landscape: such "light" development is more readily accommodated than, for example, a warehouse. A number of recent appeals have referenced this. Reference is made to the decision in Bramley (PINS reference: APP/H1705/W/22/3304561) where it was noted that the panels "would not sit heavily upon the land", and in Halloughton, (PINS reference: APP/B3030/W/21/3279533) Inspector Baird found that the development would "sit lightly on the affected fields".

Consideration of Benefits

- 3.45 The applicant's submission indicates that the first significant benefit such schemes bring is the obvious contribution to reaching Net Zero through provision of clean, renewable, secure energy. Such energy generation has consistently been afforded substantial, very significant, or significant weight. Examples include the Bishop's Itchington (PINS reference: APP/J3720/W/22/3292579) Halloughton (noted above), Langford (PINS reference: APP/Y1138/W/22/3293104), and Bramley (noted above) decisions.
- 3.46 A further considerable benefit is the contribution to biodiversity net gain. The UK has experienced a significant decline in biodiversity over the last 50 years, with loss and degradation of many habitats and species. Of the G7 countries, the UK has the lowest level of biodiversity remaining, and the House of Commons Environmental Audit Committee considers action needs to be "stepped up". Significant biodiversity improvements at scale can be rewarded with significant positive weight in the planning balance. To give some examples:
- a. At Bishop's Itchington, a 96.5% biodiversity net gain was afforded significant positive weight;
 - b. At Halloughton, a 73% biodiversity net gain was afforded significant positive weight; and the House of Commons Environmental Audit Committee issued a report June 2021 entitled "Biodiversity in the UK: bloom or bust?"
 - c. At Bramley, a 100% biodiversity net gain was afforded significant positive weight.
- 3.47 In concluding its submission of the benefits the submission acknowledges that there will be impacts, namely the following:-
- a. Openness of the Green Belt;
 - b. Heritage harm; and
 - c. Landscape harm.

Taking these matters in turn, Paragraphs 147 and 148 of the NPPF state that inappropriate development in the Green Belt is, by definition, harmful and carries substantial weight. Paragraph 151 is clear that many renewable energy projects will comprise inappropriate development, requiring "very special circumstances" to be granted permission. However, Paragraph 151 then provides that such circumstances "may include the wider environmental benefits associated with increased production of energy from renewable sources."

- 3.48 Applying the support of this paragraph, in the recent appeal decision for a Chelmsford solar farm, Inspector Plenty found that the public benefits of clean

solar energy attracted “very substantial weight” and amounted to the “very special circumstances” necessary to outweigh the substantial harm to the Green Belt and all other harm identified. The Inspector considered that the reversible 40-year lifetime of the scheme reduced the degree of Green Belt harm, because the site would ultimately be reinstated to its former open character. The applicant considers that the generation of clean renewable energy as is the case for Rayleigh Solar Farm, overcome any harm attracted to the use of land in the Green Belt and all other harm.

- 3.49 The applicant’s planning submission in this regard concludes that in light of the case submitted that in this instance very special circumstances exist that clearly outweigh any harm to the Green Belt and any other harm caused by the Solar Farm. It is therefore concluded that the Solar Farm would meet the requirements of Policy GB1 of the Rochford Core Strategy and Section 13 of the NPPF; and the grant of permission can be justified.
- 3.50 In consideration of the ‘very special circumstances’ when weighed against the definitional harm in Green Belt terms and the other harm by reason of presence albeit a much lesser harm which the case officer considers to be moderate to negligible but yet a harm – it is considered that the provision and the enablement of sustainable forms of Green Energy is not only a local and regional priority but a global priority to humanity. Given the elevated importance of tackling a global climate and energy crisis as reflected by national planning policy and guidance and the contribution of schemes such as this at local level towards the ‘bigger’ objective, it is considered that the challenges which humanity in all parts of the globe face in this regard (and as reflected at local, regional, European and global level) is a very special circumstance which combined with the fact that there are limited land available within the district for the reasons set out justifies this development within the Metropolitan Green Belt.
- 3.51 The weighting given to the needs and benefits case as set out by the applicant (in effect the very special circumstances) carries significant weighting in the case officers view, so much so that when set against the significant weighting which also applies to Green Belt protection – the weight of the case that very special circumstances prevail is overwhelming such as to justify the development despite the site’s Green Belt designation.
- 3.52 The case officer appreciates that there are other matters to be considered other than those to be weighted in the balance of consideration against Green Belt harm. Where appropriate an overview of the planning balance in other respects will be drawn by the case officer towards the closing paragraphs of this report.

Other Material Planning Considerations

Impact of the proposed development on the Landscape

- 3.53 Paragraphs 174a and 174b of the Framework require proposals to:-

- a) protect and enhance the valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognise the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.

3.54 The UK Government's position on power is set out in the Draft Overarching National Policy Statement (NPS) for Energy (EN-1), September 2021 which recognises the importance of understanding and addressing landscape and visual impacts (Department of Energy and Climate Change, 2011). It includes a section on criteria for 'good design' for energy infrastructure, which states [inter alia] at paragraph 4.6.1 that:

"The application is supported by a Landscape and Visual Assessment (LVIA). An LVIA is used to help design the proposed change as well as assess its effects, so that negative landscape effects are avoided, reduced or offset. The LVIA examines two independent but related aspects: which are landscape effects and visual effects. Landscape effects are caused by physical changes to the landscape, which may result in changes to the distinctive character of that landscape and how it is perceived. Visual effects are changes to what can be seen by people as a result of what is proposed. A visual assessment assesses the change in visual amenity undergone by people (either individually or in groups) that would arise from any change in the nature of views experienced.

Landscape Effects/Impacts

- 3.55 The site and its immediate surroundings are not considered to be a valued landscape for the purposes of paragraph 174(a).
- 3.56 Furthermore, paragraph 2.4.2 of the Draft National Policy Statement for Renewable Energy Infrastructure (EN-3), September 2021 states; "Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology".
- 3.57 The Council's Core Strategy policy DM26 when considering proposals for development, it must be shown that consideration has been given to the landscape character of the area. The Council will protect the following landscape features when considering proposals, where they are of importance for fauna and flora, from loss or damage: hedgerows; semi natural grasslands; water courses; ponds; and networks or patterns of other locally important habitats.
- 3.58 This matter is not to be confused with the Green Belt openness assessment which is a separate standalone consideration. A Landscape and Visual

Assessment has been prepared in accordance with good practice guidance set out in the third edition of Guidelines for Landscape and Visual Impact Assessment. The assessment has been undertaken over a Study Area extending up to 2.5 km from the Site, and is supported by visualisation material, including Zone of Theoretical Visibility (ZTV) mapping and photomontages.

- 3.59 The application recognises that the proposed development would introduce new solar panels and associated structures into the landscape. These would not be tall structures and hence would not be clearly visible over a wider area. The proposed development would however increase the footprint of built development locally. As part of the Fairglen highway improvement scheme, a new hedgerow would be planted along the southern boundary of the site to provide additional screening of views from the A127 corridor. New hedgerows and trees would also be planted within the site to break up views of the panels from more elevated vantage points east of the site. New trees would also be planted around the substation for additional screening. In consideration of the key components of 'Landscape' the case officers view is that although the development would introduce what is in effect 'light' development within the landscape, the key components of the landscape contributing to its overall 'make up' including ditches, hedges, established boundaries with other land uses serving different functions will not be fundamentally changed. The fabric of the landscape which can be significantly altered by activities such as quarrying or some renewable energy schemes or reservoir schemes (often subject of Environmental Impact Assessment) in this case are not fundamentally changed since the hedges, field patterns and boundaries and water courses will remain intact.
- 3.60 Furthermore, the proposed planting which will serve a number of functions will mitigate what is at worst a moderate to negligible impact in landscape terms. The fact that there is a presence of development is not the measure of harm or non-harm in itself but rather its impact and the significance of effect and magnitude of change to key landscape components which in this case is not significant. The proposed landscaping although creating a greater degree of enclosure effectively creating smaller field parcels than the current arrangement reflect how the landscape historically existed prior to the removal of such boundaries to accommodate modern farming methods.
- 3.61 It is the officer's opinion that as a matter of capacity which is the ability of this landscape to accommodate the proposed development in the context of its wider landscape setting, the site is located in an area already degraded in landscape terms. This being the case it can either elevate the importance of the site in landscaping terms or undermine the case that there is no reason in landscape terms why a development of this scale and type is not acceptable.
- 3.62 Significantly as the site is within the South Essex Coastal Towns Landscape Characterisation area it is the least sensitive in landscape terms and therefore is the least sensitive to change when compared to the Crouch and Roach

Farmland and Dengie and Foulness Coastal Landscape Characterisation Areas.

- 3.63 The applicant's submitted assessment indicates that effects on landscape character would not be significant. Existing vegetation cover provides considerable enclosure, and the proposed development would have little or no influence upon the landscape beyond the immediate surroundings of the site itself. The existing landscape character, where the presence of a range of different types of built development (including housing, road and rail corridors, pylons and substations) is well-established, would not undergo any notable change.
- 3.64 It is indicated that Wheatley Wood, to the north of the site is an area of woodland and grassland between the railway line and the edge of Rayleigh. The area is managed by the Woodland Trust and is accessible to the public. The vegetation cover along the A127 corridor prevents views southwards into the site.
- 3.65 In terms of the significance of any landscape effect, it is considered that as no features are lost that the change by the introduction of the development will be discernible at a localised level within the local landscape. The overall significance of effect however in landscape terms is considered moderate to minor reflecting the fact that the magnitude of change will not be significant.
- 3.66 It must be noted that there is no statutory landscape designation pertaining to this site such as an Area of Outstanding Natural Beauty (AONB) or National Park. The landscape quality and value is considered low which landscape capacity infers that it is tolerance to change or substantial change which has already taken place within the local landscape which has largely been eroded by the presence of built infrastructure, highway lighting and the general activity associated with the highway and railway network in the area.

Visual Impacts

- 3.67 Visual impacts relate solely to changes in available views of the landscape, and the effects that those changes have on people. The higher the exposure of the visual receptor point the greater its sensitivity. An example of this would be a local footpath used by a limited number of people as compared to a national trail on a coastal path used by hundreds of thousands of people annually. In the latter example based on its use by this number of people and the views offered from visual points along that path that visual vantage point would be highly sensitive.
- 3.68 The scenic quality in the vicinity of the planning application site given its location, topography and relationship to other developments affecting the views is low in value. This is a definition given within guidance to land which is flattish with no definition. There are no escarpments or cliffs or crags, mountains or river valleys or gorges which if these applied would render the

site and vicinity much higher in scenic value. The vegetation type would render the scenic value medium to low also.

- 3.69 The key issue to consider in terms of visual impacts is whether fundamentally the proposed solar panel installations would be dominant and whether they would constitute an overwhelming intrusion in visual terms taking into account the surrounding area. The significance of visual effects is considered to be medium to low recognising that the greatest impacts upon current views would be from higher ground at the north east aspect at the terminus of Great Wheatley Road at the stile leading onto the footpath which crosses between the site and Beeches Farm before it comes out onto the A 127. The view from this vantage point is one of open fields framed partly within hedge boundaries, the A 127 with linear development running parallel to it to the south and Michellin's Farm development near the highway interchange which is not high in scenic quality.
- 3.70 The applicant's photo montage provides a visual impression of the development from specific vantage points to the east looking over the site to the west although it does not appear that the visual impression has accounted for the planting around some of the field edges running north to south within the site which will have the effect of providing a greater degree of enclosure and screening to the individual parcels in effect breaking up the views of the site from this vantage point such that in the greater majority of months when foliage is present the visual impression and the obviousness of the presence of the solar panels will be significantly reduced.
- 3.71 As one walks in a southerly direction from Great Wheatley Road through a vineyard, area views of the site become screened by existing vegetation to field boundaries which lie outside the application site. Views of the site during the summer from the A127 are hindered by the hedge boundary running along the southern edge of the site parallel to the A 127 whilst although based on the use of the A127 by eastbound motorists, the visual receptor point which is that north side of the carriageway is a sensitive receptor point based on how many motorists use the highway. In reality the views are not static views but transient views where motorists will see the site momentarily within the long range views and then glimpsed views through gaps in hedgerow as they pass the site. A highway due to its function of carrying traffic as opposed to a viewpoint on a national trail is not a sensitive receptor point.
- 3.72 Traffic travelling in the other direction westerly would not be particularly or directly exposed to any view of the site due to the location of the site relative to their direction of travel on the southern side of the A 127.
- 3.73 It is important to emphasise that visual impacts in the planning context relate to public views and how these may be affected and not an individual's view from any private property.
- 3.74 The significance of effect in visual terms must take into account the scale over which an effect is "felt". An effect may be locally significant, or significant with

respect to a small number of receptors, but not significant when judged in a wider context. Any effect may be described as temporary or permanent, direct or indirect, positive or negative and these various types of effect have a bearing on the acceptability or otherwise of the type of effect.

- 3.75 The Zone of Theoretical Visibility (ZTV) which supports the Landscape and Visual Assessment demonstrates that due to the presence of existing screening there would be limited visibility of the land to the west of Rayleigh site from the surrounding area. From a high-level review, it is not considered that the other sites benefit from such good screening and would be visible from a greater number of receptors. Whilst relating to a single matter, this has been taken into account in the consideration of potential sites. Based on the above, the land to the west of Rayleigh (between the Railway Line, Rayleigh, A127 and A1245) has been found to perform better from an environmental, social and economic perspective than other plots of land that were subject to the initial site selection process.
- 3.76 The visual effects have been modelled to provide a zone of theoretical visibility of the proposed development taking into account the presence of existing vegetation cover in the surrounding area. The modelling indicates that outside of the site boundary, theoretical visibility is predicted to be very localised. There would be patches of visibility immediately east and west of the site, and from some areas west of the A130 (and from a section of the A130 itself). In the remainder of the Study Area, theoretical visibility would be largely absent.
- 3.77 At Viewpoint 1: Public footpath near Great Wheatley Farm, a moderate adverse effect would occur. The proposed solar panels would be situated approximately 265m from the viewpoint and views of them would replace the existing views of cropland within the site. However, the panels would be relatively low in height (3m) and would not prevent views of existing features further west. The foreground of the view would be unaffected. The Proposed Development would be a clearly visible addition to the long range views west from the footpath and the influence of built development upon the views would increase. The nature of the view would remain similar to baseline, albeit with an increase in the influence of development. Effects would not be significant.
- 3.78 At Viewpoint 3: Public bridleway, Doublegate Lane, a minor adverse effect would occur. Whilst visible from this location, the proposed development would not stand out. It would be partially screened by more prominent intervening features, including the large substation west of the A1245. The views available would not change appreciably from baseline. Effects would not be significant.
- 3.79 At notional viewpoints 2 and 4, the proposed development would not be visible due to the screening provided by intervening features (vegetation and landform respectively). As such, there would be no visual effect from these locations.

Pattern of Visual Effects

- 3.80 As noted above, there would be only very limited theoretical visibility of the proposed development from outside of the site boundary. The clearest views would be available from the footpath to the east, where views over the site from a relatively open and elevated hillside are available. The nearby residential properties at the edge of Rayleigh benefit from screening provided by garden vegetation and other adjacent tree cover and any views from these would be better screened with only partial visibility of the proposed solar panels occurring at worst.
- 3.81 More generally in views from Rayleigh, the proposed development is anticipated to be wholly screened by vegetation cover. This is also anticipated to be the case from locations east of the site (east of the existing substation), and also from the north of the railway.
- 3.82 From the scattered properties south of the A127, there would be little visibility. The properties located directly on the road itself are anticipated to have some views of the proposed development, filtered through garden vegetation. Any change would occur in the context of the high volumes of road traffic that are present and views would also be screened over time as the new hedgerow planting associated with the A127 improvements establishes south of the solar panels. From further south, both properties and public rights of way would benefit from the screening provided by intervening vegetation. Any views of the Proposed Development would be very localised and clear visibility is not anticipated.
- 3.83 From locations west of the site views are anticipated to be available from sections of the public rights of way network in the vicinity of Viewpoint 3. The proposed development would be a limited addition to views from this area, with other existing features remaining more prominent. Other than this, areas located within the ZTV west of the A130 are largely confined to agricultural fields with no public access, where no-one other than occasional farm workers would be present to experience any change in view.
- 3.84 There are patches of theoretical visibility from locations at the edge of Rawreth, but few if any properties are anticipated to experience clear views of the proposed development. In general, vegetation and/ or landform would provide screening (refer to Viewpoint 4).
- 3.85 Road and rail users would experience fleeting views of the proposed development from moving vehicles. Such views would typically be filtered through adjacent vegetation cover along the transport corridors, and clear views of the proposed development are unlikely. This would be the case from the railway north of the site, and from the A127 to the south. Clearer views are anticipated to be available from the elevated section of the A130 west of the site (approximately 1.3km of road in total), where the proposed solar panels would be visible approximately 1km away in views perpendicular to the

direction of travel and in the context of intervening foreground features including pylons, a large substation and a recently built warehouse.

- 3.86 In concluding on the visual impact, although the greatest degree of visibility of the site will be from the north east, the footpaths in the area are not national trails used by significant numbers of people which reduced therefore the sensitivity of any visual receptor point. Any impact must be assessed in terms of how many people experience a view at that visual receptor point to gauge the significance of the visual effect. It is the officers view that there will be some visual effect but not to any degree that the visual effect can be considered to be demonstrably harmful.

Impact upon Heritage Assets

- 3.87 In accordance with section 66(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990 (the LBCA Act), the local planning authority has taken regard of the desirability of preserving those listed buildings potentially affected by the proposals, or their settings or any features of special architectural or historic interest which they may possess.
- 3.88 The Planning (Listed Building and Conservation Areas) Act 1990 places a duty on the Council to ensure that "...in considering whether to grant planning permission for development which affects a listed building or its setting, the Local Planning Authority shall have special regard to the desirability of preserving the building or its setting."
- 3.89 Paragraph 194 of the Framework sets out that in determining applications, Local Planning Authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. Local Planning Authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset), as per paragraph 195 of the Framework.

Great Wheatley Farmhouse (Site 13) and associated barns (Sites 21 and 32)

- 3.90 The three Listed Buildings at Great Wheatley Farm form a coherent example of a developed post-medieval East Anglian farmstead. Recent analysis of the farmhouse (Brakenbury 2013) suggests that the farmstead may have been first established during the late medieval period. However, the farm's evolution continued until the early part of the 19th century, by which time documentary evidence suggests that it was a tenanted farm in the ownership of the Fanes, a family of Oxfordshire landowners who had inherited dispersed Essex estates in 1786 (AOC 2017, 15-16). The 1828 map of the Fane's Rayleigh estate (Figure 5) shows that Great Wheatley at that time formed part of a block of land with Little Wheatley Farm (Site 174). Subsequent 19th and 20th century development including the loss of Little Wheatley, the insertion of both the railway and the A127 Southend Arterial Road as well as the development of housing to the north of the railway and the Brickfields

Industrial Site to the south of the A127 have impacted considerably upon the former Fane landholding meaning that is no longer legible as a single estate. Similarly, the loss of the land to the southeast of Great Wheatley to housing means that the farm is now approached through development and that only the western end of Great Wheatley Road (Plate 11) maintains its original form as a green lane. However, agricultural land to the west of the farm, including a mixture of pasture and arable fields immediately surrounding the farm to the east of the site still contributes to an appreciation of the original agricultural setting of the farm.

- 3.91 The prominent topographical position of the farm buildings to the southeast of the Site means that some limited intervisibility with the site exists, particularly with the eastern part of the site. However, site visits have indicated that any visibility between Great Wheatley Farm and the site will be at least partly impeded by vegetation surrounding the farm complex. The clearest intervisibility between the farm complex and the site exists within the two fields that share a border with the pasture immediately northwest of the farm. The proposed layout indicates that no panels would be located within these fields, which would substantially reduce any visibility of the proposed development from the farm.
- 3.92 The two barns stand within the curtilage of the farmhouse and the principal visual and contextual relationships of all three buildings, which make up their setting, are with each other. Whilst the proposed development is likely to be at least partly visible from areas within the farmstead, intervening fields and the nature of the proposed solar farm development mean that it is not anticipated that the proposed development would interfere with the ability to appreciate the authentic agricultural function of the buildings. Nor would it represent a significant imposition within the landscape, such that it would prevent the ability to appreciate the relationship between the farmstead and its former agricultural land holding, which once included the site.
- 3.93 The proposed development is therefore anticipated to cause considerably less than substantial harm to the settings of the Listed Buildings at Great Wheatley Farm, in terms of the Framework. Given this, no further mitigation measures, beyond that set out by the proposals, are considered necessary.
- 3.94 Essex County Council Place Services Built Heritage and Conservation has been consulted for its view in regard to the impacts of the development upon the setting of non designated heritage assets; the response is as follows:-
- 3.95 The application site is that of agricultural land totalling approximately 45 hectares. It is bounded to the north by the railway line and the A127 to the south. To the west and east are agricultural fields and the historic farmstead of Great Wheatley is located further to the east. The site is characterised as open arable land which affords views across the rural landscape. The proposals have the potential to affect the setting of the following heritage assets:

Barn Approximately 10 Metres West of Great Wheatley Farmhouse, Grade II listed (list entry number: 1252995)

Great Wheatley Farmhouse, Grade II listed (list entry number: 1112679) and

Barn Approximately 8 Metres East of Great Wheatley Farmhouse, Grade II listed (list entry number: 1168472).

- 3.96 The application site as open arable land is considered to positively contribute to the historic farmstead and the designated heritage assets within it. It is understood that the application site also shares a historic functional link with Great Wheatley Farmhouse therefore increasing the sensitivity of the site with regards to the setting of the farmstead and there is intervisibility between the sites. It should also be noted that the setting of the historic farmstead of Great Wheatly has been adversely impacted by modern development, such as the residential development to the southeast, therefore the local planning authority should be mindful of the cumulative impact upon the setting of the heritage assets and the further erosion of their rural setting and character.
- 3.97 The potential impact of the proposed development upon the setting of the adjacent heritage assets is informed by current guidance from Historic England, The Setting of Heritage Assets (GPA Note 3). This provides a stepped approach and it is within Step 2 that a checklist of potential attributes of setting which contribute to significance is provided, this includes factors such as 'functional relationships, green space, land use, surrounding landscape' and other environmental factors. It is felt that there would inevitably be an impact to the setting the above identified heritage assets given the scale of the proposals and the fundamental impacts to the rural landscape.
- 3.98 The consultation response goes onto say that there is a concern that the proposed Solar Farm would result in an industrialising effect, contrary to the agrarian landscape setting, resulting in a level of less than substantial harm, Paragraph 202 of the Framework (2021) being relevant. This level of harm concurs with the assessment within the submitted Heritage Statement, however officers suggest that this harm is towards the low end of the spectrum.
- 3.99 Therefore, paragraph 202 of the Framework is engaged. This states: "Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use."
- 3.100 The application in its Heritage Impact Assessment concurs that the harm is in terms of definition 'less than substantial harm' With regards to the harm to Great Wheatley Farm will be less than substantial. The applicant's position in this regard and paragraph 202 of the Framework' is that where a development proposal will lead to less than substantial harm this should be weighed

against the public benefits of the proposed development. This consideration therefore has to be weighed within the planning balance having given due and proper regard to the matter.

Archaeology

- 3.101 The Heritage Impact Assessment which accompanies this application mentions that geophysical survey has taken place, but the results are inconclusive. It recognises that there is the potential for archaeological features and deposits to survive in this area which need further assessment. Specialist Archaeological advice has been sought with 2 conditions being recommended. These are part of the officer's recommendation.
- 3.102 The conditions will require works comprising archaeological trial trench evaluation which may be followed by excavation or monitoring. It is recommended that a professional archaeological contracting team should undertake any archaeological work.

Cumulative Impact

- 3.103 The 'Framework' highlights that planning decisions should ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of new development.
- 3.104 Planning Policy Guidance (PPG) - Renewable and Low Carbon Energy, June 2015 states that Local Planning Authorities will need to take into account the cumulative impacts of renewable energy. The PPG states that:-
- “Cumulative impacts require particular attention, especially the increasing impact that...large solar farms can have on landscape and local amenity as the number of solar arrays in an area increases. Local topography is an important factor in assessing whether large scale solar farms could have a damaging effect on landscape and recognise that the impact can be as great in predominantly flat landscapes as in hilly areas.”
- 3.105 The existing Outwood Farm Road solar farm (approved under reference: 14/00948/FULL) is noted as is the planning application for the installation of a solar farm and associated infrastructure at Crays Hall Farm, Church Lane, Ramsden Crays, Billericay (refused under reference: 22/00296/FULL and has very recently gone to appeal). The planning application for a proposed battery energy storage site, substation compound and associated infrastructure at Whites Farm, Barleylands Road, Billericay reference: 22/01108/FULL is also noted. It is the case officer's opinion that the cumulative effect of solar farm applications within the landscape is a different one to offshore or onshore windfarms where due to their height and physical presence, turbines are seen from longer distances and when viewed in conjunction with one another from key vantage points can appear as one development indiscernible from the other. This is how cumulative impact is best explained.

- 3.106 Solar farms involve low lying apparatus which by reason of height are not dominating and overbearing features within the landscape although it is understood that topography and viewpoints at visual receptor points have a bearing on cumulative impacts. It is not considered that this development in conjunction with other consented developments including that consented by Rochford Council at Fambridge (which cannot be seen within the same visual envelope as this site) will result in unacceptable cumulative impacts

Noise

- 3.107 A Noise Impact Assessment has been prepared in support of the application. A review of the area surrounding the site was undertaken to identify the nearest noise sensitive receptors (NSRs). This process resulted in four locations being chosen to establish background sound levels. A detailed environmental baseline sound survey was carried out at the NSRs to determine details of the noise climate to provide typical and representative background sound data. The survey was carried out over a typical weekend period to determine the lowest likely representative background and residual sound levels.
- 3.108 The results of baseline noise monitoring over a weekend monitoring period at four locations (in areas representing typical background sound levels) indicate that modal (i.e. most common place value) or average background sound levels vary between 39 dB to 49 dB LA90 during the daytime, 34 dB to 47 dB LA90 during early morning periods and 33 dB to 43 dB LA90 during the night-time period. To ensure the protection of amenity it is proposed that during the daytime or early morning periods noise from the Proposed Development should not exceed the representative background sound levels at the NSRs.
- 3.109 Typical site operational noise has been calculated using empirical noise data for the inverters and transformers obtained from similar solar farm sites operating in the UK. The assessment has used ISO9613-2 prediction methodology and Cadna A noise modelling software for producing noise contours of the highest likely generated noise with all plant operating. The results show that noise levels from the site range between 26 dB and 35 dB LAeq15mins during maximum site operations.
- 3.110 The assessment concludes that the site can be designed to operate such that it complies with all appropriate and relevant noise standards and guidance. There is, therefore, no reason to refuse the proposed development on the grounds of noise.

Design

- 3.111 The Framework at Chapter 12 – ‘Achieving Well Designed Places’ states that the Government attaches great importance to the design of the built environment. Good design is a key aspect of sustainable development, is indivisible from good planning and should contribute positively to making places better for people. It advises that it is important to plan positively for the

achievement of high quality and inclusive design for all development, including individual buildings.

Main Infrastructure Panels and Frames

- 3.112 The submitted information indicates 'the Solar Farm comprises the installation of static bifacial fixed tilt solar PV panels mounted to a metal frame at a maximum plane tilt of 20 degrees facing south. The layout of the solar panels (rows running east-west) and typical solar panel frame configuration is illustrated on the 'Site Layout' plan. The lowest edge of the panels would be circa 0.7 m above ground level to enable the area under the panels to potentially be grazed by sheep. The maximum height of the panels along the back edge of the array would be 3m.
- 3.113 The solar PV support frame structures would consist of metal uprights and cross bars/racks. The uprights would comprise hollow steel post with a u-shaped cross section (or similar). The posts would be ram driven into the ground using a number of specialist small scale global positioning system (GPS) controlled piling machines. Typically, less than 2% of the total arrays penetrate the ground. The rest of the support frame would then be fitted to the posts to create angled support tables ready for the solar panel installation. In areas of ecological or archaeological sensitivity surface mounted solar panel frames would be used.
- 3.114 The solar PV modules would be mounted on to the pre-constructed support frame table. The solar PV modules convert solar irradiance (sunlight) into direct current (DC) electricity. The individual solar PV modules within the Solar Farm would consist of dark blue, dark grey or black photovoltaic cells covered with an antireflective coating to avoid glint and glare. PV technologies are developing rapidly and it is not possible to specify the precise panel type, as this will depend on the competitive procurement process and the technology available at the time.
- 3.115 The solar PV modules would be connected in strings. Cabling would be secured to the rear of the solar panels and protected from grazing livestock by suitable trunking / elevation. From the end of each run the cables would be taken below ground and would be connected to the inverter/transformer stations. These would be located throughout the Solar Farm adjacent to the internal access tracks.

Transformer/Inverter Stations

- 3.116 Seven transformer/inverter stations would be contained within a modified ISO shipping container or similar (circa 6.1 m long x 2.4 m wide x 2.9 m high). The footprint of each station would be circa 15 sqm and each would be finished in a recessive green colour. To enable cable installation each station would be raised circa 0.6m above ground level (maximum height 3.5 m). The soil excavated from beneath each station would form a battered slope surrounding each station. The stations would contain the inverters, transformers and circuit

breakers necessary to connect the solar farm to the on site switchgear building.

- 3.117 The development requires the installation of circa 135 No. string inverters. The inverters within each station take direct current (DC), as generated by the solar panels, and convert it into alternating current (AC) to enable the on site generated electricity to be transferred to the on site switchgear building and UKPNs Rayleigh Substation.

Electrical Cabling

- 3.118 On site electrical cabling is required to connect the infrastructure together. In addition, a high voltage connection to the UKPN substation is also required.
- 3.119 The 'Typical Track Cross Section' plan provides details of an indicative cable trench. Cable trenches would generally run parallel and adjacent the on site access tracks and fence lines. In addition to electrical cabling the trenches may also carry earthing, data and communications cables and would be backfilled with fine sand and excavated materials to the original ground level.

Control Compound

- 3.120 The control compound would be positioned on the eastern edge of the Solar Farm, within Field 8, as illustrated on the 'Site Layout' plan. The illustrative design for the control buildings (one for the Operator and the other for the Distribution Network Operator (DNO) who is UKPN)) is shown on the 'Control Building Plan and Elevations'. The DNO control building would be approximately 5.0m by 5.5m by 3.8m high (27.5 sqm). The customer control building would be approximately 12.0m long by 5.2m wide by 3.8m high (62.4 sqm). Both buildings would be finished in a recessive green colour, supported by doors / vents, and manufactured from glass reinforced plastic or brick, dependent upon final design. The buildings would be set within a compound (21m by 15m), surfaced in gravel and secured by 2.1m high open mesh steel panel fencing, and associated gates finished in a recessive green colour, as illustrated on the 'Typical Fence and Gate' plan.

Storage Containers

- 3.121 Seven ISO storage shipping containers or similar (circa 6.1m long x 2.4m wide x 2.4m high) are proposed to be located at the site. The footprint of each would be circa 15 sqm and it is anticipated that they would be finished in a recessive green colour, as illustrated the 'Typical Spare Parts Container' plan. This would provide secure storage for tools and spare parts for maintenance.
- 3.122 The Solar Farm would require approximately 2,250m of new permeable stone access tracks, approximately 4m wide to facilitate construction, operation, and decommissioning. This would include a combination of upgrading existing agricultural tracks and the construction of wholly new tracks. The new access tracks would be formed by excavating circa 450mm of topsoil and laying clean stone over a geotextile membrane, depending on ground condition, as

illustrated on the 'Typical Track Cross Section' plan. Excavated topsoil would be spread adjacent to the track for use in restoration. The indicative layout of the access tracks is illustrated on the 'Site Layout' plan. Existing field gaps and ditch crossings have been utilised; however, it would be necessary to install new drainage pipes through the existing earth crossings and introduce new crossings in several places.

Security Fencing

- 3.123 Security would be provided by up to 2.1m high wooden post and deer fencing. The location of the security fencing is illustrated on the 'Site Layout' plan and the indicative appearance is illustrated on the 'Typical Fence and Gate' plan.

Lighting

- 3.124 Lighting would be limited to low level lighting positioned above access doors and would only be activated by passive infra-red (PIR) sensors for security / emergency purposes or when switched on by a maintenance engineer. No areas of the Solar Farm would be continuously lit during operation. A condition is recommended controlling any lighting over the lifetime of the use as artificial lighting during the evening could not only impact upon the general amenity of the vicinity by radiating light, but also affect the Green Belt in terms of dark skies and also the amenity of any properties by way of light intrusion and glare.
- 3.125 The Solar Farm is of a high-quality design, but it should be recognised that the infrastructure contained within the proposed development is designed primarily for functionality, i.e. of harnessing solar power and transferring this via electricity infrastructure to the Rayleigh substation. The panels have been designed to cover the smallest footprint possible, subject to the need to ensure they function properly and would extend to a maximum height of 3m. Other infrastructure supporting the panels is proposed to be finished in a recessive green shade. Soft landscaping associated with the proposed development has been designed to manage and improve existing features. This would result in biodiversity gains and help to screen and merge the development into the surrounding area. Policy DM1 of the Council's Development Management Plan.
- 3.126 The design of the solar panel farms have incorporated opportunities to mitigate the potential impacts to the water environment to include; The solar arrays and vulnerable infrastructure will be located above the ground level and away from the drainage ditches which pose a surface water flood risk; The modules are raised off the ground such that the leading edge of each panel will be approximately 0.70 m off the ground and the top edge approximately 1.90 m off the ground. Consequently, the panels will be unaffected by flood water depths of less than 300mm as identified for the surface water flooding sources.

- 3.127 The frame supporting the solar panels should not impede overland flow or reduce flood storage capacity, as it would only be the legs which would be within the path of overland flow or flood waters. The legs are of narrow dimension (circa. 60mm) and well-spaced (between 4m and 6m apart). The panels are designed so that they have minimal foundations. This limits disturbance of soils/loss of resource and reduces the volume of concrete required. This would also therefore limit the potential for disruption of surface and ground water flows. The ancillary structures, substation, transformers, etc. are also small structures and therefore only require shallow foundations, limiting ground disturbance and disruption to overland flow routes.

Secured by Design

- 3.128 The 'Framework' states that planning decisions should aim to achieve healthy, inclusive, and safe places which are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion. The Comment received by Essex Police is noted. On site security is an issue for the developer whilst on a site of high value such as this there is always the potential for theft of valuable plant and machinery and cabling. As there is a condition requesting further landscaping details, although the boundary fence does incorporate barbed wire which is not reflected in the consultation response received, there is opportunity to incorporate into the site boundary with the A127 shrub species such as Berberis Montana a prickly shrub which is particularly effective as a defensible boundary. It is not considered that the application is deficient such that this matter can form a valid reason for objection or refusal.

Impact Upon Residential Amenity

- 3.129 There is no private rights to a view. The arrays themselves are passive during operation, they have no running parts and emit no carbon, noise smell or light. Once installed, the system itself needs minimum maintenance and will be unmanned. The use of the site itself once operational, would not result in any material noise or disturbance to nearby residents. In this regard the set of conditions which one would reasonably expect to enjoy on an everyday basis will not be affected.
- 3.130 The proposed development would not be overbearing upon neighbours given the siting of the arrays away from nearby residential properties and their maximum height of 3m. Whilst there would be some construction traffic resulting from the proposed installation of the solar farm, this traffic would be short-lived and once operational, there will be no traffic movements associated with the development (except for issues of maintenance).

Glint and Glare/Aviation Safety

- 3.131 Solar photovoltaic panels are not particularly reflective; they are designed to absorb light and to minimise reflection because any light that is reflected would be wasted as far as their purpose of energy generation is concerned.

Modern PV panels are even designed to absorb light on their undersides, so as to make use of any solar energy that is reflected up from the ground. The application is accompanied by a Glint and Glare Assessment by Neo Environmental dated March 2022, which concludes that there would be no significant effects in respect of glint and glare from the proposed development. The proposed vegetation can be used to reduce the impacts of glint and glare and to screen the PV arrays from the road and nearby properties. This screening would mitigate any glint and glare that may affect homes.

- 3.132 The assessment concludes that:-
- 3.133 Solar reflections are possible at 34 No. of the 40 No. residential receptors assessed within the 750m study area. The initial bald-earth scenario identified potential impacts as high at 16 No. receptors, medium at 9 No. receptors, low at 8 No. receptors, including 1 No. residential area, and none at the remaining 7 No. receptors. Upon reviewing the actual visibility of the receptors, glint and glare impacts remained high at two receptors, however once mitigation measures were considered, impacts reduced to none for all receptors.
- 3.134 Solar reflections are possible at 12 No. of the 15 No. road receptors assessed within the 750m study area with the potential impacts being high. Upon reviewing the actual visibility of the receptors, glint and glare impacts remained high at 3 No. receptors and reduced to none at the remaining 12 No. receptors. Once mitigation measures were considered, impacts reduce to none for all receptors.
- 3.135 Solar reflections are possible at 9 No. of the 13 No. rail receptors assessed within the 750 m study area with the potential impacts being High. The initial bald-earth scenario identified potential impacts as high at 9 No. receptors and none at 4 No. receptor. Upon reviewing the actual visibility of the receptors, glint and glare impacts reduce to none at all receptors.
- 3.136 Green glare impacts are predicted on aviation receptors for Runway 23 at Southend Airport, which is acceptable according to Federal Aviation Administration guidance. Green glare impacts are predicted on the Air Traffic Control Tower at Southend Airport. Upon review of ground elevation, glint and glare impacts at Southend Airport Air Traffic Control Tower reduce to none. Glint and glare impacts on aviation receptors are acceptable and not significant.
- 3.137 To mitigate the impact found during the visibility analysis at 2 No. residential receptors, and 3 No. road receptors, hedgerows would be planted 57, infilled and gapped up and thereafter maintained to a height of 3m along the southern boundary of the Site. Once implemented the effects on local receptors is not predicted to be significant. The illustrative landscape plan which has been submitted as part of this planning application has taken this mitigation requirement into consideration.

Highway Considerations

Fairglen Interchange

- 3.138 As background it is indicated that planning permission for the improvement of the A127 / A130 Fairglen Interchange was granted by Essex County Council in December 2019 (reference: CC/BAS/28/19). Since then, various applications to discharge conditions and seek non-material amendments have been submitted and approved. The highway improvement works extend along the A127 and into the fields immediately adjoining the A127 site.
- 3.139 The approved plan of relevance to the Solar Farm is submitted as part of this application. This demonstrates that the proposed highway improvement works include improved field access, fencing and landscaping (hedgerow) along the frontage of the A127. Sufficient space has been provided as part of the Solar Farm development to accommodate the highway improvement works and avoid any potential conflict.
- 3.140 It is understood that commencement of this project is due to start in late 2022 and will be completed in 2024. At the time of preparing the planning submission, the applicant states that it is anticipated that the construction of the Solar Farm would begin after the highway improvement works are completed.
- 3.141 The initial consultation response received from Essex Highways objected to the development on the basis that the developer had not demonstrated that the proposal would be acceptable in terms of highway safety and efficiency. Additional information was stated to be required to assess the impact of the proposed development, as the proposal involved intensification of a 'field access' on the A127 Strategic Road Network over a considerable building phase and would include the provision of traffic management. The Highway Authority indicated that a Stage 1 Safety Audit report including designer's response where appropriate, was required to accompany any planning application which seeks to materially alter the existing highway.
- 3.142 It was advised that any safety audit accompanying a planning application would need to be carried out in accordance with current standards by an independent safety auditor. Subsequently a Stage 1 Road Safety Audit report was submitted on 27 June which was accompanied by an indicative design illustrating the extent of widening required to permit simultaneous HGV access and egress movements, in order to demonstrate that it will be feasible to temporarily widen the access during the construction phase.
- 3.143 The initial feedback received from Essex Highways in relation to the Road Safety Audit indicated concerns in terms of a number of key design details and implications including risk of nose to tail collisions due to slow vehicles entering/leaving site, offside lane of slip road in the vicinity of the proposed western access, risk of distraction, loss of control or nose to tail collisions on

the slip road, inadequate visibility splay resulting in collisions of all types, risk of nose to tail or loss of control collisions due to turning movements.

- 3.144 Correspondence received from the applicant on 17 January set out that in order to address this matter, a slightly updated access layout, which now includes a taper provision based on the design of the garden centre access on the A127 northbound carriageway, was submitted to Essex Highways on 13 January 2023. A Designers Response was also provided to Essex Highways at the same time. On considering these plans the increase in surface area of the revised access accounts for all of 827m².
- 3.145 Essex Highways now confirms that it has no objection to the proposed development on the basis of the conditions it set out confirming also that the new design has addressed the principled requirements of the Stage 1 Road Safety Audit. The conditions as recommended by Essex Highways are part of the recommended conditions.
- 3.146 This confirmation was received on 1 March from Essex Highways that the revision to the access was acceptable from a Stage 1 Road Safety Audit perspective. Its acceptance was on the basis of revised plan reference Site Access Plan: New drawing number 2999-01-SK03 which essentially provides access to the proposed development from the south east of the site. This arrangement has been designed in discussion with officers at Essex Highways and in particular their Road Safety Team. The access scheme provides for a suitable access and egress taper into the site from the A127, which is now deemed to be acceptable by Essex Highways.
- 3.147 The revised access shows an acceleration and deceleration taper providing a visibility splay of 160m in a westerly direction at a point set back 4.5m relative to the edge of the A127 carriageway. The access is shown to be wide enough to accommodate the 2 way flow of HGV traffic at the bell mouth of the access and beyond the security gates.

Trees, Landscaping and Biodiversity Enhancements

- 3.148 Policy DM25 (Trees and Woodlands) of the of the Council's Development Management Plan indicates that development should seek to conserve and enhance existing trees and woodlands, particularly Ancient Woodland. Development which would adversely affect, directly or indirectly, existing trees and/or woodlands will only be permitted if it can be proven that the reasons for the development outweigh the need to retain the feature and that mitigating measures can be provided for, which would reinstate the nature conservation value of the features.
- 3.149 Where development would result in the unavoidable loss or deterioration of existing trees and/or woodlands, then appropriate mitigation measures should be implemented to offset any detrimental impact through the replacement of equivalent value and/or area as appropriate. Consideration should be given to the impact on the landscape character area and the findings of the Rochford

District Historic Environment Characterisation Project (2006) when considering the potential loss of trees and/or woodland, and the replacement of these.

- 3.150 In addition, policy DM26 states that: “When considering proposals for development, it must be shown that consideration has been given to the landscape character of the area and the findings of the Rochford District Historic Environment Characterisation Project (2006).” The National Planning Policy Framework at chapter 15 (Conserving and enhancing the natural environment) indicates that planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan).
- 3.151 The landscape proposals for the Site are illustrated indicatively on the ‘Illustrative Landscape Masterplan’. The plan illustrates that the existing field boundaries, and tree cover is to be retained. Existing hedgerows are to be retained and maintained. Additional hedges will be planted and which are the subject of condition as set out within the recommendation.
- 3.152 The planning submission indicates that the fields would be seeded with new low maintenance pasture and species rich grassland. Areas would be seeded with a target mix which would be beneficial to bees. Favourite forage plants include white dead-nettle, hedge woundwort, black horehound and legumes such as red clover, birds-foot trefoil and meadow vetchling. Important late flowering species include red bartsia, common knapweed and scabious. Furthermore, through careful management late cuts to allow flowering (especially into September) suitable habitat would be maintained at the site.
- 3.153 There are isolated existing trees within the field boundaries surrounding the proposed solar panels. However, the scheme has been designed so that a 5m off-set from the field boundaries is achieved and the perimeter fencing is off-set by 2m. This approach ensures that the scheme would not impact the field boundaries (which are sought to be retained) or existing trees and hedgerows and ensuring that the panels operate effectively (i.e. are not shaded). The only location where the scheme comes into close proximity with trees, is the south-eastern corner of the application site, where the access passes through a linear belt of woodland to reach the A127.
- 3.154 This revision to the access affects Group 1 which forms a linear belt of Ash, Blackthorn, Elder, Hawthorn, Sycamore and Wild Cherry fronting the A127. The group is categorised as C (within BS5837) as a result of the overhead lines resulting in the trees being heavily reduced to a height of approximately 3m. Group 3 which forms a linear belt of Ash, Blackthorn, Crack Willow, English Oak, Hawthorn and Sycamore which is located immediately behind Group 1. The group is categorised as B (within BS5837); and the access road would also result in the slight incursion into the root protection areas of three English Oaks (T2, T3 and T4) which are categorised as C, C and B

respectively (within BS5837). It is calculated that route would result in an incursion of 5.5sqm for T2 and 9.1sqm for T4 which represents 19.4 and 12.5% of the RPAs respectively. This is below the 20% threshold set out in paragraph 7.4.2.3 of the BS5837. As such it not considered that the access would result in an impact on trees. The recommendation is conditioned to account for the alteration to the access whilst the council's Arboricultural officer has no objection.

Ecological and Biodiversity Matters

- 3.155 The application indicates that in the biodiversity calculations (Appendix 5-4d) the proposed biodiversity enhancements would lead to a unit change of +128 % (+141 % change) in habitats and a unit change of +17 % (+165 % change) in hedgerows. This would significantly improve the overall biodiversity in the locality. The proposal would also enable improvements to the soils health on the basis it would be taken out of intensive agricultural practices.
- 3.156 Paragraph 180 of the Framework indicates the importance of avoiding impacts on protected species and their habitat where impact is considered to occur appropriate mitigation to offset the identified harm. The council's Local Development Framework Development Management Plan at Policy DM27 requires consideration of the impact of development on the natural landscape including protected habitat and species. National planning policy also requires the planning system to contribute to and enhance the natural environment by minimising impacts on biodiversity, providing net gains in biodiversity where possible. In addition to the UK Biodiversity Action Plan, proposals for development should have regard to Local Biodiversity Action Plans, including those produced at District and County level.
- 3.157 Paragraph 179 of the Framework looks to protect and enhance biodiversity and geodiversity, and continues in paragraph 180, that when determining applications, local planning authorities should apply the following principles; if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.
- 3.158 Core Strategy policy DM27 requires that proposals should not cause harm to priority species and habitats. Development will only be permitted where it can be demonstrated that the justification for the proposal clearly outweighs the need to safeguard the nature conservation value of the priority habitat, and/or the priority species or its habitat.
- 3.159 Policy ENV6 of the Core Strategy discusses large-scale renewable projects and states that permission will be granted if the development is not within or adjacent to an area designated for its ecological or landscape value such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar Sites, Sites of Special Scientific Interest (SSSI's), Ancient Woodlands, Local Nature Reserves (LNRs) or Local Wildlife Sites (LoWSs); or if it can be shown that the integrity of the sites would not be adversely

affected. The site is in proximity to Thundersley Great Common - Site of Special Scientific Interest (SSSI). Thundersley Great Common SSSI is approximately 1km south-east of the site. It is noted there is a body of water adjacent to the eastern boundary of the site within Great Wheatley Farm and to the east within Beeches Farm, north of the A127.

- 3.160 A preliminary ecological appraisal has been undertaken and is reported in the Environmental Assessment Report has been prepared in support of the application. The Environmental Assessment Appraisal confirms that there are no priority species or habitats on the site. A landscaping scheme has been submitted as part of the planning application. The proposed landscaping comprises of locally native species and would result in a net increase of habitat which would enhance the biodiversity of the site when compared to its current arable use. Therefore, the Solar Farm is considered to accord with Policy DM27 and the provisions of the Framework.

Air Quality

- 3.161 The Council's Development Management Plan policy DM29 indicates that major developments will be required to submit an air quality assessment with their planning application to determine the potential cumulative impact of additional transport movements on potentially significant road junctions. This assessment should be produced having regard to the guidance developed by Environmental Protection UK.
- 3.162 As demonstrated by a submitted Transport Statement the Solar Farm would not result a significant number of vehicle movements during the construction phase and during its operational phase the Site would only be visited periodically by an engineer. The Site is not located within a designated Air Quality Management Area (AQMA), and it would not result in any aerial emissions during its operation. Accordingly, whilst the proposal does constitute 'major' development an air quality assessment has not been provided in this instance as the Solar Farm would not generate a significant number of vehicle movements that have the potential to result in an air quality issue. As such, it is not considered that the Solar Farm would conflict with the requirements of Policy DM29.

Flood Risk, SUDS and Drainage

- 3.163 The Framework indicates at paragraph 167 that local planning authorities when assessing development proposals should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood risk assessment. There is a policy requirement for development proposals to demonstrate that it is appropriately flood resistant and resilient, that it incorporates sustainable drainage systems unless there is clear evidence that this would be inappropriate, that any residual risk can be

managed whilst providing safe access and escape routes where appropriate as part of an agreed emergency plan.

- 3.164 The Framework at paragraph 169 indicates that major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The Lead Local Flood Authority has appropriate proposed minimum operational standards and has maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development and where possible provide multifunctional benefits.
- 3.165 A Flood Risk Assessment (FRA) has been prepared in accordance with the 'Framework' for the proposed development. In summary, the FRA identifies and assesses the risks of all forms of flooding to and from the development and demonstrates how these flood risks will be managed so that the development remains safe throughout the lifetime, taking climate change into account.

Flood Risk

- 3.166 The site is not at risk of flooding from a major source (e.g. fluvial and / or tidal). The site has a 'low probability' of fluvial / tidal flooding as the site is located within Flood Zone 1 with less than a 1 in 1,000 annual probability of river or sea flooding in any year (<0.1 %) therefore, the Sequential and Exception Tests will not need to be undertaken as part of this planning application. A secondary flooding source which may pose a low significant risk to the site is from surface water flooding. This source will only inundate the site to a relatively low water depth and water velocity, will only last a short period of time, in very extreme cases and will not have an impact on the whole of the site.
- 3.167 The proposed use of the site is 'essential infrastructure' appropriate within Flood Zone 1 after the completion of a satisfactory FRA. In conclusion, the flood risk to the site can be considered to be limited; the site is situated in Flood Zone 1, with a low annual probability of flooding and from all sources. The site is unlikely to flood except in very extreme conditions.

Surface Water Drainage

- 3.168 The applicant's planning submission sets out the following: surface water run off from the developed site will be no different pre and post application. There will be no increase in surface water run off or exacerbation of off site risk because of the development. There should be no perceivable changes to the upstream or downstream hydrology and to flood risk because of the proposed development. In terms of surface water run off the proposal will not increase the impermeable area on the site as the size of the inverter house and PV modules are negligible in the context of the site area.

-
- 3.169 Research into the impact of solar farm panels on run off rates and volumes indicates that solar panels do not have a significant impact on run off volumes, peak rates or time to peak rates when the ground below the panels is vegetated. Therefore, with well maintained vegetation underneath the panels, the solar panels themselves will not have a significant impact on the run off volumes, peaks or time to peak.
- 3.170 The flooding sources will be mitigated on the site by using several techniques and mitigation strategies to manage and reduce the overall flood risk at the site. The design of the proposed development has incorporated opportunities to mitigate the potential impacts to the water environment this includes. The solar arrays and vulnerable infrastructure will be located above the ground level and away from the drainage ditches which pose a surface water flood risk. The modules are elevated such that the leading edge of each panel will be approximately 0.7m off the ground. Consequently, the panels will be unaffected by surface water flood sources.
- 3.171 The frame supporting the solar panels should not impede overland flow or reduce flood storage capacity, as it would only be the legs which would be within the path of overland flow or floodwaters.
- 3.172 The panels are designed so that they have minimal foundations. This limits disturbance of soils / loss of resource and reduces the volume of concrete required. This would also therefore limit the potential for disruption of surface and groundwater flows.
- 3.173 The ancillary structures, substation, transformers, etc. are also small structures and therefore only require shallow foundations, limiting ground disturbance and disruption to overland flow routes. The proposed development is based on maintaining the existing drainage, the structures associated with the solar farm will introduce only small areas of impermeable surfacing. It is not proposed to install new drainage infrastructure but maintain existing greenfield runoff rates. Where possible existing farm access tracks will be used, and the position of new access tracks will avoid the necessity for watercourse crossings to avoid changes to in-channel flow and disturbance of the riparian habitat.
- 3.174 In conclusion, the proposed development would be expected to remain dry in all but the most extreme conditions. Providing the recommendations made in the FRA are instigated, flood risk from all sources would be minimised, the consequences of flooding are acceptable, and the development would be in accordance with the requirements of the Framework.
- 3.175 A Flood Risk Assessment and a Surface water drainage strategy was submitted on 24 June to address the initial holding objection received from Essex County Council Lead Local Flood Authority. This indicates that the flooding source will only inundate the site to a relatively low water depth and water velocity, will only last a short period of time, in very extreme cases and will not have an impact on the whole of the proposed development site.

- 3.176 There will be no net loss in flood storage capacity or impact on movement of flood water across the site. The overall direction of the movement of water will be maintained within the developed site and surrounding area. The conveyance routes (flow paths) will not be blocked or obstructed. The proposed use of the site is 'essential infrastructure', 'essential infrastructure' uses are appropriate within Flood Zone 1 after the completion of a satisfactory FRA. In conclusion, the flood risk to the site can be considered to be limited; the site is situated in Flood Zone 1 with a low annual probability of flooding and from all sources. The site is unlikely to flood except in very extreme conditions.
- 3.177 Currently the majority of rainfall infiltrates into the soil substrate and/or runoff from the Site. An estimation of surface water runoff is required to permit effective site surface water management and prevent any increase in flood risk to off site receptors. In accordance with The SuDS Manual, the Greenfield runoff from the site has been calculated using the loH124 method. Table 2 to the FRA shows the loH 124 method Greenfield runoff rates calculated for the proposed areas of the proposed inverter/transformers, grid connection and substation structures and the maintenance road and the access track of 9.100m². The mean annual maximum flow rate from a Greenfield site (QBAR: approximately a 2.30 year return period) has been calculated to be 3.20 litres/second (l/s)
- 3.178 The method used for calculating the runoff complies with the 'Framework' as well as the new Defra non statutory technical standards for SuDS and assumes that the excess runoff associated with the proposed development (plus an allowance for future climate change) will need to be managed by the proposed SuDS scheme.
- 3.179 The proposed inverter/transformers, grid connection and substation structures will be constructed from impermeable surfaces. However, these will stand on an area of permeable surfaces. The inverters are positioned on legs raised above the base. The cabin plinths will be founded on concrete pads surrounded by permeable surfaces. Filter strips will be constructed to surround the concrete bases of all these ancillary buildings/structures to capture any run off from the roofs, which in turn will be conveyed to the swales adjacent the maintenance roads and owners access track to provide attenuation and down stream/down slope water quality.
- 3.180 The proposed PV modules will consist of an aluminium frame, with stainless steel supports and concrete shoes. Greenfield conditions will be retained as alluded to in the BRE Planning Guidance for the Development of Large Scale Ground Mounted Solar PV Systems. Although the solar panels will divert the downward path of falling rain, being raised off the ground on frames; they will not reduce the permeable area where they are sited. Any rainfall that does fall onto the site will, as now, infiltrates into the soil substrate. The flow path over the PV modules is shown in Figure 5

- 3.181 It is anticipated that rain falling on each of the solar PV modules will fall underneath the down-slope of the panels. A gap of approximately 70mm will allow water to drain off each PV module (the 70mm gap surrounds all sides of the panels) The erection of the solar panels will require the use of light machinery; however, it is anticipated that this would not lead to irreversible compaction of soils on the site. Therefore, infiltration should not be limited by compaction of soils. The land on the site can continue to be used for agricultural purposes (sheep grazing or similar) or for biodiversity enhancement following installation of the panels.
- 3.182 The proposed access tracks that will be used to service the inverter units will be constructed from permeable material. This will ensure that the access tracks remain permeable allowing surface water to infiltrate into the soil substrate; therefore, the access tracks and maintenance roads will not result in an increase in the impermeable area.
- 3.183 The SuDS design incorporates swales which will allow treatment and attenuation and infiltration into the ground and has been designed to accommodate the 1 in 100 year event plus climate change (+40%) therefore, flooding would not occur for all events up to the 1 in 100 year (+40%) event. The Micro Drainage calculations include the areas of the buildings and infrastructure and the access track and maintenance roads.
- 3.184 The cabin plinths will be founded on concrete pads surrounded by permeable surfaces. Filter strips will be constructed to surround the concrete bases of all these ancillary buildings/structures to capture any run off from the roofs, which in turn will be conveyed to the swales adjacent the maintenance roads and owners access track to provide attenuation and down stream/down slope water quality.
- 3.185 These methods will reduce peak flows, the volume of run off, and slow down flows and will provide a suitable SuDS solution for this site. The adoption of SuDS features for the site represents an enhancement from the current conditions as the current surface water runoff from the site is uncontrolled, untreated, unmanaged and unmitigated. The SuDS features will reduce the risk of flooding to the site and off-site locations. In adopting these principles it has been demonstrated that a scheme can be developed that does not increase the risk of flooding to adjacent properties and development further downstream.
- 3.186 Following the submission of this information the Lead Local Flood Authority maintained its holding objection in its letter dated 14 July to the proposed development on the basis that the application needed to demonstrate how protection of topsoil and prevention of compaction by this equipment will be achieved.
- 3.187 A further consultation response was received on 9 August 2022 removing the holding objection with recommendations that conditions be attached to any planning permission granted. Following a revision to the site access to meet

the requirements of the Stage 1 Road Safety Audit the applicant submitted further technical details relating to surface water drainage coinciding with plan reference 2999-01- SK 03 revised Proposed Site Access which has been subject of consultation with the Lead Local Flood Authority which has no objection.

Agricultural Land Classification

- 3.188 The site is classified as Grade 3 Agricultural Land. This is considered to be of a mix of good to moderate quality agricultural land. There is no local planning policy relating to loss of best and most-versatile agricultural land although the 'Framework' and Planning Practice Guidance seeks to protect land of the highest grade but does not prohibit use. Land of poor quality should be used in preference.
- 3.189 An Agricultural Land Quality Survey has been prepared in support of the application. The survey was carried out in accordance with the relevant guidance and was based on observations at intersects of a 100 m grid. During the survey soils were examined by a combination of pits and augers to a maximum depth of 1.2 m. The soils were found to comprise uniform non calcareous clay or heavy clay loam topsoil with dense clay sub soil. The soils were found to be mainly stoneless, but moderately stony in the north-eastern corner of the site. The survey concludes that the whole of the application site is classified as sub-grade 3b agricultural quality/classification.
- 3.190 The glossary contained within Annex 2 of the Framework confirms that best and most versatile agricultural land is formed by land in grades 1, 2 and 3a of the agricultural land classification. As such, the entire site does not form best and most versatile agricultural land.

Effect on Arable land

- 3.191 Soils and Agricultural Land Quality Under the Town and Country Planning (Development Management Procedure) (England) Order 2015 (DMPO) entails that Natural England is a statutory consultee on development that would lead to the loss of over 20ha of 'best and most versatile' (BMV) agricultural land (land graded as 1, 2 and 3a in the Agricultural Land Classification (ALC) system, where this is not in accordance with an approved plan. From the description of the development this application is likely to affect BMV agricultural land. However Natural England consider that the proposed development, if temporary as described, is unlikely to lead to significant permanent loss of BMV agricultural land, as a resource for future generations.
- 3.192 This is because the solar panels would be secured to the ground by steel piles with limited soil disturbance and could be removed in the future with no permanent loss of agricultural land quality likely to occur, provided the appropriate soil management is employed and the development is undertaken to high standards.

Other Considerations

Renewable Energy

3.193 A material consideration in the determination of planning proposals for renewable energy are the National Policy Statements (NPS) for the delivery of major energy infrastructure. The NPS's recognise that large scale energy generating projects will inevitably have impacts, particularly if sited in rural areas. In September 2021, draft updates to the overarching National Policy Statement for Energy (EN-1) and the National Policy Statement for Renewable Energy Infrastructure (EN-3) were published.

3.194 The draft NPS EN-3 states that:-

“...solar farms are one of the most established renewable energy technologies in the UK and the cheapest form of electricity generation worldwide. Solar farms can be built quickly and coupled with consistent reductions in the cost of materials and improvements in the efficiency of panels, large scale solar is now viable in some cases to deploy subsidy free and little to no extra cost to the consumer.”

3.195 Both the existing and proposed NPS's state that the NPS's can be a material consideration in decision making on applications that both exceed or sit under the thresholds for nationally significant projects.

3.196 The UK Government has declared a climate emergency and set a statutory target of achieving net zero emissions by 2050, and this is also a material consideration. Since the declaration, the Sixth Assessment Report of the Intergovernmental Panel on Climate Change has indicated that there is a greater than 50% chance that global temperature increases will exceed 1.5 degrees Celsius above pre-industrial levels. The report indicates that delay in global action to address climate change will miss a rapidly narrowing window of opportunity to secure a liveable and sustainable future for all.

3.197 The UK Energy White Paper, Powering our Net Zero Future (2020), describes the costs of inaction as follows:-

“We can expect to see severe impacts under 3°C of warming. Globally, the chances of there being a major heatwave in any given year would increase to about 79%, compared to a 5% chance now. Many regions of the world would see what is now considered a 1-in-100-year drought happening every two to five years.

At 3°C of global warming, the UK is expected to be significantly affected, seeing sea level rise of up to 0.83 m. River flooding would cause twice as much economic damage and affect twice as many people, compared to today, while by 2050, up to 7,000 people could die every year due to heat, compared to approximately 2,000 today. And, without action now, we cannot rule out

4°C of warming by the end of the century, with real risks of higher warming than that. A warming of 4°C would increase the risk of passing thresholds that would result in large scale and irreversible changes to the global climate, including large-scale methane release from thawing permafrost and the collapse of the Atlantic Meridional Overturning Circulation. The loss of ice sheets could result in multi-metre rises in sea level on time scales of a century to millennia.”

- 3.198 The draft NSP’s recognise that to meet the Government’s objectives and targets for net zero by 2050 significant large and small scale energy infrastructure is required. This includes the need to ‘dramatically increase the volume of energy supplied from low carbon sources’ and reduce the amount provided by fossil fuels. Solar and wind are recognised specifically in Draft EN-1 (paragraph 3.3.21) as being the lowest cost way of generating electricity and that by 2050, secure, reliable, affordable, net zero energy systems are ‘likely to be composed predominantly of wind and solar’. The Government aims by 2030 to quadruple offshore wind capacity so as to generate more power than all homes use today. This would therefore be delivered in collaboration with solar energy, and other measures, to provide a robust supply.
- 3.199 Planning Practice Guidance (PPG), on renewable and low carbon energy, states that:
- “...there are no hard and fast rules about how suitable areas for renewable energy should be identified, but in considering locations, local planning authorities will need to ensure they take into account the requirements of the technology and critically, the potential impacts on the local environment, including from cumulative impacts.”
- 3.200 The Framework explains that when dealing with planning applications, planning authorities should not require a developer to demonstrate a need for low carbon or renewable energy projects and should recognise that even small scale projects can help reduce greenhouse gas emissions. Paragraph 158(b) also explains that such schemes should be approved if any impacts are, or can be made, acceptable. Furthermore, it identifies once areas have been identified for such projects, by local authorities in local plans, any subsequent applications should demonstrate how they would meet the criteria used in identifying suitable locations.
- 3.201 The Council has not allocated any sites for renewable energy schemes in the district. The council has approved a solar farm development at South Farnbridge on the basis that the benefits of renewable energy would outweigh the harm to the openness of the Green Belt.

Planning Balance

- 3.202 All guidance is clear, as are the planning ‘Acts’, that a Local Planning Authority in coming to a decision on a planning application must take into

account all material planning considerations. Where there is conflict with policy a weighing exercise must be undertaken balancing the harm against the benefits to arrive at a position. Clearly the benefits of the development, when taking into consideration the harm and mitigation which may offset that harm, must outweigh the harm to arrive at a balanced position of acceptance.

- 3.203 In concluding on the acceptability of this proposal, the development in summary is considered to constitute inappropriate development within the Metropolitan Green Belt and is harmful by definition. There is also moderate visual harm although not considered significant as a result of its presence which would be visually mitigated by additional hedge planting. There is a recognised less than substantial harm in heritage asserts terms although this harm is at the lower end of the spectrum of harm. It is considered that the landscape change is not significant when tested such as to constitute a harm which warrants objection and refusal of the application and the same applies to the visual harm on the basis of the points discussed within the relevant section of this report. Substantial weight is given to the harm to the Green Belt with less weighting to the harm to the Heritage asset on the basis that Great Wheatly Farm does not constitute a World Heritage Site or Scheduled Ancient Monument and on the basis that the expert view is that the degree of harm is less than substantial. No weighting needs to be given either way to those matters of considered non harm in landscape and visual terms.
- 3.204 The public benefits of the proposal in terms of renewable energy production which is a national and global endeavour are considered of sufficient magnitude in this case to outweigh the substantial harm found to the Green Belt and all other harm identified above. These benefits identified attract very substantial weight in favour of the scheme. In this context, the harm to the Green Belt would be clearly outweighed by the other considerations identified and therefore the very special circumstances necessary to justify the development exist. Accordingly, the proposal would satisfy the local and national Green Belt policies outlined.

Additionally there would be the added benefit of the additional planting, which would remain after the end of the limited period, which is afforded significant weight and that the unchallenged Biodiversity Net Gain (BNG) is a further substantial benefit.

- 3.205 Weighing in favour of the proposal is the production of renewable electricity which is afforded significant weight; the economic benefits which are afforded moderate weight; and the additional planting and Biodiversity Net Gain which are together afforded significant weight.

Third Party Representations

- 3.206 The points raised by third parties are noted. There is no evidence to support any notion that electricity from solar panels and transmission to the power grid harms human health as such emits extremely weak electromagnetic fields. Exposure to low-level electromagnetic fields has been studied extensively

and there is no evidence that it is harmful to human health, according to the World Health Organization (WHO).4 Jan 2022.

- 3.207 The impact of a development upon property prices is not a material planning consideration.
- 3.208 The concerns raised by the occupier of Great Wheatley Farm are noted and understood. The High Court decision although noted and understood relates to a different set of circumstances whilst the recommendation made in this instance is not detached from the duties the council has exercised in informing that decision. Therefore the council has not exceeded its legal powers which is they key test which would be applied under Section 288 of the Town and Country Planning Act 1990.

4 CONSULTATIONS AND REPRESENTATIONS

Rayleigh Town Council:

- 4.1 No objection.

Anglian Water:

- 4.2 No comment to make.

Essex County Council Lead Local Flood Authority (LLFA) SuDS:

- 4.3 Issued a holding objection on 20 April 2022 on the basis of run off rates.

Basildon Borough Council:

- 4.4 Object on the grounds that a South Essex regional strategic approach to address how these solar farms sit across the sub region is now essential. Highlights that Basildon Council considers this should be part of the work carried out by the Association of South Essex Local Authorities (ASELA) as an appropriate body to lead this strategy, to consult and address how solar farms sit spatially within South Essex. This is essential to ensure a sustainable, conflict free solar strategy for the sub region. If neighbouring local authorities close to these sites are excluded then knock on effects are overlooked and the cumulative landscape and visual effects of this clear increase in solar farms pushed towards the borders of other boroughs goes ineffectively managed.
- 4.5 The Transport Statement accompanying the application acknowledges the benefits of the site's location in terms of being sited on the A127 with good links to junction 29 and the M25. As a result the impact on deliveries for construction activities that would take place 7 days per week between 7.30 am and 6.00 pm week days and 8.30 am and 6.00 pm on weekends, with probable direct transport links through Basildon Borough to achieve this, would be considerable and further highlights the knock on effects of solar developments on local authority boundaries. Should planning permission be

granted subject to conditions, Basildon would ask to be consulted on the Construction Environmental Management Plan.

- 4.6 The NPPG outlines guidance that relates to large scale ground mounted solar PV farms and states that large scale solar farms should be directed to previously developed and non-agricultural land provided that it is not of high environmental value. The agricultural land quality survey of the site undertaken in February 2021 gave the agricultural site a land value of subgrade 3b agricultural quality with the land all under winter cereal crops at the time. Basildon Borough Council further objects on the grounds that the proposal would result in development in the Green Belt outside any exception listed in the National Planning Policy Framework. The proposed development, including mitigation measures required as part of the Glint and Glare assessment requiring the hedgerows infilled/gapped up and maintained to a height of 3 metres along the southern boundary, would have a significant and harmful effect on both the visual and spatial openness of the Green Belt.
- 4.7 Basildon Council is mindful of the value of solar renewables and the important contribution passive solar design can make. New rules put in place in 2020 allow solar farm developers to connect to the grid cheaper and faster in exchange for allowing UK Power Networks to reduce their electricity output at times of low energy demand and LPAs are coming under increased pressure to assess applications for solar farms particularly in Essex, where the terrain is flat and land considered suitable. The South Essex authorities need to work proactively to ensure the opportunity to determine optimal locations for solar farms is addressed, as opposed to allowing an increase of solar farms towards the edges of their boroughs as Basildon is increasingly witnessing and community benefits from the development are considered for neighbouring boroughs impacted by the consequences of such boundary solar farm development.

Essex County Council Place Services Historic Buildings and Conservation Advice:

- 4.8 Objection on the basis that the proposals would fail to preserve the special interest of several listed buildings, contrary to Section 66(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990, through change in their setting. With regards to the NPPF (2021) Paragraphs 202 and 206 are relevant, meaning that public benefit would have to outweigh this harm to each asset.

Castle Point Borough Council:

- 4.9 Objection. Advise that whilst this Authority would welcome proposals which would reduce the carbon footprint of the area, this proposal represents a significant form of inappropriate development in the Green Belt which in the opinion of this authority conflicts with the purposes of the Green Belt, contributing to sprawl and encroachment into the countryside.

- 4.10 Whilst the applicant seeks to identify the need for alternative energy sources and the limited impact of the proposal on the Green Belt as the very special circumstances necessary to secure planning permission, it is the view of this authority that the circumstances identified do not attract such weight as to outweigh the harm to the Green Belt.
- 4.11 Whilst this authority acknowledges the national need to secure net zero by 2050, there is no demonstration that the provision of a solar farm in this location is essential to the energy security of the country or that suitable sites beyond the Green Belt are not available, or that more localised urban solutions have been fully explored. It is not therefore considered that the argument for the need for a solar farm at this location has been sufficiently developed within the submissions to carry significant weight in the determination of this application.
- 4.12 Further, it is not considered that the proposed development facilitates the beneficial use of the Green Belt in the context established within the NPPF and in an age of increasing transport costs and potentially declining access to imported foodstuffs as a consequence of seeking to reduce carbon footprints associated with such importation, the loss of intensively cultivated agricultural land is not considered beneficial and should be weighed in the balance.
- 4.13 The applicant concedes that the proposal would have an adverse impact on the actual openness of the Green Belt. This Authority concurs with this view which must attract weight against the proposal.
- 4.14 The applicant also opines that the proposal would also have only a small impact in perceptual terms because of the presence of road and railway infrastructure. This Authority considers this argument to be flawed. The road and highway infrastructure to which the applicant refers passes through the Green Belt and has minimal impact on its openness. It is not considered that the same can be said of the proposed development which will appear as an extensive and alien feature in the landscape.
- 4.15 Further, it would appear that no assessment has been made in respect of the visual impact of the proposal when viewed from within Castle Point, all identified view-points being to the north of the A127, thus it is considered that the visual impact of the proposal has not been fully considered.
- 4.16 With regard to landscaping it is noted that reliance appears to be being placed on the renewal of the hedgerow adjacent to the A127 by Essex County Council as part of the works to improve the Fairglen Interchange. It is not considered that such reliance is appropriate and in the event of planning permission being secured, this Authority will expect the applicant to provide additional landscaping along the southern edge of the application site in order to secure appropriate screening of the development from the A127 and receptors within Castle Point.

- 4.17 Finally, whilst it is noted that the applicant suggests the use of the land is for a temporary period of forty years (unless a further consent for an extended period is achieved), and that the land will be restored to its former condition thereafter. A period of 40 years (or more) is a long period for a temporary consent and this Authority is concerned that once developed for the solar farm, the site will be identified as previously developed land in the future and will therefore be subject to further pressure for development, thus potentially contributing to the merging of the settlements of New Thundersley and Rochford. In the event that planning permission is granted, this Authority would expect appropriate conditions to be imposed to ensure the restoration of the site to its former open condition.

Natural England:

- 4.18 No objection.
- 4.19 Based on the plans submitted, Natural England considers that the proposed development will not have significant adverse impacts on statutorily protected nature conservation sites or landscapes.
- 4.20 Consequently, Natural England would advise that any grant of planning permission should be made subject to conditions to safeguard soil resources and agricultural land, including a required commitment for the preparation of reinstatement, restoration and aftercare plans; normally this will include the return to the former land quality (ALC grade).

Essex Police:

- 4.21 Highlights a substantial increase in the numbers of metal thefts from other locations. There is real potential for thefts from solar farms to occur within the County of Essex.
- 4.22 It should be noted that there has been an exponential rise in crime in relation to solar farms since 2020. Nationally in 2021 there were 30 incidences of theft from solar farms reported, however in the first 4 months of 2022 there has been 21 reported incidences of solar farm crime with a further offences expected in the summer months due to dryer weather conditions. Whilst Essex thus far has not experienced a rise in this specific crime, Essex Police are aware that there has been a substantial increase in the numbers of metal thefts from other locations. There is real potential for thefts from solar farms to occur within the County of Essex.
- 4.23 Current Home Office research suggests that the thefts are fuelled by the rising metal prices especially that of copper being at a 10-year high; with everything from solar panels to cabling, batteries and ancillary equipment being targeted. As a consequence, the Solar Trade Association have consulted with the National Metal Crime Working Group, which comprises of National Police organisations, metal trade and recycling bodies, infrastructure organisations

and other allied stakeholders, with a view to seeking risk commensurate options for security measures at solar farms.

- 4.24 Whilst we accept the importance given to mitigating the site's impact on the local wildlife, we wish draw attention to the inherent crime risk of such sites due to the increase in metal theft crime and the need for serious consideration of risk commensurate security measures.
- 4.25 "Deer/stock fencing" in relation to crime is not sufficient to deter or mitigate a crime risk and only provides a symbolic boundary. It is also noted on some applications in the past that some cameras will be mounted on posts forming part of the fencing, in itself total unsuitable for security and image capture. Mature dense natural hedging ideally of a spiky nature such as hawthorn and blackthorn provides a stronger deterrent, but as with other measures requires regular inspection to ensure growth it is not obstructing CCTV cameras and to detect intrusion attempts; this needs to be included within maintenance and management plans.
- 4.26 We are quite appreciative of the desire to preserve open site lines across the countryside wherever possible and where stronger boundary treatments are not compatible combining 'deer fencing' with suitable monitored CCTV, Perimeter Intrusion Detection System (PIDS), 24 hour response and enhanced building and compound security may provide a compromise solution. Where due to increased risk this is not possible, a black or green weld mesh fence has been shown to be less obtrusive.

Essex County Council Highways:

- 4.27 No objection. Initially objected on the basis that the developer has not demonstrated that the proposal would be acceptable in terms of highway safety and efficiency. This proposal would therefore be contrary to the aims and objectives of Policy DM1 (General Policy), Policy DM2 (Strategic Routes), DM14 (Safety Audits) and Policy DM20 (Construction Management) of the Development Management Policies Feb 2011. Confirms no objection on the basis of revised plans.

Essex County Council Specialist Archaeological Advice:

- 4.28 No objection.

Rochford District Council Arboricultural officer:

- 4.29 No objection, subject to conditions.

Neighbour Representations

- 4.30 A total of 7 representations have been received including those from the following households:

Great Wheatley Road: 45A.

High Road: 31.

Redwoods: 2, 4, 10.

Western Road: “Great Wheatley Farm”

4.31 Points of concerns include:-

- Radiation exposure given the proximity of the proposed solar installation to a heavily populated residential area.
- Question regarding the duration of the construction phase and access routes serving construction traffic and associated construction noise.
- Reference made to the footings of an ancient abbey although the precise location of the remains is not made clear.
- Concern regarding the destruction of pleasant views and Green Land.
- Concern regarding light pollution on neighbouring residential properties and impacts upon drivers using the A127.
- Concern regarding the perception that these installations produce a constant humming noise which cannot be good for the residents hearing, physical and mental health.
- Concern expressed regarding the potential of electromagnetic radiation fields caused by batteries and equipment and impacts upon health and the proximity of the installation to residential properties.
- Perception of significant impacts of the development upon the value of residential properties.
- Potential archaeological implications owing to the ruins of an abbey.
- Correspondence received from the occupier of Great Wheatley Farm:
 - (1) I confirm that the proposed location of the facility falls within the setting of the listed Great Wheatley Farm House and two listed barns.
 - The development is on good quality farmland which is badly needed for food production and also located within the Green Belt. In August 2013 I commissioned a report from Michael Brackenbury MA Cantab. MPhil Edin, Historic Buildings Consultant and I outline below and overleaf extracts for your kind attention. A copy is available on request.
 - The report describes the evolution of the farm buildings to evaluate the significance of each of them. ‘Three of the buildings constituting the farm complex are listed. The proper historic significance of an individual building at Great Wheatly will only become clear when its place in the

sequence of the evolution of the site as a whole is understood. Some of the buildings at the farm have been little altered since their first addition to the group. They reflect the desire at the time for a new building to accommodate a new need.

- An instance would be the carriage house, built in the early nineteenth century to accommodate a new status symbol, the gentleman farmer's carriage. Other buildings, in particular the farmhouse itself, would have originated as new buildings but would subsequently have been altered and added to over many years. This makes their history complex and sometimes uncertain. Nonetheless their individual histories are vital to understanding their significance within the group and hence to understanding the whole complex of buildings. The principal listed building on the site is the farmhouse. Next in order of importance is the main barn.
- A smaller stable and carriage house with upper hayloft is also listed. A further group of historic buildings on the site are not listed but have significance within the farm yard complex. Others have been too much altered recently or entirely rebuilt to be able to be included in this study.
- Because of its special relationship with the surrounding locality, which survives as an extensive curtilage of unaltered fields and hedgerows, the Great Wheatley Farm group is a key component of a wider landscape history. The position of the group on high ground above lower meadows and fields, with steep slopes between the two, make its location of special interest. Within the complex the contours of the ground have been exploited and sometimes altered to enhance the use of the buildings. So the buildings are intimately connected to the land around them. They record the changing relationship to it of the people who worked Great Wheatley over the centuries.'
- (2). Under application 17/00437/FUL Daniel Worley of Place Services gave Historic Buildings and Conservation Advice in his letter dated 1 September 2017 attached. He commented 'the main farmhouse, originally constructed in the sixteenth century, is a two storey timber framed building which has been extended at various times. The two listed barns are both timber framed and date from the seventeenth and eighteenth centuries.
- The farmstead is located within an agricultural setting which is characterised by fields enveloping the site. The boundary of urban edge of Rayleigh is located 100m to the south-east and 400m away to the north-east. The farmstead is situated on the brow of a hill which falls away to the west making this area the most open and prominent in terms of the setting of the listed buildings.'
- He goes on to say 'the three listed buildings are all agricultural in origin and the surrounding fields, in terms of setting, have a historical association with the building stock as they relate to their function. As urban development has encroached from various directions, this has increased

the significance of the remaining agricultural landscape to the west to the setting of the listed farmstead. The proposed site to be developed contributes to the setting of the listed farmstead by forming part of the wider agricultural landscape.

- In respect of application 17/00437/FUL ‘the proposal would be located within a dip in the landscape, reducing the prominence of the proposals within the setting of the farmstead and the landscape generally. In addition the existing field boundary on the eastern border is substantial; however, it is more permeable on the southern edge. It is proposed to introduce additional screening, which will further reduce the impact of the development on the setting of the heritage assets.
- Although the site as existing contributes to the wider agricultural setting, the imposition of this incongruous development would not substantially erode the relationship of the farmstead with its wider agricultural landscape. This is due to the limited size of the proposals, the distance from the farmstead and relatively concealed positing of the development. The detrimental impact upon the agricultural setting is therefore not considered to be overly significant.’
- The comments made by Daniel Worley support the notion that a solar farm would have a detrimental impact upon the setting of the listed buildings.
- (3) Recent case law (attached) *Steer vs Secretary of State, Catesby and Amber Valley Council* confirmed that a narrow interpretation of setting adopted by an Inspector on appeal was unlawful and a wider interpretation was the correct approach. This not only considers the question of inter-visibility but also the broader “experience” of a heritage asset.
- The proposed development will cause significant harm to the setting of heritage assets. The test of which is set out at paragraph 134 which states: “Where a development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use”
- In this case, the harm to views to and from the listed building will be harmed. Therefore, it must fall to be refused as the harm cannot be mitigated or overcome.
- The Council and decision maker is under a statutory duty under the legislation relating to the historic environment which is contained in the Planning (Listed Building and Conservation Areas) Act 1990. Section 66 of the Act is of particular relevance to this case, as it places a duty on the decision maker to have special regard to the desirability of preserving the special interest and setting of a listed building.

- A failure to consider such matters would leave open the possibility of a legal challenge to any decision of the Council.
- (4) Access is proposed from the A127 Trunk Road. Access was declined on appeal on the adjoining site (APP/B1550/A/09/2107785) from the A127. Likewise, an application for prior notification for the provision of a farm access track was refused and on application due to the impact on the openness of the Green Belt.
- The proposed access is located in an accident black spot on one of the busiest roads in the county and would cause major disruption to traffic flow over a sustained period of time.
- (5) The applicant has not undertaken any consultation with me which I understand is contrary to the approach advocated in the National Planning Policy Framework.
- In conclusion, I have serious concerns with the nature and location of the proposed development. Solar Farms must be in the right place. There is plenty of alternative land available in the district and the applicant needs to look for a new location for this inappropriate development. I urge the Council to refuse the application. (ended).
- A High Court judgment is also submitted relating to a development and its impacts upon the setting of a listed Building at Alestree, Derbyshire.

5 EQUALITY AND DIVERSITY IMPLICATIONS

- 5.1 An Equality Impact Assessment has been completed and found there to be no impacts (either positive or negative) on protected groups as defined under the 'Equality Act' 2010.

6 CONCLUSION

- 6.1 The development is considered to constitute inappropriate development within the Metropolitan Green Belt and is harmful by definition. There is also visual harm although not considered significant as a result of its presence which would be visually mitigated by additional hedge planting. There is a recognised less than substantial harm in heritage asset terms although this harm is at the lower end of the spectrum of harm. It is considered that the landscape change is not significant when tested such as to constitute a harm which warrants objection and refusal of the application and the same applies to the visual harm on the basis of the points discussed within the relevant section of the report. Substantial weight is given to the harm to the Green Belt with less weighting to the harm to the Heritage Asset on the basis that Great Wheatly Farm does not constitute a World Heritage Site or Scheduled Ancient Monument and on the basis that the expert view is that the degree of harm is less than substantial. No weighting needs to be given either way to those matters of considered non harm in landscape and visual terms.

- 6.2 The Public benefits of proposal in terms of renewable energy production which is a national and global endeavour are considered of sufficient magnitude to outweigh the substantial harm found to the Green Belt and all other harm identified above. These benefits identified attract very substantial weight in favour of the scheme. In this context, the harm to the Green Belt would be clearly outweighed by the other considerations identified and therefore the very special circumstances necessary to justify the development exist. Accordingly, the proposal would satisfy the local and national Green Belt policies outlined.
- 6.3 Moreover, there would be the added benefit of the additional planting, which would remain after the end of the limited period, which is afforded significant weight and the unchallenged Biodiversity Net Gain (BNG) is a further substantial benefit.
- 6.4 Weighing in favour of the proposal is the production of electricity which is afforded significant weight; the economic benefits which are afforded moderate weight; and the additional planting and BNG, which are together afforded significant weight. Taking all material considerations into account therefore in the balancing exercise this proposal constitutes sustainable development which should be approved.



Phil Drane BA (Hons) MRTPI

Director of Place

Relevant Development Plan Policies and Proposals

National Planning Policy Framework 2021

Core Strategy Adopted Version (December 2011) – policies CP1 Design, GB1 Green Belt Protection, ENV1 Protection and Enhancement of the Natural Landscape and Habitats and the Protection of Historical and Archaeological Sites, ENV3 Flood Risk, ENV4 Sustainable Drainage Systems, ENV6 Large Scale Renewable Energy Projects, T1 Highways,

Development Management Plan Policies: DM1 Design of New Developments, DM5 Light Pollution, DM25 Trees and Woodlands, DM26 Other Important Landscape Features, DM27 Species and Habitat Protection, DM29 Air Quality

Other Material Planning Policies:

Climate Change Act 2008 (2050 Target Amendment) Order 2019 National Planning Practice Guidance (2014, as amended);

National Policy Statements;

UK Solar PV Strategy Part 1: Roadmap to a Brighter Future (October 2013);

UK Solar PV Strategy: Part 2 (April 2014);

Committee on Climate Change: 2017 Report to Parliament - Meeting Carbon

Budgets: Closing the Policy Gap; and

IPCC Special Report on Global Warming of 1.5°C.

Background Papers:-

None.

For further information please contact Arwel Evans on:-

Phone: 01702 318037

Email: arwel.evans@rochford.gov.uk

If you would like this report in large print, Braille or another language please contact 01702 318111.

