



DAVIS MEADE

Rural Land Management / Property Consultants

PLANNING DESIGN AND ACCESS STATEMENT IN SUPPORT OF:

Planning application in relation to the construction of a 0.99MW AC ground mounted solar array, comprising 2,500 x 570 watt solar pv panels to supply previously secured export grid connection and all associated works at:

Cop House Farm, Flint Road, Saltney Ferry,
Chester, Cheshire, CH4 0BW

On behalf of: Mr David Edge

Date: May 2025

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1. Introduction

- 1.1 The following planning statement (incorporating the design and access requirements) is submitted in support of the application to construct a 0.99MW AC ground mounted solar array, comprising 2,500, 570watt solar pv panels to supply a secured export grid connection and all other associated works at Cop House Farm, Flint Road, Saltney Ferry, Chester, Cheshire, CH4 0BW on behalf of Mr David Edge.
- 1.2 This installation is in line with the secured connection export capacity on the line. The proposal is therefore optimising secured local infrastructure for “embedded generation”. Embedded generation is preferred by the District Network Operators’ (DNOs’) as it reduces transmission losses to the end users, consequently helping to mitigate future increases in power costs.
- 1.3 Standard solar installation practice is to install approximately 20% more panels than the inverter rating as panels perform at a maximum efficiency of around 80%. Inverters must therefore be loaded with appropriate direct current (DC) panel strings in order for them to switch on early and switch off late, consequently optimising daylight hours available for generation.
- 1.4 The number of panels to be installed will be 2,500, 570 watt solar pv panels.
- 1.5 The Application Site is located a short distance west of the Chester suburbs of Saltney Ferry and Saltney, approximately 4km west of Chester town centre, at grid reference SJ36106557.
- 1.6 The site comprising 1.865 hectares of grassland, is situated on a flat site which is the southernmost portion of a larger field, currently used for cattle grazing. In the Green Infrastructure and Net Benefit for Biodiversity Report produced by ELM Associates its condition is assessed as “Moderate overall”. In addition, this assessment confirmed the habitat classification as Floodplain Coastal and Grazing Marsh, rating the habitat present on site as poor overall. The field is low lying and south facing, making it ideal for solar energy capture.
- 1.7 The site forms part of Cop House Farm, a working 250 head dairy farm, extending in total to around 715 acres. The site is set within the rural Cheshire landscape.

- 1.8 **Figure 1** below details the application site in outlined red. To the north west is the farmstead.



Figure 1 - Application site outlined in red.

- 1.9 The planning application proposes the installation of a solar farm comprising ground mounted solar PV panels with a 1.3MW DC capacity on a 990kw AC grid connection and running through a 1.5MW transformer including specialist framework, inverters, underground cabling, deer proof fencing, CCTV, and associated infrastructure, landscaping and environmental enhancements and a permanent grid connection hub.
- 1.10 There is an existing electricity cable in place going to the nearby substation that the site would be connected to.

- 1.11 The project is part of a diversification strategy by the farm as agricultural dairy incomes in recent years have been under significant pressures with rising input costs. The scheme will provide Mr Edge with an alternative source of income, that can be operated and run alongside the ongoing dairy business, without causing a significant impact on the land area available to the dairy enterprise.
- 1.12 In recent years, although the output price of milk has increased, this increase has been outweighed by the rising input costs resulting in significantly less profits for many farmers. Output prices are now falling however albeit the same decreases are not being seen in relation to input prices and again margins are being tightened.

2. Supporting Information

The following documents are submitted in support of the application:

- 2.1 Plans
 - 2.1.1 Site Location Plan
 - 2.1.2 Proposed Site Block Plan
 - 2.1.3 Technical drawings – Panel Elevations, Transformer Technical Drawing, Building to House Transformer
- 2.2 Preliminary Ecological Assessment Report
- 2.3 Historic Environment DBA
- 2.4 Landscape and Visual Impact Assessment
- 2.5 Topographical Survey

3. Planning Design and Access Statement

3.1 The Site

- 3.1.1 The site is located at Cop House Farm, approximately 3km west of Saltney along the canalised River Dee, and is an area of 18,650m² centred on approximate OS Grid Reference SJ3606 6557.
- 3.1.2 The site and surrounding land located on historically drained floodplain. The site and surrounding areas are largely agricultural land, with the River Dee located approximately 500m north of the site.
- 3.1.3 The site is accessed from off the B5129 highway, along an existing dairy track leading south, for approximately 500m or thereabouts. This will be the access route to the site for construction as well as ongoing maintenance works if required
- 3.1.4 The main farmstead for Cop House Farm is a further 400m along the B5129 public highway.
- 3.1.5 The site is adjacent, on the southern boundary, to the railway line which serves as the main route between Chester and North Wales.
- 3.1.6 The application site is approximately 1.865 hectares (4.608 acres) in size and comprises the southern proportion of a field parcel, currently split by the afore mentioned dairy track.

3.1.7 Figure 2 shows the application site in relation to the surrounding agricultural landscape.



Figure 2 - Application site in relation to the surrounding agricultural landscape

3.2 Site Context

- 3.2.1 The site lies within an agricultural landscape, physically discreet in the wider landscape and naturally screened by existing vegetation and surrounding topography. The landscape is characterised by large, irregular shaped fields with established boundaries and is clearly a managed agricultural landscape. The landscape impacts of the proposal will naturally be limited.
- 3.2.2 The site is situated in a predominately flat landscape associated with the flood plain of the River Dee, located approximately 500m to the north, while the sprawling complex of buildings and factory facilities making up Hawarden Aerodrome situated to the south and west results in this portion of the study area being deemed to be peri-urban in character. The village of Saltney is located 3.1km to the south-east while Chester Road (A5104), one of the principal routes into Chester City Centre from North Wales, lies approximately 1km south-east of the site.

3.3 The Agricultural Quality of the Site – Agricultural Land Classification

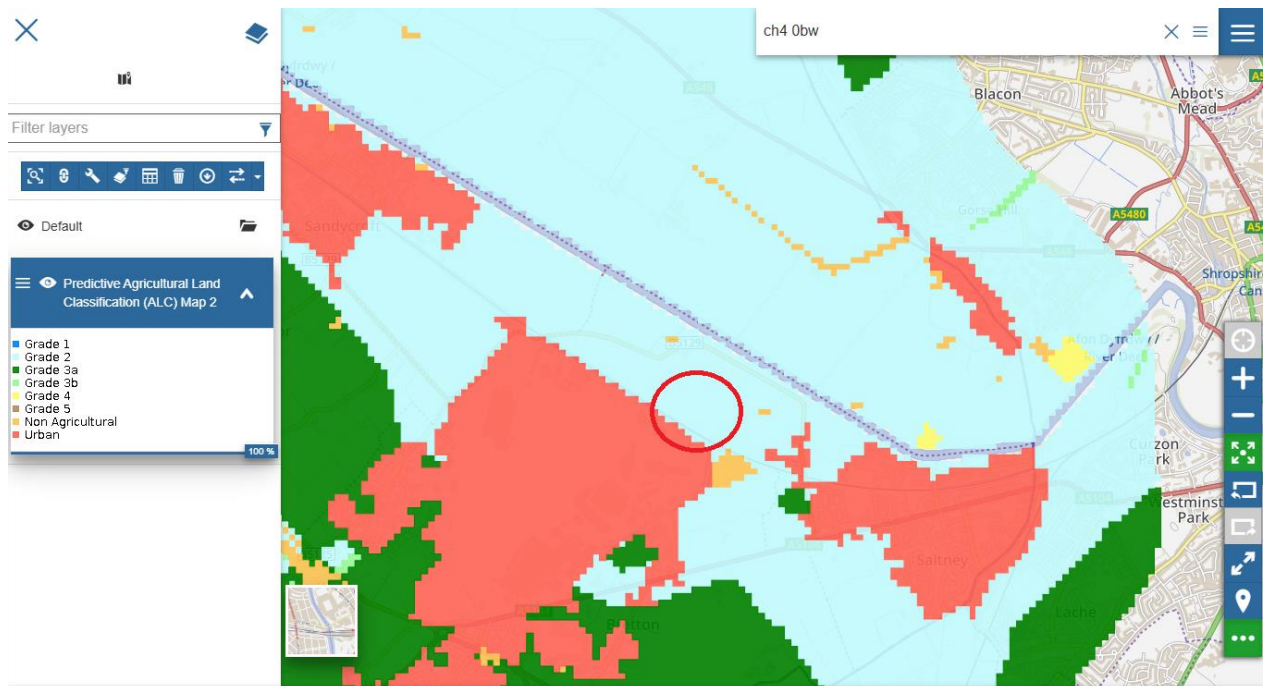


Figure 3 - Agricultural Land Classification Plan from Data Map Wales

- 3.3.1 A survey through the official DataMap Wales mapping database has been undertaken to determine the agricultural grading of the site and confirm whether the site does comprise any 'Best and Most Versatile' land. The findings of this survey determined the land to be grade 2. This is defined in the Welsh Government's Data Map and Agricultural Land Classification (ALC) as very good quality agricultural land. It can support a wide range of agricultural or horticultural crops, but may have some limitations in producing demanding crops like winter-harvested vegetables or arable root crops. The land is however immediately adjacent to a significant area of "urban land" as well as grade 3a and 4 land.
- 3.3.2 Cop House Farm has been owned by David Edge's family since the farm was purchased by his father, Geoff Edge as a sitting tenant in 1984. The application site is within close proximity to the nearby Airbus airfield and an array of factory buildings. The site is well screened with a mound of ballast for the adjacent railway to the south.
- 3.3.3 The field is known to be one of the less productive land parcels across the holding. Cop House farm is a dairy farm, however the milking herd are very rarely grazed on this field as it would hinder milk yields and it is therefore reserved for dry cows or heifers. When considered in isolation the application is more akin to a grade 5 description than the blanket grade 2 that the DEFRA system has applied to it.
- 3.3.4 Careful consideration has been given to the National Planning Policy Wales documentation in that it states that the economic and other benefits of the best and most versatile (BMV) land should be taken into account in planning decisions. It states that where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. In relation to solar farms it is noted that Planning Practice Guidance advised that local planning authorities should encourage the

effective use of land by focussing these developments on previously developed and non agricultural land, provided that it is not of high environmental value. The guidance advises that, in considering solar farm proposals located on greenfield sites, local planning authorities should consider whether:

- 3.3.4.1 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
- 3.3.4.2 The proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around the development.

This information is provided for within the ELM Associates Preliminary Ecological Assessment report.

3.4 Flood Risk Characteristics

- 3.4.1 The site is located within a low risk Flood Zone (lowest probability of flood risk). This means in any year land has a less than 0.1% chance of flooding from rivers or the sea.

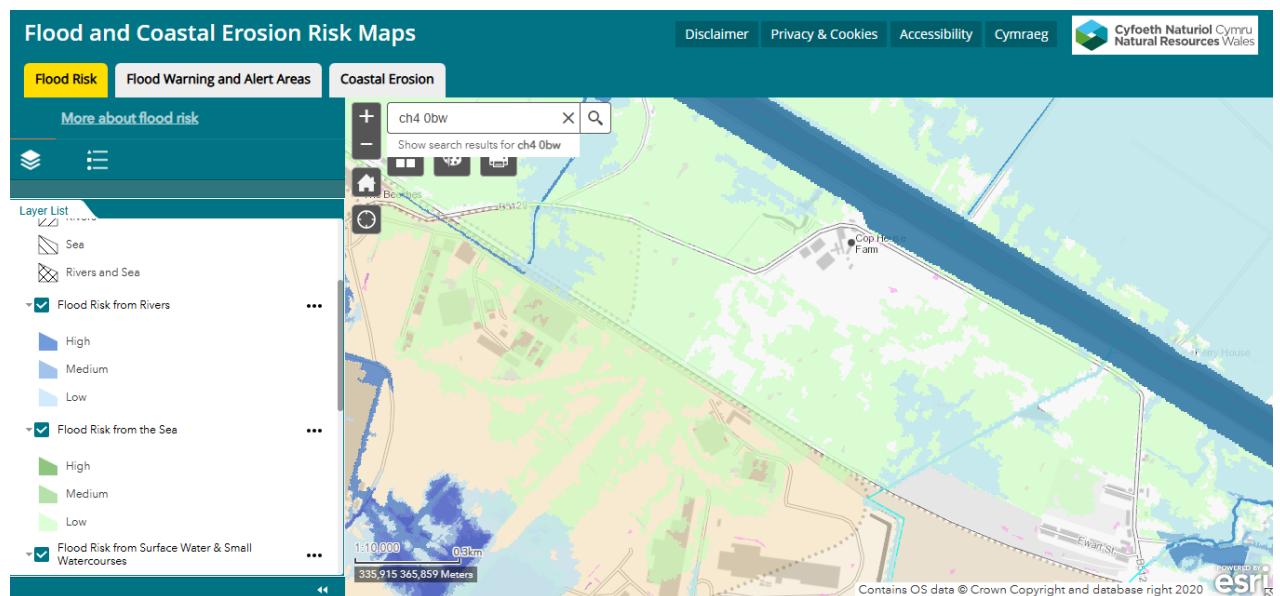


Figure 4 - Natural Resources Wales - Flood Risk Map

4 The Proposed Development

4.1 The Proposed Site

- 4.1.1 The application proposes the installation of a solar development comprising ground mounted solar PV panels including specialist framework, inverters, deer proof fencing, CCTV and associated infrastructure, landscaping and environmental enhancements.

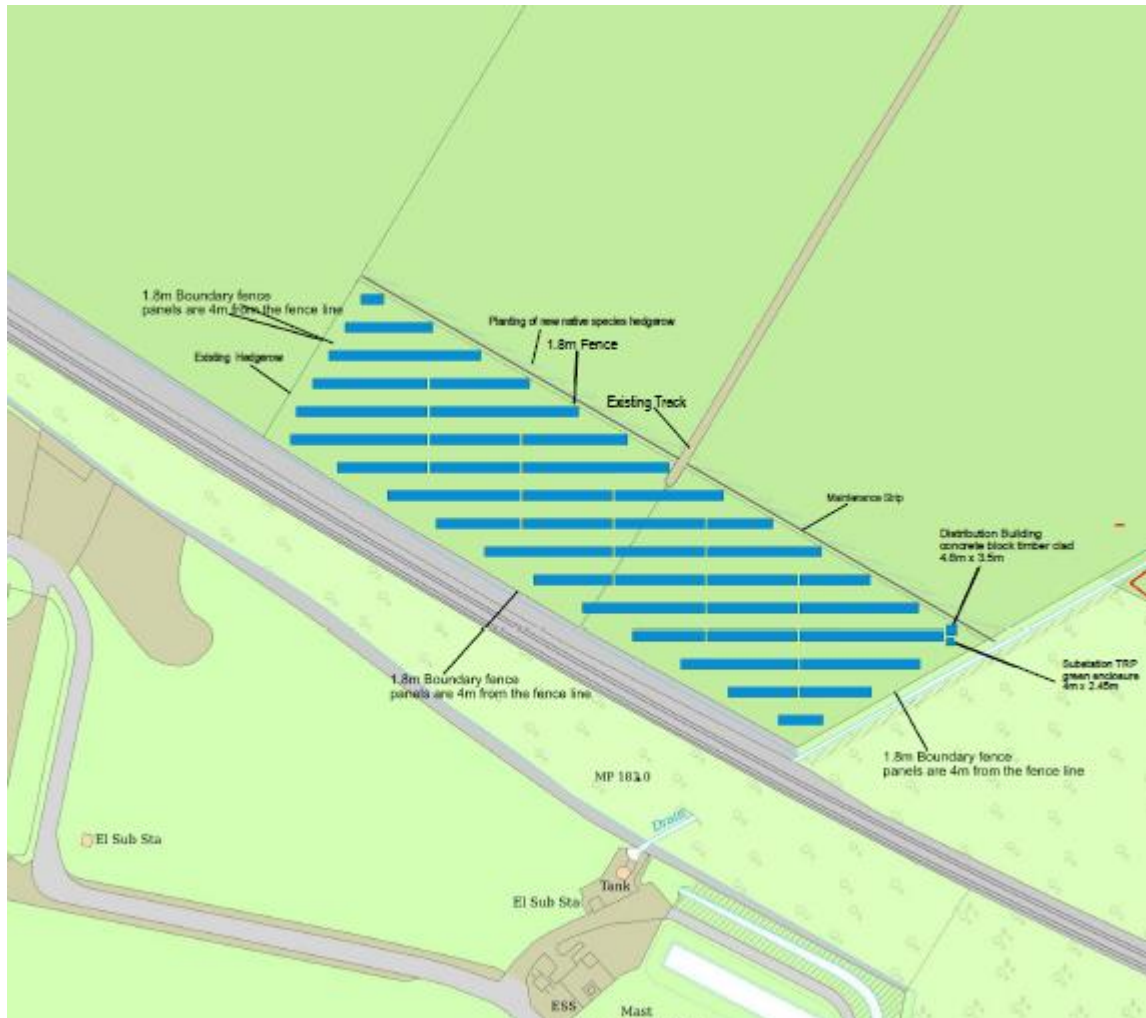


Figure 5 - Proposed Layout Within Site

- 4.1.2 The solar PV project operation will be inert and once established on site, there would be minimal disturbance. The solar panels will be static (non-rotating) and the ground could also be grazed by sheep, thus generating an additional agricultural yield. The solar panels will be spaced to avoid shadow and elevated on an angled frame supported by stakes. The units will be sited to achieve optimum exposure for solar energy absorption.
- 4.1.3 The scheme would also incorporate the following ancillary equipment:
- Deer proof fencing
 - CCTV mounted on inward facing exterior of the switchgear housing to monitor the interior of the site for security and insurance purposes.

- Ecological enhancements

4.2 The grid connection will be via an existing underground cable to the nearby substation site.

4.2.1 The site area as a whole measures 1.865 hectares (4.608 acres). The panels will have capacity to generate 1.3MW of renewable electricity during daylight hours. All electricity generated will feed into the national grid. The scheme will be delivered without any support from government subsidy and as such, the scale of the site is required to accommodate the quantum of solar arrays to ensure a financially viable proposal.

It is of note, that conventional solar developers that lease farmers' ground for solar developments do not consider projects less than 5MW (5000kw). Therefore, in perspective, this is still a very small solar installation by industry standard norms, reflecting the applicant's desire to remain and maintain a family business size operation rather than 'sell-out' to a large firm.

4.3 Careful consideration has been given to alternative sites across the holding however the primary reason for selecting the chosen site is that it is already well screened, low lying and south facing. It is adjacent to the existing electricity cable to connect to the substation and given that the site is on the outer perimeter of the farmland, the impact upon the continuing dairy business will be minimal.

5 Historic Environment

- 5.1 A Historic Desk Based site assessment has been carried out by Trysor. Trysor is a Registered Organisation with the Chartered Institute for Archaeologists and both partners are Members of the Chartered Institute for Archaeologists
- 5.2 This desk-based assessment has been undertaken by Trysor to examine potential impacts on the historic environment from a proposed solar farm on land to the south of Cop House Farm. The assessment studied the direct and indirect impacts on all recorded historic assets within 1 kilometre radius area, focused on SJ3606465545. Designated historic assets within 3-kilometres were also initially assessed but none had potential for impact on their setting and were not assessed further.
- 5.3 A site visit was undertaken on 22nd October 2024 by Trysor to examine the proposed development plot and its surroundings.
- 5.3.1 The assessment studied the direct and indirect impacts on all recorded historic assets within 1 kilometre radius area, focused on SJ3606465545.
- 5.3.2 Designated historic assets within 3-kilometres were also initially assessed but none had potential for impact on their setting and were not assessed further.
- 5.3.3 The regional Historic Environment Record, managed by Heneb CPA (Heneb CPA HER Enquiry E6976-CPHER) was consulted, as well as data from RCAHMW and Cadw via the Coflein, Cof Cymru and DataMapWales portals. Historical mapping was also consulted as well as aerial photographs available online and 1-metre LiDAR available through DataMapWales.
- 5.3.4 There are no Scheduled Monuments within a 1-kilometre radius of the centre of the development.
- 5.3.5 There is one Scheduled Monument within 3-kilometres – FL185 – Bretton Hall Moated Site. It is not intervisible with the proposed solar farm and there would be no impact on it from the proposed solar development.
- 5.3.6 There is one Listed Building within a 1-kilometre radius of the development, Wellfield House, Listed Building number 85415. Although theoretically intervisible with the development site, its own farm buildings, trees and the North Wales railway blocks any views. There are four Listed Buildings in Wales and three in England that are within 1 to 3 kilometres of the proposed development. There would be no impact on their setting or significance as they are not intervisible with the location of the proposed solar panels.
- 5.3.7 There are no Registered Park and Garden within 3-kilometres of the proposed solar development.
- 5.3.8 The proposed development site does not lie within a Registered Historic Landscape.

- 5.3.9 There are no World Heritage Sites, or Conservation Areas within a 3- kilometre radius of the development.
- 5.3.10 No impacts have been identified to recorded historic assets within the 1 kilometre radius assessment area.

6 Ecological Enhancement

- 6.1 In line with Flintshire Council's policies on Biodiversity Enhancement: Flintshire County Council recognises its statutory duty under the Environment (Wales) Act 2016 to seek to maintain and enhance biodiversity. The council's Local Development Plan (LDP) emphasises the importance of green infrastructure, including streams, woodlands, and hedgerows, to improve accessibility, enhance biodiversity, and reduce flood risk.
- 6.2 The council's Supplementary Planning Guidance (SPGN) No. 8 on Nature Conservation and Development provides guidance for developers on integrating biodiversity into their proposals. Flintshire County Council also has a Biodiversity Duty Delivery Plan, which outlines actions to maintain and enhance biodiversity across the county and a dedicated plan called "Supporting Nature in Flintshire" which addresses the enhanced biodiversity and resilience of ecosystems. Flintshire County Councils' Biodiversity duty delivery plan has been produced in response to the enhanced biodiversity and resilience of ecosystems duty under Section 6 of the Environment (Wales) Act 2016 which requires that Public Authorities must seek to maintain and enhance biodiversity so far as is consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems.
- 6.3 In line with the above, ELM Associates have conducted an ecological assessment of the site and as a part of their report have produced a corresponding biodiversity enhancement plan.
- 6.3.1 The report outlines the ways in which this development addresses the requirements of Planning Policy Wales which came into effect in October 2023. This Green Infrastructure Statement includes an assessment of habitats and species with and in the environment of the proposed development site, including site surveys, baseline data assessment including habitat and species surveys, and uses this information to identify the priorities and opportunities available on the site to build a plan for a Net Benefit for Biodiversity.
- 6.3.2 In the absence of a Welsh biodiversity metric the Natural England Statutory Biodiversity Metric condition assessments were used to assist with the condition assessments of the habitats. The biodiversity enhancement plan considers the ways of delivering multi-functional outcomes appropriate to the site, following the step-wise approach to ensure that measures have been taken to avoid, minimise, mitigate and compensate for impacts on habitats and species.
- 6.3.3 This ecological assessment and biodiversity plan has been designed to comply with Welsh Government policy PPW12, standard reporting guidelines provided within both the British Standard Biodiversity – Code of practice for planning and development – BS 42020:2013 (BSI, 2013) and the Chartered Institute of Ecology and Environmental Management Guidelines for Ecological Report Writing (CIEEM, 2015).
- 6.3.4 The Environment (Wales) Act 2016 requires planning authorities to assess potential developments to protect against loss and to ensure that there is a net benefit for biodiversity and ecosystem resilience.

This requires applicants to:

- assess the species and habitats regarded as being of 'principal importance' for the purpose of maintaining and enhancing biodiversity around a site

- safeguard protected species and existing biodiversity assets from direct, indirect or cumulative adverse impacts in and around a development site.
- secure the maintenance and enhancement of resilient ecological networks by improving diversity, extent, condition and connectivity.

6.4 In terms of the site baseline the site comprises species-poor modified grassland which is a sown herbal ley mix used for grazing. The sward is dominated by the following species which are agricultural varieties: perennial ryegrass, *Lolium perenne*, hybrid rye grass *Festulolium*, Timothy *Phleum pratense*, white clover, *Trifolium repens*, red clover *Trifolium pratense* and ribwort plantain *Plantago lanceolata*. Within the sward there is also occasional chickweed, *Stellaria media*, broad-leaved dock *Rumex obtusifolius*, pineapple weed, *Matricaria discoidea*. At the time of the visit, the area was wet and slightly poached at the gateway area. Under the Statutory Biodiversity Metric condition criteria, the grassland is assessed as 'Moderate' condition modified grassland due to it passing/failing the following criteria outlined in the Technical Supplement condition assessments.

6.5 In relation to the adjacent site features:

6.5.1 The eastern boundary of the site is a holding boundary and has the farm's main drainage ditch running along the boundary. On the other side of the ditch there is an area of land in other ownership which is a formerly industrial site that may have been used for waste storage but has in recent decades been colonised with woody scrub. The woodland edge has a dense infestation with Japanese knotweed which runs up to but not across the ditch. On the side in the ownership of the Edge family, grazing has prevented the Japanese knotweed from colonising the bank and spreading into the field. The enhancement plan needs to incorporate measures to maintain control over the spread of this invasive species onto the solar installation site. Maintenance of grazing has been discussed, but an advisory mown grass margin will also be incorporated into the enhancement plan.

6.5.2 Along the southern boundary runs the railway line which serves as the main route between Chester and North Wales.

6.5.3 Along the western boundary of the site is an existing hedgerow that was planted by the Edge family in 2018, to fill a gap in the hedgerow boundary on the lower part of the field. This is a native species hedgerow with at least 5 species, which has since grown to be a good continuous hedgerow that has reached equivalent height and width dimension with the rest of the boundary and provides continuity along that boundary to its point of intersection with the railway line verge. This hedgerow will be retained to provide screening for the site.

6.5.4 Along the northern boundary the site is currently open to the rest of the field at the and is currently separated at times by a single strand of barbed wire fencing, to allow for rotational cattle grazing.

6.6 In relation to the habitat assessment - The site itself falls within the area classified as Floodplain Coastal and Grazing Marsh, therefore the Statutory Biodiversity Metric condition criteria were applied to assess the condition of the site in relation to the habitat classification. The site was assessed as 'Poor' condition floodplain coastal grazing marsh due to it passing/failing the following criteria outlined in the Technical Supplement of the metric.

7.0 Biodiversity Plan for Net Benefit

The Management Objectives to achieve net benefit for the Biodiversity Plan were also assessed by ELM Associates.

- 7.1 The management objectives for the proposed development must ensure that a step-wise approach to maintaining and enhancing biodiversity is achieved for the site, following guidance outlined by the Welsh Government.

This requires demonstration of the following steps:

- 7.1.1 In the first instance, developments must avoid damage to the existing habitats and species, their abundance and ecosystem functioning in the wider site environment
- 7.1.2 The work should minimise the extent of the impact of the development on the site, maintaining the largest possible extend of existing habitat to support biodiversity and ecosystem function
- 7.1.3 Where there is impact, to put in place mitigation measures to limit the negative effects of a development, and/or restore habitats immediately
- 7.1.4 Where necessary, the management plan should include measures to compensate onsite for impacts with biodiversity impacts.
- 7.1.5 Only if not possible on-site, the management plan can include measures to compensate off-site
- 7.1.6 When this step-wise approach is not followed, and no mitigation and enhancement measures are possible, planning authorities may refuse planning permission

- 7.2 The Step-wise approach to maintaining and enhancing biodiversity on the development Site is set out in further detail at table 4.1 of the ELM report, however in summary:

MITIGATION STEP	MANAGEMENT PROPOSAL
AVOID	The development will avoid any damage to existing habitats and species, their abundance and ecosystem functioning within the site and in the wider site environment. This will include: Ensuring all site vehicle access uses the existing access track to the site area, avoiding parking or storage of vehicles or equipment on the wider field within which the site is located, to ensure that there is no actual or potential impact to the use of the wider field by species such as wading birds.
MINIMISE	The impact of the development will be minimised by ensuring that all installation works are contain within the site boundary, and that no permanent structures associated with the development are located outside of the site. Temporary impacts during the installation e.g. vehicle wheelings or temporary storage of equipment will be minimised by ensuring that surfaces are protected e.g. using ground mats.
MITIGATE	Where disturbance to the site is caused, e.g. by installation of underground pipework, immediate mitigation will be undertaken to ensure that earthworks are repaired and restored by reseedling to achieve grassland cover equivalent to the rest of the wider site. Potential negative impacts that may result from a change in management leading to the risk of spread of non-native species from the adjacent area will also be mitigated against in the management plan.
COMPENSATE ON SITE	The proposal outlined here to compensate for development impacts will be fully implemented within 12 months of the works. This will include: - Sward enhancement of the site with resilient native grass species, clovers and herbs, prior to the works, to ensure that the sward can be maintained as permanent grassland. - Installation of a new species rich native hedgerow boundary to enhance the site's biodiversity value and increase connectivity of habitats from the site to the wider landscape.

7.3 The proposal in terms of the Habitat Enhancement and Management Plan will be to implement the enhancement works in stages in line with the appropriate timings of required maintenance once established.

7.3.1 The prescriptions cover a 10-year period and include both the start-up works and continued management post-intervention, but ELM Associates have advised that the management plan should be reviewed so that recommendations can be implemented over a period of at least 30 years. This is inclusive of primary establishment of habitats and subsequent management regimes.

7.4 The site enhancement plan is designed to maintain and enhance the ecological networks on site, by improving the diversity, extent, condition and connectivity of habitats. Three enhancement elements will be implemented, which are outlined in detail in Table 5.1 of the ELM Associates report, but in summary include:

1. Grassland sward enhancement - the existing grass sward will continue to be modified grassland in the short term, but will be amended to increase the resilience in its suitability for future management under solar panels by oversowing with a mix of native meadow grasses, native legumes and herbs that will be more suitable permanent pasture, which can then be managed occasional mowing or grazing with sheep, if these become available. The aim is to change the structure of the grass cover away from short-term productive agricultural species towards those that are typical of species rich permanent pastures.
2. New Hedgerow boundary – a new species rich hedgerow will be planted across the northern site boundary, providing both a biodiversity enhancement and a green barrier which will mitigate visual impact on the landscape. The hedgerow will contain at least 5 native hedgerow species and will be a double staggered row, protected by appropriate stock fencing on both sides.
3. INNS Control Plan – the risk of the spread of Himalayan balsam or other non-native invasive species from the boundary watercourse and adjacent site on the proposed development site will be managed by maintaining a mown margin along the site perimeters adjoining the watercourse and railway line.

8 Visual Impact

- 8.1 The applicant has commissioned a comprehensive Landscape and Visual Impact Assessment (LVIA).
- 8.2 Topography and mature vegetation serve to limit visibility of the site to a very relatively small number of locations to the north and east, as shown on the Viewpoint Location Plan. It was confirmed, during the site assessment, that the proposed development site is not visible from the *Wales Coast Path* which runs along the north bank of the *River Dee* and is extremely well-used by both recreational walkers and cyclists.
- 8.3 Significant visual receptors in the study area are primarily users of local footpaths since the site is largely invisible from the surrounding roads. This comprises predominantly of local walkers, which are likely to consist predominantly of residents (those living in the local area, *Chester* and *Connah's Quay*), although may also, as referenced in section 3.6, include visitors to Chester, exploring the wider area during an extended stay. It is noted that there is both *Fir Trees Caravan and Lodge Park* and an adult-only campsite just over 1km to the north-east.
- 8.4 The locations of the selected viewpoints are shown in Figure 5 of the Design with Nature report appended.
- 8.5 Design with Nature have been commissioned to undertake the LVIA. Within this report the methodology to assess the visual impact has been explained, the visual impacts outlined and the way in which these effects are going to be mitigated is clearly set out.
- 8.6 The report also sets out in detail a baseline context, giving information on the local landscape character, local patterns and vegetation as well as further information on the sensitivity of the local landscape, heritage in the area and any ecological designations and a full description of the site.
- 8.7 The LVIA has carefully considered the visual context of the site and these have been assessed from identified existing view points and the impact or level of sensitivity that the project would bring to these identified view points and the level of sensitivity.
- 8.8 The report then considers measures to mitigate where possible any impacts on the visual amenity caused by the project.
- 8.9 In terms of the Proposed Mitigation and Enhancement Works the panels have been purposely located in the southernmost portion of the field adjoining the railway line and adjoining woodland, both factors serving to obscure the installation from publicly accessible viewpoints located to the north and east. In addition, the following measures have been taken to reduce the level of impact associated with this development.

8.9.1 *With regards to Layout / Design the LVIA proposes:*

- 8.9.1.1 Retention of all the existing hedgerows and associated mature trees on the site's boundaries.
- 8.9.1.2 Proposed new native mixed species hedgerow along the north-eastern boundary
- 8.9.1.3 Location of the two buildings in the eastern corner of the site against the adjoining block of woodland and the selection of appropriate cladding materials / colours.

8.9.2 *During Construction*

- 8.9.2.1 Protection of existing retained vegetation in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

- 8.10 In conclusion Topography and mature vegetation serve to limit visibility of the site to a small number of locations to the north and east with the site not really being visible from any of the surrounding roads. Receptors comprise predominantly of local walkers, some of which are likely to be visitors exploring the wider area during an extended stay in Chester or the *Fir Trees Caravan and Lodge Park* / adjacent campsite.
- The ordered flood plain landscape in which the site is located has a very distinctive character, in which views of the sky play an important part while the encroachment of nearby settlements and urbanising influence of the *Hawarden Aerodrome complex* serve to reduce the overall level of scenic quality. In addition, the canalised character of the nearby *River Dee* and the presence of pylons / overhead wires in the wider area reinforce the man-made character of the surrounding landscape. Overall, the site and the immediate surrounding area is deemed to have a moderate to low level of visual amenity.
- 8.11 As a part of the LVIA, Design with Nature also worked in conjunction with Advantage Geomatics who produced a topographical survey. The full topography of the site has therefore been assessed and the conclusion, particularly given the low-lying nature of the application site is that the visual impact will be low.
- 8.12 The proposed development is broadly in accordance with all relevant local authority policies. The report has determined that there is only a Low Adverse to None landscape effect on the site and the area immediately surrounding the site, albeit one that is reversible in nature and has a limited extent. In conclusion the proposed development is deemed to have no adverse effect on the key characteristics of the Dee Coastal Levels Landscape Type or on the current levels of visual amenity enjoyed by users of the footpaths along the River Dee, including the Wales Coast Path.

9 Site Access

- 9.1 Access to the application site is required for the construction phase. Thereafter the installation is unmanned and attracts fewer traffic movements than an agricultural use.
- 9.2 Materials will be delivered both directly to the application site and also to the farmstead at Cop House Farm thereby avoiding any plant or machinery causing any hindrance or delay on the public highway. As materials are then required on the application site, they will be transported by tractor and trailer to the application site.



Figure 6 - Access route to application site

10 Impact on Residential Amenity

- 10.1 The residential property closest to the site is *Cop House Farmhouse* located just under 500m, to the north-west, although it seems unlikely, due to its orientation, that the occupants of this dwelling have any discernible views of the site.
- 10.2 There are a significant number of terraced houses, seemingly associated with a former factory, in a couple of distinct clusters located approximately 500m to the east although very few of these have any views towards the site due to the north and south orientation of their front and rear facing windows.
- 10.3 Approximately, 2.km north of the site there are 2no. 13 storey high rise residential blocks, *Nant Peris and Glyn Garth*, with the middle and upper floors of their south-facing elevations having intervisibility with the site.
- 10.4 Due to the screening effect of the adjoining woodland, it is unlikely that the proposed solar array will have any adverse effect on the levels of existing visual amenity enjoyed by occupants of the two property clusters to the east. However, the rear of a few panels in the north of the array may be visible, at completion, in oblique views from some of the properties at the western end of North Street, although these would largely be obscured from view over the longer term by the proposed boundary hedgerow.
- The south facing orientation of the panels is likely to significantly reduce the level of visibility from the *Nant Peris* and *Glyn Garth* tower blocks located to the north due to the general absence of reflectivity during sunny periods, associated with their south-facing orientation.
- 10.5 There will no noise generated from the ongoing operation of the solar panels.
- 10.6 There will be no permanent lighting on site.

11 Solar Panels and Specialist Framework

- 11.1 The solar panels will be spaced to avoid shadow and set on a frame supported by steel piles which are driven into the earth by a pre-programmed machine to ensure a consistent alignment.
- 11.2 There will be minimal disturbance to the ground and this construction method allows the scheme to be easily reversed in the future, simply by pulling out the framework.
- 11.3 The panels will have a maximum height of up to 2.8m.

12 Planning Policy

The following policies are deemed to be relevant to the proposed development:

- 12.1 Flintshire Local Development Plan (2015-2030)
 - 12.1.1 The LDP functions across key themes with two of them being pertinent to this report:
 - Delivering Growth and Prosperity (point 13) stated aim is to *“promote a diverse and stable rural economy”*
 - Safeguarding the Environment (point 15) stated aim is to *“minimise the causes and impacts of climate change and pollution”*
- 12.2 Strategic Policies
 - 12.2.1 STR7 Economic Development, Enterprise, and Employment includes the following provision: *“In rural areas, recognise the continued contribution agriculture makes to the rural economy, whilst also supporting wider rural enterprise, tourism and diversification”*.
 - 12.2.2 STR14 Climate Change and Environmental Protection states *“encouraging energy efficient development, environmentally acceptable renewable and zero / low carbon energy generation”*
- 12.3 Development Management Policies
 - 12.3.1 EN2 Green Infrastructure states that *“Development proposals will be required to protect, maintain and enhance the extent, quality and connectivity of the green infrastructure network”*, and seek to *“create new green infrastructure linkages from the proposed development to the existing local network”*.
 - 12.3.2 EN4 Landscape Character stipulates that *“New development, either individually or cumulatively, must not have a significant adverse impact on the character and appearance of the landscape”* further adding that *“Landscaping and other mitigation measures should seek to reduce landscape impact and where possible bring about enhancement”*.
 - 12.3.3 EN13 Renewable and Low Carbon Energy Development infers that *“renewable or low carbon energy generation development may be permitted for small-scale solar in appropriate locations”*.
- 12.4 Planning Policy Wales (PPW):
 - 12.4.1 The latest version of PPW (Edition 12) sets out the land use planning policies of the Welsh Government, including policies related to renewable energy development.
- 12.5 Future Wales:
 - 12.5.1 The National Plan 2040, Future Wales, emphasises the importance of renewable energy development and supports the principle of maximizing renewable and low-carbon energy generation.

- 12.6 Local Area Energy Plans (LAEPs):
- 12.6.1 Local authorities are responsible for preparing LAEPs to guide the transition to a net-zero energy system, considering various renewable energy technologies and stakeholder engagement.
- 12.7 In essence, while Wales supports renewable energy development, including solar, there are regulations and assessments in place to ensure that developments are appropriate, minimize environmental impacts, and contribute to local communities.
- 12.8 This section of the report assesses the principle of the Proposed Development against policies contained within the Planning Policy Wales document and also Flintshire Council's Local Development Plan and supplementary guidance notes.
- 12.9 Planning Policy Wales (ed.12) – Section 5.6 covers the Rural Economy. Sub-section 5.6.13 states “Diversification activities come in many forms and include both agricultural and non-agricultural activities. Activities could include, for example, livestock and crop processing, non traditional livestock and crop farming, tourism projects, farm shops, and making and selling non agricultural products. Diversification can also include **renewable energy** proposals such as anaerobic digestion facilities or **solar** and wind installations, **which will help to increase the viability of rural enterprises by reducing their operating costs. These schemes should be supported where there is no detrimental impact on the environment and local amenity.**”
- 12.10 Technical Advice Note (TAN 6) - Planning for Sustainable Rural Communities (July 2010 ed) sets out that the planning system must respond to the challenges posed by climate change, for example by accommodating the need for renewable energy generation. Planning authorities should seek to strengthen rural communities by helping to ensure that existing residents can work and access services locally using low carbon travel and obtain a higher proportion of their energy needs from local renewable sources.
- 12.11 Under section 3.7 of TAN 6 Farm diversification is considered. “When considering planning applications for farm diversification projects, planning authorities should consider the nature and scale of activity taking a proportionate approach to the availability of public transport and the need for improvements to the local highway network. While initial consideration should be given to converting existing buildings for employment use, sensitively located and designed new buildings will also often be appropriate. Many economic activities can be sustainably located on farms. Small on-farm operations such as food and timber processing and food packing, together with services (e.g. offices, workshop facilities, equipment hire and maintenance), sports and recreation services, and the production of non-food crops and renewable energy, are likely to be appropriate uses.”
- 12.12 In line with Flintshire's planning policies the LPA should recognise the responsibility on all communities to contribute to energy generation from renewable or low-carbon sources.
- This proposal provides a positive strategy for energy from a renewable source, as part of a suitable development, whilst ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts).

The applicant has identified a suitable area for renewable and low carbon energy production and has identified an opportunity to draw an energy supply from a decentralised location.

- 12.13 The wider benefits of renewable energy projects must also be given significant weight as material considerations regardless of scale. These benefits include CO2 reduction, the diversification of local economies, the creation of new jobs and support for the regeneration of rural areas.
- As most renewable energy resources can only be developed where the resource exists and where economically feasible, there should not be a sequential approach in the consideration of renewable energy projects (for example, by giving priority to the re-use of previously developed land for renewable technology developments).
- 12.14 The development proposed is of a high-quality sustainable design and construction that promotes safer communities, is respectful of local character, and planned to mitigate, and adapt to, the impacts of climate change.
- 12.15 Many LPA's across Wales have strategies for promoting sustainable economic development in rural areas through encouraging development and making enterprises more efficient, which is the case at Cop House Farm.
- 12.16 The proposal promotes a low carbon generation of energy from a renewable source. It supports the development of a sustainable community and promotes sustainable economic development and growth. It is an example of developing a rural enterprise, diversification of the rural economy, and the continued importance of farming and agriculture.
- 12.17 The proposal ensures the character, quality and diversity of Flintshire's built, natural and historic environment is protected and enhanced. It positively encourages infrastructure, where this has no significant adverse impact on recognised environmental assets, that mitigates and adapts to climate change including decentralised, low carbon and renewable energy generation and working with network providers to ensure provision of necessary energy distribution networks.
- 12.18 National guidance requires LPA's to help deliver radical reductions in greenhouse gas emissions, through the delivery of renewable and low-carbon energy infrastructure. The UK has agreed a target to achieve 15% of its energy consumption from renewable sources by 2020 (Renewable Energy Directive 2009). The development of renewable energy generation infrastructure will make a vital contribution to meeting these targets and we must therefore encourage renewable technologies.
- 12.19 Planning Policy Assessment
- 12.19.1 At the national, regional and local levels, this application demonstrates a clear dedication to the generation of energy through a renewable source of proven technology. Planning Practice Guidance on Renewable low carbon energy sets out the particular planning considerations that apply to solar farm proposals. It states that increasing the amount of energy from renewable and low carbon technologies

will help to make sure the UK has a secure energy supply, reduce greenhouse gas emissions to slow down climate change and stimulate investment in new jobs and businesses.

12.20 The proposal has given careful consideration to:

12.20.1 Landscape and Visual Impact – consideration of the likely impact of the proposed development on the character and appearance of the area has been studied in detail and although considered to be low, mitigation measures have been. Further details on this element can be seen within the Landscape and Visual Impact Assessment Report.

12.20.2 Archaeological Assessment – consideration as to the impact that the proposed development could have in archaeological terms has been assessed and is deemed to be low. An archaeological assessment has been carried out to conclude whether there would be any likely archaeological implications.

13 Key benefits of the proposal

13.1 It is considered that the proposed scheme represents a sustainable form of development in environmental, social and economic terms. The proposal gives rise to substantial benefits.

13.2 The principal benefits in this regard are set out under the relevant sub-headings below.

13.2.1 Environmental

13.2.1.1 Solar farms are needed to help combat the effects of climate change, to meet important European targets on renewable energy deployment and secure home grown energy without reliance on volatile foreign energy markets. They are an increasingly important means of generating clean, home green energy and are a proven technology.

13.2.1.2 The proposal is for a solar farm in line with international, national and local policies which actively support the principle of energy generation from renewable sources.

13.2.1.3 The proposal will deliver clear biodiversity enhancements when compared with the site in its current state. This is achieved through focus upon dedicated areas of the site for ecological enhancements and through appropriate management of key ecological features such as hedgerows. The site itself will also become a haven for wildlife since it will not be disturbed.

13.2.2 Economic

13.2.2.1 The proposal represents a form of agricultural diversification, which brings an economic benefit to the landowners. They will receive a consistent income for the full period of installation, to add to their otherwise more volatile agricultural income. This will help the landowners to invest in their farm and help their farming enterprise to remain viable during a time of significant change following the UK's exit from Europe, which has brought significant changes to farming subsidy allied to the more extreme weather conditions we are now facing as a result of climate change.

13.2.2.2 The scheme will support the wider economy by generating employment associated with the planning, construction, operations and maintenance of the scheme.

13.2.2.3 The proposal will generate business rates and spin-off opportunities for wealth creation, all feeding into the local and wider economy and, hence delivering significant economic benefits.

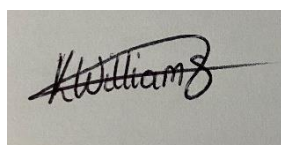
- 13.2.2.4 Importantly, the proposal will help in generating home grown energy. It will help to protect British consumers from exposure to volatile foreign energy markets and enable the nation to have more control on energy production and therefore the wholesale cost of energy, helping to safeguard energy prices.

13.2.3 Social

- 13.2.3.1 The diversification of the farming business will provide a consistent income stream for the landowner and secure the future of the wider farming enterprise. The economic prosperity of such enterprises is critical to supporting the health of rural communities.

14 Summary

- 14.1 The planning application is supported by robust technical reporting to inform an understanding of the likely impacts of the proposed development. Through the findings of this assessment work it is demonstrated that the proposed development is compliant with the key tests set out in pertinent planning policies.
- 14.2 With regards to regional and local planning policies it is demonstrated that the proposed scheme would not bring about significant adverse impacts upon the criteria of features set out in the policies.



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May 2025