Parish:	**Barwick**	
Proposal:	**Proposed solar photovoltaic (PV) farm with associated infrastructure for a temporary period of 27 years**	
Location:	**Proposed Solar Farm Fakenham Road Barmer Syderstone**	
Applicant:	**RES Ltd**	
Case No:	**15/01701/FM (Full Application - Major Development)**	
Case Officer:	**Mrs K Lawty**	**Date for Determination: 22 January 2016**

Reason for Referral to Planning Committee – Raises matters of wider concern, solar farm exceeds 1 hectare.

Case Summary

The overall site (10Ha) comprises part of an arable field on the south western side of the B1454 Fakenham Road near Barmer. The site lies in an area classed as 'countryside' on the Local Plan map for this locality and the land within the site is gently undulating.

The site is bounded by mature, native hedging along the north eastern and south eastern boundary with some sporadic trees. There are two pockets of woodland on the edges of the Site, one in the north eastern corner of the field and another excluded from the redline boundary to the south west of the development area.

The Site is bounded by the B1454 on its north-eastern boundary and by the C479 Bagthorpe to Hyde Park road on its north western edge. A sewage works is located on land adjacent to the Site to the west with farmland beyond. Agricultural land effectively surrounds the site.

This application seeks permission for a 5MW solar farm, including solar panels, plant, security fencing, landscaping and other associated equipment for a temporary period of 27 years.

The application is accompanied by a series of supporting documents including a Design & Access Statement, Planning Statement, Flood Risk Assessment, Statement of Community Involvement, Agricultural Land Classification document, Ecology Report, Geophysical Survey Report, Archaeological Investigations Trial Trenching Report, Cultural Heritage Report and Landscape & Visual Impact Assessment.

Key Issues

Planning Policy
Landscape and visual impact
Impact upon heritage assets
Access and highway matters
Other material considerations

Recommendation

APPROVE

THE APPLICATION

The Application Site ('the Site') is located in West Norfolk, approximately 0.8 km south east of Bircham Newton Training Centre, 4 km south east of Docking and 2.8 km to the north west of Syderstone.

The Site comprises of farmland. It is enclosed by mature hedgerows along the north eastern and south eastern boundary, including some scattered trees. There are two pockets of woodland on the edges of the Site, one in the north eastern corner of the field and another excluded from the redline boundary to the south west of the development area. The Site is currently managed as arable land and includes part of an area of set aside. The boundary to the south west of the Site is open to the field extending beyond. The north western boundary includes some trees and gappy broken hedgerow which is almost completely absent for large stretches.

The landform within the Site is gently undulating, with a south facing slope that plateaus to the south west before the field to the south west of the Site boundary gently rises up to a north facing slope.

The Site is bounded by the B1454 on its north-eastern boundary and by the C479 Bagthorpe to Hyde Park road on its north western edge. A sewage works is located on land adjacent to the Site to the west with farmland beyond. A public footpath runs past the sewage works site, and meets the C479 just to the south west of the Site. The Parish Boundary crosses the Site so it falls partly within the Bagthorpe with Barmer Parish and partly within Barwick Parish.

The entirety of the Site is classed as Grade 3b agricultural land, meaning it is not considered to be 'best and most versatile' land. The Site lies entirely in Flood Zone 1, indicating the lowest risk of flooding. The Site falls outside of any defined settlement and therefore can be classified as 'open countryside' in planning terms.

The Site is not covered by any national or local landscape designations.

There are no national heritage designations or designated heritage assets within the Site. There are number of listed buildings and scheduled monuments within 4km radius of the Site, including most notably the Grade II* All Saints Church at Barmer which is located 600m to the east of the Site.

In terms of ecological interest, there are no designated sites present within or directly adjacent to the Site. The nearest being the Bircham Newton Heath County Wildlife Site located 550m to the west of the Proposed Development at its nearest point. There are no statutory ecology designations within 2km of the Site.

The Site is located approximately 11km to the south of the North Norfolk Coast Special Area of Conservation (SAC)/Special Protection Area (SPA)/Ramsar site/Site of Special Scientific Interest (SSSI).

The application is for a solar PV farm comprising rows of fixed PV panels, mounted on galvanised metal frames set into the ground by direct piling, and associated ancillary infrastructure. The purpose is to generate renewable electricity which can be fed into the local distribution network.

The Site is currently utilised for arable farming although the land is of low quality agricultural (Grade 3b). The use of the Site as a solar farm will be for a period of up to 27 years (25 year operation period) after which the Site will be returned to its current use. Upon decommissioning of the Site, all infrastructure would be removed.

The solar panels will have a generating capacity of approximately 5MW and will be fixed on to the 41 south facing array rows. The panels will at a 20-30 degree module incline, arranged across the site on an east/west axis. The panels will have a maximum height of 2.5m to the top of panel frame on level ground, including 0.5m of ground clearance to enable maintenance access below the PV modules.

Associated buildings and infrastructure will also include small electrical cabinets (up to 50), 4 embedded substations in self-contained weatherproof units (9m long by 3m wide and 3m high), buried cabling (up to 1.5m below ground), a secondary access for use on completion of development, a grid connection building (12m long by 6m wide and 4.5m high), 2 energy storage containers on an area of hardstanding approximately 10m x 21m.

Perimeter security/deer fencing (2m high) and planting schemes will enclose the site and a temporary construction compound is proposed for the storage of materials. Approximately 15 poles are proposed for infra-red CCTV security cameras approx. 3.5m high.

Access to the site is proposed to be gained via an existing gated entrance located along a lane running the length of the north western boundary. Construction traffic will approach this lane via A10, A149, A148 and then the B1454 travelling North West.

The main site access for the construction period will be via the existing main field entrance from C479 Bagthorpe to Hyde Park road in the middle of western perimeter of the field.

On completion of the development an existing secondary access will be used for the main site access for the period of operation. This is also from the lane just to the south of the northern woodland area. Access at this point will require just a short area of track providing access to the Grid Connection Building.

The application is accompanied by a series of supporting documents including a Design & Access Statement, Planning Statement, Flood Risk Assessment, Statement of Community Involvement, Agricultural Land Classification document, Ecology Report, Geophysical Survey Report, Archaeological Investigations Trial Trenching Report, Cultural Heritage Report and Landscape & Visual Impact Assessment.

SUPPORTING CASE

The application has been supported by the following documents:-

- Planning Statement
- Design and Access Statement;
- Landscape and Visual Impact Assessment (LVIA);
- Cultural Heritage Report;
- Geophysical Survey Report,
- Archaeological Investigations Trial Trenching Report;
- (Extended) Phase 1 Habitat Survey Report (“Ecology Report”);
- Agricultural Land Classification Report;
- Flood Risk Assessment; and
- Statement of Community Engagement (SCI).

The Design and Access Statement states that the key reasons for siting the Proposed Development here are:

- To benefit from the south facing slope on this part of the Site;
- To keep the distance to the grid connection to a minimum;
- To enable a layout that benefits from the undulation in this part of the Site, which for example allows the Grid Connection Building to be naturally contained by the site's typography; and
- To benefit from the screening potential of the already present trees and hedgerows within this part of the Site, which can be reinforced and grown to increase their habitat and screening value over time.

The Proposed Development will have a capacity of approximately 5 MW of renewable electricity subject to detailed design and optimisation. The PV module array and ancillary infrastructure will have an operational area of approximately 9ha.

A PV Array consists of PV Modules (commonly called "solar panels"), typically of dimensions of 1m x 1.6m and 50mm thick, arranged on mounting racks.

The proposed PV Modules will be mounted on steel or aluminium racking systems with a maximum height above ground level of 2.5m - up to 2m of Panel Modules at 20 - 30 degrees from the horizontal, plus up to 0.5m of ground clearance to enable maintenance access below the PV Modules. Racking will be mounted on foundations which will consist of direct embedded piles

Small electrical cabinets, for control and protection of the cable system gathering energy from the panels and inverters, will be installed adjacent to some of the panel racks. They will generally be located near or under the raised northern edge of the racks so that they are shaded and visually unobtrusive. There may be up to 50 of these electrical cabinets with dimensions up to 1,058 mm L x 848 mm H x 245 mm W.

Embedded substations housing transformers and inverters will be located within the PV Module Array. There will be 4 embedded substations in self-contained weatherproof units. The inverters will convert the Direct Current (DC) to Alternating Current (AC) and the transformers will uprate the voltage from a Low Voltage to a Medium or High Voltage as required by the electricity grid connection. Each unit will be up to 12m long by 3m wide and 3m high.

The main site access for the construction period will be via the existing main field entrance from the C479 Bagthorpe to Hyde Park Road in the middle of western perimeter of the field. On completion of the development an existing secondary access will be used for site access for the period of operation. This is also from the Bagthorpe to Hyde Park Road just to the south of the northern most woodland area and will allow for a short area of on-site track providing access to the Grid Connection Building.

It is proposed to install 2 storage containers at the Site on an area of hardstanding approximately 10m x 21m. The energy storage devices will be located adjacent to the Grid Connection Building in the north east part of the Site where visibility will be limited.

The PV Modules will be surrounded by wire deer stock fencing with wooden posts up to 2m high.

A temporary Site Compound will be required during the construction period. The compound will be used for storage of materials, as well as containing office and welfare facilities and will be fenced off using temporary fencing for safety and security. It will also include an area for worker and visitor parking. The compound will be surfaced appropriately with compacted stone, which will be removed following the completion of the construction phase.

The Planning Statement concludes:

The Proposed Development is for the construction of a Solar Photovoltaic (PV) Farm with ancillary infrastructure on land to west of the B1454, near Barmer. The development will deliver considerable benefit in respect of renewable energy generation to meet the energy requirements of approximately 1,000 homes every year (the homes equivalent has been calculated using the predicted annual electricity generation of the site and the annual average domestic electricity consumption figures from the Department of Energy and Climate Change 2013 (4128kWh).

The impacts of the Proposed Development have been thoroughly assessed and mitigation measures identified through the preparation of the supporting documents and assessments submitted with this application. The location of the Proposed Development has been carefully sited on land which is not subject to any landscape, ecology or heritage designations, is assessed to be of limited agricultural value. The Proposed Development has been designed at an appropriate scale that can be effectively accommodated to minimise potential issues regarding landscape and visual impact. The proposals also include measures to improve the biodiversity of site to the benefit of the local area.

Crucially, as identified in this Statement, the Proposed Development is considered to be acceptable in accordance with the provisions of the adopted Development Plan and other material considerations including national planning policy and guidance and emerging local planning policy.

On this basis, the Proposed Development should be granted planning permission.

The Landscape and Visual Impact Assessment demonstrates that the proposed development will have limited impact on the landscape and views. It summarises that large scale visual effects, where the proposed development would form a major new element in the view, would generally be limited up to approximately 50m from the site.

Beyond 50m up too 600m, roadside and field boundary hedgerows, and woodland, begin to the filter views and restrict visibility of the site to a Medium scale visual effect. Beyond 600m up to approximately 1.5km, the layering effect of the intervening vegetation and localised undulations in the topography further restrict views to that of Small visual effects. Beyond this distance, the layer effect of vegetation significantly reduced to the potential visibility of the site and Proposed Development.

Views would be generally limited to PROW and local roads within an area approximately 1km of the site. Some direct views would possible from locations situated in close proximity to the site, such as viewpoints 1, 2 and 7. These would reduce over time as proposed hedgerow planting matures. Beyond 1km, views would be largely restricted by the intervening vegetation and undulating topography.

The scheme includes mitigation measures to minimise any visual impact and the height of panels and associated infrastructure. The scheme proposes:

- Existing hedgerows to the north (along the C479 Bagthorpe to Hyde Park road); the north east (along the B1454); and the south eastern boundaries would be retained, with gaps planted up where necessary, and allowed to grow up to 3m; and
- Proposed new section of hedgerow to the south west of the Site, offset approximately 8m from the south western fence boundary.

The Cultural Heritage Assessment concludes there are no known significant archaeological remains (whether standing or buried) within the development site which might be impacted by the Proposed Development. The only expected remains are those of lost field boundaries and a former trackway, known from historic maps.

The development as currently designed will not have a detrimental effect upon the historic landscape fabric of the area.

The setting of all relevant cultural heritage assets in the vicinity (comprising, broadly within 5 km of the Proposed Development, 12 Scheduled Monuments, 50 Listed Buildings, 2 Conservation Areas, 1 Registered Park & Garden and 4 nearby non-designated buildings and parks) has been considered and the potential development effect upon the significance of the assets has been assessed. In the great majority of cases and after due inquiry, the formal finding of this assessment is that there will be no setting effects from the Proposed Development.

Only in the case of the wider setting of the redundant Church of All Saints, Barmer, is it considered that a significant adverse effect upon heritage-significance is likely to occur, having taken into account the special treatment indicated in law as proper for a Grade II* Listed Building. This low Major effect (a distraction towards the lower end of the range of 'material but less than substantial harm') will occur from viewpoints, adjacent to the Proposed Development along the C479 Bagthorpe to Hyde Park road, in which the I km distant 'landmark' qualities of the church are currently engaged to a minor degree (under conditions of low winter foliage and only with strong high-angle or westering sunlight).

The fundamental elements (architectural and historical) of the heritage-significance of the church will at first remain unaffected, either by the Proposed Development alone or cumulatively with the existing Chiplow and Jack's Lane Windfarm permissions. Once the new roadside hedging has grown up, the adverse effect upon the heritage-significance of the church will be slightly increased as all distant views of the church from this road become blocked.

PLANNING HISTORY

None

RESPONSE TO CONSULTATION

Parish Council: Covered by Parish Meeting only.

Highways Authority: NO OBJECTION – subject to condition following submission of amended plans.

Historic England: NO OBJECTION - whilst the proposals would be a significant and alien introduction into the landscape, it would not be visible from the grade II* listed Church of All Saints, which is located to the south-east.

Environment Agency: No Comments - the Lead Local Flood Authority (LLFA) should be consulted on this application.

Environmental Health & Housing – Environmental Quality: No Comments

Public Rights of Way Officer: No Comments

Natural England: NO OBJECTION in relation to designated site; advice offered on habitat enhancement etc.

REPRESENTATIONS

NINE letters of **OBJECTION** received, raising the following concerns:

- This will blight, spoil the landscape;
- Payment of £5000.00 from RES is an insult; will provide a new bench or two;
- Elizabeth Truss quote: no longer receive agricultural subsidies for land that had solar power on, saying the "ugly" panels were "a blight on the countryside and villages" and were pushing production of meat and produce overseas: "solar panels are for south facing rooftops"
- Too much for the area
- Countryside is being vandalised
- Farmland is unusable for life of scheme
- Grazing land for pink footed geese
- Distracting to drivers: glare: highway safety issues for drivers
- Access to site from main road: highway safety issues
- How can this scheme help our energy problems? How much energy potential?
- These developments should be in larger countries with huge desert areas
- Solar farms do not appear in some parts of the UK where influential people live
- Negative impact on property values
- Concern over RES's organisation of construction traffic based on what happened during Jack's Lane Wind Farm, poor signage, blocked farm accesses etc.

ONE letter of **SUPPORT** received raising the following grounds:

- will provide non-carbon energy

NATIONAL GUIDANCE

National Planning Policy Framework – sets out the Government's planning policies for England and how these are expected to be applied.

National Planning Practice Guidance - Provides National Planning Practice Guidance, in support of and in addition to the NPPF

LDF CORE STRATEGY POLICIES

CS01 - Spatial Strategy

CS02 - The Settlement Hierarchy

CS06 - Development in Rural Areas

CS08 - Sustainable Development

CS11 - Transport

CS12 - Environmental Assets

SITE ALLOCATIONS AND DEVELOPMENT MANAGEMENT POLICIES PRE-SUBMISSION DOCUMENT

DM1 – Presumption in Favour of Sustainable Development

DM15 – Environment, Design and Amenity

DM20 - Renewable Energy

PLANNING CONSIDERATIONS

The application raises the following key issues:-

- Planning Policy
- Landscape and visual impact
- Impact upon heritage assets
- Access and highway matters
- Other material considerations

Planning Policy

National Policy

Two of the 12 'Core Planning Principles' identified at paragraph 17 of the NPPF comprise statements to the effect that planning should:

- Take account of the different roles and character of different areas, promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it; and
- Contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this Framework.

Further, Section 11 of the NPPF, entitled 'Conserving and Enhancing the Natural Environment' states at paragraph 109 that the planning system should contribute to and enhance the natural and local environment (Council's emphasis) by, amongst other things, "protecting and enhancing valued landscapes".

Policy guidance in the NPPF very much regards landscape and visual impacts of development as being a material consideration. This is so even in circumstances where the effects of the proposed development will impact on land lying outside nationally designated areas, since two of the 12 Core Principles identified in the NPPF are expressly concerned with effects on "the countryside" and "the natural environment" in general terms, as opposed to only those areas which benefit from particular designation. Further, Section 11 of that document expressly promotes the protection and enhancement of 'valued landscapes' in the general context of the "local environment", as opposed to protection of areas benefiting from particular designation.

In terms of heritage assets, Section 12 of the NPPF deals with 'Conserving and enhancing the historic environment'. Paragraph 126 of the guidance emphasises that heritage assets are an "irreplaceable resource", and directs local planning authorities to "conserve them in a manner appropriate to their significance".

Paragraph 129 in Section 12 exhorts local planning authorities to identify and assess the particular significance of any heritage asset that may be affected by a proposal, before going on to require consideration of the effect that a proposed development will have upon a heritage asset. In this context, the NPPF makes specific reference to development which affects the setting of heritage assets.

Paragraph 132 also expressly refers to the potential for development to cause harm to the significance of a heritage asset by reason of impact on its setting, stating that: 'Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting'. Paragraph 132 concludes by stating that substantial harm to or loss of designated heritage assets of the highest significance should be wholly exceptional.

Paragraphs 133 and 134 of the NPPF speak of 'substantial harm' and 'less than substantial harm' to the significance of a designated heritage asset and the need to weigh any such harm against the benefits of the proposed development.

There is considerable support in the NPPF for renewable energy development of the type proposed in the application. In this context one of the Core Planning Principles set out in paragraph 17 of the document expressly supports "the transition to a low carbon future in a changing climate…and…the use of renewable resources (for example, by the development of renewable energy)".

Further, Section 10 of the NPPF, entitled 'Meeting the challenge of climate change, flooding and coastal change', provides support for renewable energy development. The opening paragraphs of this section set out the role that planning has to play in helping to secure "radical reductions in greenhouse gas emissions [and] supporting the delivery of renewable and low carbon energy and associated infrastructure". Thereafter, paragraph 97 states that local planning authorities should recognise the need for all communities to contribute to energy generation from renewable sources, and paragraph 98 directs authorities to approve planning applications for such development "if its impacts are (or can be made) acceptable".

Paragraph 112 of the NPPF states:

"Local planning authorities should take into account the economic and other benefits of the best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of higher quality."

That is then supported by National Planning Policy Guidance (NPPG), most recently issued on 6 March 2014:

"What are the particular planning considerations that relate to large scale ground-mounted solar photovoltaic Farms?

The deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in undulating landscapes. However, the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively.

Particular factors a local planning authority will need to consider include:

- encouraging the effective use of land by focussing large scale solar farms on previously developed and non-agricultural land, provided that it is not of high environmental value;
- where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays. See also a speech by the Minister for Energy and Climate Change, the Rt Hon Gregory Barker MP, to the solar PV industry on 25 April 2013 and Written Ministerial Statement – Solar energy: protecting the local and global environment – made on 25 March 2015?
- that solar farms are normally temporary structures and planning conditions can be used to ensure that the installations are removed when no longer in use and the land is restored to its previous use;
- the proposal's visual impact, the effect on landscape of glint and glare and on neighbouring uses and aircraft safety;
- the extent to which there may be additional impacts if solar arrays follow the daily movement of the sun;
- the need for, and impact of, security measures such as lights and fencing;
- great care should be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large scale solar farms on such assets. Depending on their scale, design and prominence, a large scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset;
- the potential to mitigate landscape and visual impacts through, for example, screening with native hedges;
- the energy generating potential, which can vary for a number of reasons including, latitude and aspect.

The approach to assessing cumulative landscape and visual impact of large scale solar farms is likely to be the same as assessing the impact of wind turbines. However, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography the area of a zone of visual influence could be zero."

In the Ministerial speech referred to and incorporated in this Guidance, Gregory Barker said:

"…Solar is a genuinely exciting energy of the future, it is coming of age and we want to see a lot, lot more.

But not at any cost… not in any place… not if it rides roughshod over the views of local communities."

"…we will do our best to spread examples of best practice, focussing deployment on buildings and brownfield land – not greenfield."

"Where solar farms are not on brownfield land, you must be looking at low grade agricultural land which works with farmers to allow grazing in parallel with generation…"

The Written Ministerial Statement from 25 March 2015 refers:

"…Meeting our energy goals should not be used to justify the wrong development in the wrong location and this includes the unnecessary use of high quality agricultural land. Protecting the global environment is not an excuse to trash the local environment. When we published our new planning guidance in support of the Framework, we set out the particular factors relating to large scale ground mounted solar photovoltaic farms that a local council will need to consider. These include making effective use of previously developed land and, where a proposal involves agricultural land, being quite clear this is necessary and that poorer quality land is to be used in preference to land of a higher quality.

We are encouraged by the impact the guidance is having but do appreciate the continuing concerns, not least those raised in this House, about the unjustified use of high quality agricultural land. In light of these concerns we want it to be clear that any proposal for a solar farm involving the best and most versatile agricultural land would need to be justified by the most compelling evidence. Of course, planning is a quasi-judicial process, and every application needs to be considered on its individual merits, with due process, in light of the relevant material considerations."

Development Plan Policy

The Local Development Framework Core Strategy was adopted by the Council on 28th July 2011.

CS01 'Spatial Strategy' contains a number of key note development priorities for the Borough, which aims to:-

- Facilitate and support the regeneration and development aspirations identified in the Regional Spatial Strategy;
- Encourage economic growth and inward investment;
- Improve accessibility for all to services; education; employment; health; leisure and housing;
- Protect and enhance the heritage, cultural and environmental assets and seek to avoid areas at risk of flooding; and
- Foster sustainable communities with an appropriate range of facilities.

CS06 'Development in Rural Areas' sets out a 4 point strategy for rural areas. One of these four points is to 'maintain local character and a high quality environment'. CS06 goes on to elaborate, stating that 'beyond the villages and in the countryside the strategy will be to protect the countryside for its intrinsic character and beauty, the diversity of its landscapes, heritage and wildlife, and its natural resources to be enjoyed by all'.

CS08 ‘Sustainable Development’ contains a section on renewable energy, stating that the Council will support and encourage the generation of energy from renewable sources. Schemes will be permitted unless there are unacceptable locational or other impacts that could not be outweighed by wider environmental, social, economic and other benefits.

Policy CS12 ‘Environmental Assets’ refers to the Borough’s environmental assets as being its green infrastructure, historic environment, landscape character, biodiversity and geodiversity. Proposals to protect and enhance these assets will be ‘encouraged and supported’.

The text of CS12 concludes by stating that: “Development proposals should demonstrate that their location, scale, design and materials will protect, conserve and, where possible, enhance the special qualities and local distinctiveness of the area (including its historical, biodiversity and cultural character), gaps between settlements, landscape setting, distinctive settlement character, landscape features and ecological networks”.

It is clear that Central Government is seeking to retain high quality agricultural land for the production of crops, hence pushing the prospect of solar farms onto brownfield or low grade agricultural land.

Although not yet part of the Development Plan, emerging Policy DM20 of the Site Allocations & Development Management Policies Document (SADMPD) sets out how these matters will be considered:

“Proposals for renewable energy and associated infrastructure, including the landward infrastructure for offshore renewable schemes, will be assessed to determine whether or not the benefits they bring in terms of the energy generated are outweighed by the impacts, either individually or cumulatively, upon:

* Sites of international, national or local nature or landscape conservation importance, whether directly or indirectly, such as the Norfolk Coast Area of Outstanding Natural Beauty (AONB), Sites of Special Scientific Interest (SSSIs) and Ramsar Sites;

- The surrounding landscape and townscape;
- Designated and un-designated heritage assets, including the setting of assets;
- Ecological interests (species and habitats);
- Amenity (in terms of noise, overbearing relationship, air quality and light pollution);
- Contaminated land;
- Water courses (in terms of pollution);
- Public safety (including footpaths, bridleways and other non-vehicular rights of way in addition to vehicular highways as well as local, informal pathway networks); and
- Tourism and other economic activity.

In addition to the consideration of the above factors, the Borough Council will seek to resist proposals where:

a) There is a significant loss of agricultural land;
or
b) Where land in the best and most versatile grades of agricultural land are proposed to be used.

Development may be permitted where any adverse impacts can be satisfactorily mitigated against and such mitigation can be secured either by planning condition or by legal agreement.”

Landscape and visual impact

The application site consists of gently undulating agricultural land where, from the north, the landform falls progressively towards the south, before gently rising up towards the west and plateauing beyond the south western boundary of the site.

The site is enclosed on the road sides by mature hedgerows, although there are notable gaps at intermittent intervals. There are a number of scattered trees along both eastern and western boundaries. Two pockets of woodland blocks are situated just outside of the redline area in the northern extent of the field and to the south east of the site boundary.

In terms of Landscape Character Areas as identified by the Landscape Character Assessment prepared for the Council by Chris Blandford Associates (CBA) in 2007 and used as a supporting document for the Core Strategy, the site lies within 1.5km of the following:

- I – Rolling Open Farmland Landscape Type: I6 Bagthorpe (okm, site within), and
- J – Plateau Farmland Landscape Type: J4 Bircham Newton (170m, south west), J1 Docking (okm, site within), J2 Bircham (1.10km, south).

As previously described, the land rises gently from south to north. The panels would therefore have a visual impact when viewed in close proximity along the C479 Bagthorpe to Hyde Park road, travelling northwards towards Fakenham Road.

A Landscape & Visual Impact Assessment (LVIA) is submitted with this application which contains photomontages from vantage points showing scenes both without and with proposed additional screen landscaping. Views are taken from public roads, footpaths and land around the site. This shows that views of the solar facility from the surrounding area will be restricted given the distances involved and the lie of the land.

The LVIA concludes that the proposed development will have limited impact on the landscape and views. It summarises that large scale visual effects, where the proposed development would form a major new element in the view, would generally be limited up to approximately 50m from the site.

Beyond 50m up to 600m, roadside and field boundary hedgerows, and woodland, begin to filter views and restrict visibility of the site to a Medium scale visual effect. Beyond 600m up to approximately 1.5km, the layering effect of the intervening vegetation and localised undulations in the topography further restrict views to that of Small visual effects. Beyond this distance, the layer effect of vegetation significantly reduced to the potential visibility of the site and Proposed Development.

Views would be generally limited to PROW and local roads within an area approximately 1km of the site. Some direct views would possible from locations situated in close proximity to the site, such as viewpoints 1, 2 and 7. These would reduce over time as proposed hedgerow planting matures. Beyond 1km, views would be largely restricted by the intervening vegetation and undulating topography.

The scheme includes mitigation measures to minimise any visual impact and the height of panels and associated infrastructure. The scheme proposes:

- Existing hedgerows to the north (along the C479 Bagthorpe to Hyde Park road); the north east (along the B1454); and the south eastern boundaries would be retained, with gaps planted up where necessary, and allowed to grow up to 3m; and

- Proposed new section of hedgerow to the south west of the Site, offset approximately 8m from the south western fence boundary.

In conclusion the application proposals would not compromise the 'inherent quality' of the local environment (as referred to in Core Strategy Policy CS12 of the LDF).

Impact on Heritage Assets

The application is accompanied by a Cultural Heritage Assessment. This concludes there are no known significant archaeological remains (whether standing or buried) within the development site which might be impacted by the Proposed Development. The only expected remains are those of lost field boundaries and a former trackway, known from historic maps.

The development as currently designed will not have a detrimental effect upon the historic landscape fabric of the area.

The setting of all relevant cultural heritage assets in the vicinity (comprising, broadly within 5 km of the Proposed Development, 12 Scheduled Monuments, 50 Listed Buildings, 2 Conservation Areas, 1 Registered Park & Garden and 4 nearby non-designated buildings and parks) has been considered and the potential development effect upon the significance of the assets has been assessed. In the great majority of cases and after due inquiry, the formal finding of this assessment is that there will be no setting effects from the Proposed Development.

Only in the case of the wider setting of the redundant Church of All Saints, Barmer, is it considered that a significant adverse effect upon heritage-significance is likely to occur, having taken into account the special treatment indicated in law as proper for a Grade II* Listed Building. This low Major effect (a distraction towards the lower end of the range of 'material but less than substantial harm') will occur from viewpoints, adjacent to the Proposed Development along the C479 Bagthorpe to Hyde Park road, in which the 1km distant 'landmark' qualities of the church are currently engaged to a minor degree (under conditions of low winter foliage and only with strong high-angle or westering sunlight).

The fundamental elements (architectural and historical) of the heritage-significance of the church will at first remain unaffected, either by the Proposed Development alone or cumulatively with the existing Chiplow and Jack's Lane Windfarm permissions. Once the new roadside hedging has grown up, the adverse effect upon the heritage-significance of the church will be slightly increased as all distant views of the church from this road become blocked.

Historic England are chiefly concerned with the effect of any proposals on the setting of the grade II* listed Church of All Saints, which is located to the south-east. The church is surrounding by a belt of trees and is in a rural setting.

They have been on site to assess the impact of the proposals, and considered the annotated photographs included within the application. Historic England considers that whilst the proposals would be a significant and alien introduction into the landscape, it would not be visible from the church. Therefore there would not be any harm to the significance of the church by development within its setting and they raise no objection to the application.

Paragraph 134 of the NPPF states that 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 its optimum viable use.

In this case the production of 5MWh/year from this facility would produce enough energy to meet the needs of approx. 1000 households.

Access and highway matters

The application is accompanied by an Access Strategy contained within the Design and Access Statement. This states that the main site access will be via the A10, A149, A148 and B1454 approaching the C479 from the south west. In order for construction vehicles to undertake this manoeuvre a temporary overrun area would need to be provided. It is anticipated that any improvement works required to the junction will be carried under a Section 278 agreement or by a Small Highway Works Permit.

Construction vehicles will include private cars and minibuses for staff movements and commercial vehicles up to HGV's for component and materials delivery. There will be no abnormal load movements (wide, long or heavy). The maximum size of vehicle is expected to be transporting 40 foot containers with an estimated length of 16.5m. Axle loads will be less than 11 tonne for all vehicles.

Any construction movements and any off site highways improvements required to facilitate the development will be agreed with the local authority.

County Highways initially raised a holding objection re: access onto C479 Hyde Park Road, as detailed on DRG 03407D2302-01requires large articulated HGVs to travel for some distance on the opposing carriageway to make the turn into the C479. They did not consider this to be a safe means of access considering the potential numbers making this manoeuvre.

However, amended plans for a revised junction have since been submitted, which the Highways Authority now raises no objection to, conditionally.

Other Matters

Loss of agricultural land

The Applicant has submitted an Agricultural Land Classification site specific report produced by Berrys which takes account of the individual limitations of the land and thus calculates its grade. The report concludes that The Agricultural Land Classification of c. 18ha South of the B1454 road forming part of Barwick Hall Farm has been determined as Grade 3b in accordance with the procedures set out in 'Revised guidelines and criteria for grading the quality of agricultural land' (MAFF, October 1988). The limiting factors include soil texture, droughtiness and erosion risk.

Grade 3b is defined as land capable of producing moderate yields of wider range crops or high yields of grass. Grade 3b is not defined as the best and most versatile agricultural land, those being Grades 1, 2 and 3a as defined by the Agricultural Land Classification.

Government policy directs that if greenfield land has to be used, that it is directed to the poorer quality land and thus, insofar as agricultural land classification, the solar farm would be sited on such land in accordance with the NPPF and NPPG.

In justifying the selection of this site, the applicant has submitted what amounts to a sequential test which includes planning constraints mapping and analysis across the county and more localised.

Flood risk

As a major development the application is accompanied by a flood risk assessment (FRA) and the site lies within Flood Zone 1 of the Council-adopted Strategic Flood Risk Assessment. Potential surface water, groundwater and 'residual' flood risks have been identified at the lower lying southwestern portion of the site, although the extent, depth and duration of such flooding has been assessed as minimal and unlikely to impact upon proposed site operations.

The Environment Agency notes that the site is located in Flood Zone 1 (low risk) and exceeds 10 hectares in size. They confirm they are no longer a statutory consultee for developments on sites one hectare or more in Flood Zone 1.

Accordingly, the Lead Local Flood Authority (LLFA) has been consulted on this application, but at the time of writing no comments have been received.

Details of surface water disposal may be controlled via condition.

Ecology

The application is accompanied by an Ecology Report which confirms there are no protected species affected by this proposed development.

The construction of the proposed development, if undertaken during the winter period, could result in a minor displacement of this bird species from the large field to the southeast of the site, if present at the time. The works are unlikely to affect any of the bird species using the large fields to the east of the site, which are the distal side of the B1454 road. Any displacement would be temporary (i.e. during the construction period only), and is unlikely to result in a greater level of disturbance than that caused by existing farming operations. As such, no disruption to feeding patterns of this species or flight paths to and from the North Norfolk Coast SAC/SPA/Ramsar site/SSSI are anticipated as a result of the proposals. No significant adverse impact on pink-footed goose or the designated site is, therefore, anticipated as a result of the proposals.

All of the trees and hedgerows will be retained and a root protection zone will be maintained around each tree, with a standoff of 10-20m between the photovoltaic modules and the hedgerows, trees and adjacent woodland. The hedgerows will be gapped-up using locally-appropriate native species, and will be allowed to grow up to 3m tall (and subsequently managed to maintain this structure). A new hedgerow will also be planted along the southwestern boundary of the site. These measures will create dense hedgerows and will increase the habitat connectivity between the site and the surrounding landscape; this will enhance the value of the hedgerow resource to wildlife.

The arable field will be converted to native wildflower meadow underneath the solar panels. This meadow will either be sheep-grazed or cut annually throughout the operation of the proposed development. Arable fields are a ubiquitous feature in the local landscape. The loss of the arable field is not, therefore, likely to be significant beyond the immediate context of the site. The conversion of the arable field to native wildflower meadow will enhance the ecological value of the site by increasing the diversity of habitats and by enhancing its value to invertebrates and small mammals.

Bats - Since the proposed development will not involve any additional lighting, no indirect adverse impacts are expected to arise as a result of illuminating the retained suitable roosting, foraging and commuting habitats.

Great crested newts - Although the ponds provide potentially suitable habitat for great crested newt, no evidence has been found to indicate its presence. The works are, therefore, considered unlikely to affect this species.

Birds - It is recommended that works within the arable fields are carried out between September and January, in order to avoid the bird breeding season. If any work has to take place during the bird breeding season, then it is recommended that the field is surveyed for active bird nests by a suitably qualified ecologist before the work is carried out. If active bird nests are present, then work within the area supporting the nests would need to be delayed until nesting activity has ceased.

Reptiles - The works will be sited within the open arable field, and will result in the loss of up to 0.5ha of arable set-aside, vegetated with a mosaic of tall ruderal vegetation and neutral grassland, which is assessed as providing suitable habitats for foraging, basking and sheltering reptiles. It is therefore recommended that a precautionary approach is adopted. Prior to works affecting the arable set-aside, this area should be hand-searched for the presence of reptiles by a suitably qualified ecologist.

Badger - No evidence of badger was located within or adjacent to the site and the works are, therefore, considered highly unlikely to result in an adverse impact on this species.

In conclusion, the landscape mitigation measures plus the conversion to native wildflower meadow would create a more natural habitat with biodiversity enhancements.

Natural England has no objection to the proposal and confirms the proposal is unlikely to affect any statutorily protected sites or landscapes.

It is recommended that the mitigation and enhancement measures set out within the Ecology Report are controlled via planning condition. This approach accords with the sentiments of the NPPG, which states (inter alia) that where a proposal involves greenfield land, the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays.

Archaeology

An Archaeological Evaluation has been submitted with the application. No finds or features were present from pre-Medieval periods. The only features recorded were of late Medieval or post-Medieval date. Finds have been recovered in neighbouring villages with the possibility of a Medieval village being present at Barmer indicating settlement within reasonably close proximity to the site. However, the complete lack of archaeological finds or features present at Jack's Lane indicates that the land was not even being manured in the medieval/post-medieval period, and that it may therefore have been under heath, pasture or woodland throughout the period.

There are no implications in terms of archaeology or heritage assets in this case.

Environmental Impact Assessment screening

The proposal was screened at the pre-application stage in accordance with Regulation 7 of the EIA Regulations 2011. It was concluded that full EIA was not required.

Residential Amenity

The closest residential properties are Hyde Park (on the opposite side of the C479 Hyde Park Road from the site), Frog's Hall (approx. 390m to the north west), properties towards the Bircham Newton Training Centre (approx.590m, north west) and at Barmer, (approx. 870m, east). A mixture of trees and hedges screen these properties from direct views of the development.

Delivery/construction times are specified within the application details (pages 19 - 20 Design and Access Statement) and may be controlled via condition.

The site will not be manned yet secured by CCTV, which is infra-red and therefore there would be no light pollution created by this proposal.

Glint & Glare

The topic of glint & glare has been addressed within the LVIA and notes that solar PV panels are purposely designed to absorb rather than reflect light. The surface of PV panels is intentionally rough to reduce reflection and facilitate absorption of the maximum quantity of sunlight. The panel frames and racking are likely to be aluminium and steel with a matt finish to minimise solar reflection. Both glint and glare attenuate with distance, with glare reducing rapidly, thus affecting a relatively localised area.

Glint and glare only occur in bright conditions, and at certain angles of the sun and times of year, so the frequency and the duration of any effects will be relatively limited throughout the year.

Grid Connection

The electricity lines on-site will be underground. The renewable electricity produced by the Solar Farm will be sent to the grid by means of teeing into the 33kV underground cable which currently runs from Jack's Lane Wind Farm to the Hempton – Burnham Thorpe – Hunstanton 33 kV line.

Decommissioning

The solar farm is to be a temporary, medium term use of the site, with an operational life of some 27 years. At the end of this period all equipment is proposed to be removed from the site and remediation works undertaken. The land could be maintained as a natural habitat or restored to agriculture (the latter use without the requirement for planning permission). Once again this may be controlled via condition.

CONCLUSION

The proposed development would produce 5MW of energy from renewable sources. Although there are no regional targets for the production of renewable energy, there is still strong support for renewable energy developments in national and local policy and in other non-planning documents.

The NPPF itself indicates that 'substantial' weight should be given to the contribution a scheme such as this makes towards achieving national renewable energy targets.

Central Government now indicate that lower grade land should be used to take this form of development and indeed this application relates to Grade 3b classed land.

The application site is not in any nationally designated landscape areas, and it is concluded that overall the proposed development could be successfully accommodated and assimilated into the surrounding landscape without causing unacceptable harm to the landscape character, visual amenity or landscape setting of the area.

Paragraph 134 of the NPPF states that 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 its optimum viable use. In this case, the proposal would deliver considerable benefit in respect of renewable energy generation to meet the energy requirements of approximately 1000 households (the homes equivalent has been calculated using the predicted annual electricity generation of the site and the annual average domestic electricity consumption figures from the Department of Energy and Climate Change 2013 (4128kWh).

The location of the proposed development has been sited on land which is not subject to any landscape, ecology or heritage designations, is assessed to be of limited agricultural value. The proposed development has been designed at an appropriate scale that can be effectively accommodated to minimise potential issues regarding landscape and visual impact.

The site is of relatively low value ecologically and protected species avoidance measures during the development phase can be addressed by condition. The landscape mitigation measures plus the enhancement measures would create a more natural habitat with biodiversity enhancements. Indeed the quality of the land would be improved for its return to agricultural production when the project is decommissioned.

Traffic generation, apart from the construction and decommissioning periods, will be relatively light. The access route during construction is via the A10, A149, A148 and B1454 approaching the C479 from the south west. This may be controlled via condition.

There are no other flood risk issues or amenity concerns arising from the proposal.

The proposal is therefore considered to be acceptable, subject to mitigation measures and the imposition of certain conditions identified below.

RECOMMENDATION:

APPROVE subject to the imposition of the following condition(s):

1 Condition The development hereby permitted shall be begun before the expiration of three years from the date of this permission.

1 Reason To comply with Section 91 of the Town and Country Planning Act, 1990, as amended by Section 51 of the Planning and Compulsory Purchase Act, 2004.

2 Condition The development hereby permitted shall be carried out in accordance with the following approved plans:

- Drawing No. 03407D2205-01, Site Location Plan & Planning Application Boundary
- Drawing No. 03407D1001-04, Infrastructure Layout
- Drawing No. 03407D2301-01, Site Entrance, Sheet 1 of 2 – Permanent Site Entrance
- Drawing No. 03407D2301-01, Site Entrance, Sheet 2 of 2 – Temporary Compound Entrance
- Drawing No. 03407D2302-02, Junction B1454, Sheet 1 of 1
- Drawing No. 03236D2201-02, Typical Security Lighting & CCTV Support Details
- Drawing No. 03236D2211-04, Solar PV Array, Sheet 1 of 2 – Grid Connection Building Details Floorplan
- Drawing No. 03236D2211-04, Solar PV Array, Sheet 2 of 2– Grid Connection Building Details Elevations
- Drawing No. 03236D2207-01, Typical Embedded Substation Detail
- Drawing No. 03236D2209-01, Typical Deer Fence Detail
- Drawing No. 03236D2217-03, Typical Energy Storage Unit
- Drawing No. 03236D2202-03, Typical Access Track Details
- Drawing No. 03236D2203-04, Typical PV Module & Rack Detail – piled foundation

2 Reason For the avoidance of doubt and in the interests of proper planning.

3 Condition Notwithstanding the details submitted with this application, prior to the commencement of the development hereby approved, full details of the PV panels, mounting frames (and fixings), power conditioning units, collecting and transfer stations and storage container, shall be submitted to, and agreed in writing by, the Local Planning Authority. The development shall be implemented as agreed.

3 Reason To enable the Local Planning Authority to consider such details, in the interests of the visual amenity of the locality and to accord with the provisions of both the NPPF and LDF. This also needs to be a pre-commencement condition as this visual impact needs to be addressed at the earliest stage of the development.

4 Condition All solar panels, their supports, power conditioning units, transfer & collecting stations, storage container, the security fencing, any underground concrete to a depth of 1.5m, and any other equipment associated with the development hereby permitted, must be removed from site within 6 months of the solar farm ceasing to be operational.

4 Reason The application site lies in the open countryside and it is important that once the development has ceased the site is brought back into a full agricultural use in accordance with the provisions of the NPPF and Core Strategy Policies CS06 and CS12 of the LDF.

5 Condition Prior to the commencement of development, full landscaping details to accord with the proposed mitigation described within the Landscape and Visual Impact Assessment produced by LDA Design Consulting Ltd (dated September 2015) shall be submitted to and approved in writing by the Local Planning Authority.

5 Reason To assimilate the development into its countryside setting, in the interests of visual amenity and nature conservation and accord with the provisions of the NPPF and LDF. This also needs to be a pre-commencement condition as this visual impact needs to be addressed at the earliest stage of the development.

6 Condition The approved landscaping scheme referred to in Condition 5 above, shall be completed during the first planting season following the commencement of the development, or such longer period as may be agreed in writing by the Local Planning Authority. Any trees/shrubs/plants which, within a period of five years of being planted die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species unless otherwise agreed in writing by the Local Planning Authority.

6 Reason To ensure the work is carried out within a reasonable period and thereafter properly maintained, in the interests of visual amenity and nature conservation and accord with the provisions of the NPPF and LDF.

7 Condition The development shall be undertaken in accordance with the mitigation measures referred to in the Ecology Report produced by BSG Ecology (dated 04/06/2015).

7 Reason To ensure the protection and enhancement of natural habitat and any European Protected Species (EPS) on the application site, in the interests of nature conservation and in accordance with the provisions of Regulation 9(1) of the Amended Conservation Regulations 2012 and to accord with the provisions of the NPPF and Core Strategy policy CS12 of the LDF.

8 Condition Prior to the commencement of any works a Construction Traffic Management Plan and Access Route which shall incorporate adequate provision for the installation and removal of temporary junction alterations and addressing any abnormal wear and tear to the highway shall be submitted to and approved in writing with the Local Planning Authority in consultation with Norfolk County Council Highway Authority together with proposals to control and manage construction traffic using the 'Construction Traffic Access Route' and to ensure no other local roads are used by construction traffic.

8 Reason In the interests of maintaining highway efficiency and safety and to accord with the provisions of the NPPF and Core Strategy policy CS11 of the LDF.

9 Condition For the duration of the construction period all traffic associated with the construction of the development will comply with the Construction Traffic Management Plan and use only the 'Construction Traffic Access Route' and no other local roads unless approved in writing with the Local Planning Authority in consultation with the Highway Authority.

9 Reason In the interests of maintaining highway efficiency and safety in accordance with the NPPF and Core Strategy policy CS11 of the LDF.

10 Condition No works shall commence on site until the details of wheel cleaning facilities for construction vehicles have been submitted to and approved in writing by the Local Planning Authority in consultation with the Highway Authority.

10 Reason To prevent extraneous material being deposited on the highway.

11 Condition For the duration of the construction period all traffic associated with the construction of the development permitted will use the approved wheel cleaning facilities provided referred to in Condition 10.

11 Reason To prevent extraneous material being deposited on the highway.

12 Condition Notwithstanding the details indicated on the submitted drawings no works shall commence on site unless otherwise agreed in writing until a detailed scheme for the temporary off-site highway improvement works as indicated on drawing number 03407D2302-02 have been submitted to and approved in writing by the Local Planning Authority in consultation with the Highway Authority.

12 Reason To ensure that the temporary highway improvement works are designed to an appropriate standard in the interest of highway safety and to protect the environment of the local highway corridor.

13 Condition Prior to the first use of the development hereby permitted the off-site temporary highway improvement works referred to in condition 12 shall be completed to the written satisfaction of the Local Planning Authority in consultation with the Highway Authority.

13 Reason To ensure that the highway network is adequate to cater for the development proposed.

14 Condition For the duration of the construction and decommissioning period deliveries shall only be received at or despatched from the site between the hours of 0900 and 1800 hours Monday to Saturday and not at all on Sundays and Bank Holidays other than with the prior written approval of the Local Planning Authority.

14 Reason In the interests of the amenities of the locality, and to accord with the provisions of the NPPF and Core Strategy policy CS08 of the LDF.

15 Condition No development approved by this permission shall be commenced until a finalised scheme for the maintenance and provision of surface water drainage works has been submitted to and approved in writing by the Local Planning Authority. The scheme shall include:

1. Clear details of the ownership and responsibility of maintenance of all drainage on site, including SuDS elements, for the lifetime of the development.
2. Full details showing the location of all onsite storage. All on site storage needs to be designed to accommodate the volume of runoff generated by up to a 1% AEP (plus climate change) storm event.

The scheme shall be implemented in accordance with the approved details before the development is completed.

15 Reason To prevent the increased risk of flooding, to improve and protect water quality, and improve habitat and amenity, and ensuring the satisfactory storage of/disposal of surface water from the site in accordance with the provisions of the NPPF. This also needs to be a pre-commencement condition as drainage is a fundamental issue that needs to be planned for and agreed at the start of the development.

16 Condition The permission shall expire no later than 27 years from the date of decision.

16 Reason To define the terms of this permission and limit the lifetime of the development.