

Planning Statement

Proposed installation of a ground mounted Photo Voltaic (PV) solar farm
development

Land to the east of the A48 (Coordinates E257386, N 209389)

And

Land to the south west of Tycroes (coordinates E259219, N209551; & E259904,
N209590)

Prepared for



Report prepared for Spring Dev 02 Ltd.

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Executive Summary

This report has been prepared in support of the proposal for a proposed solar (PV) development on Land to the east of the A48 (Coordinates E257386, N 209389) and Land to the south west of Tycroes (coordinates E259219, N209551; & E259904, N209590).

The proposed solar PV development is a temporary installation with permission being required for 40 years and after this time the site can be returned to its original appearance with all equipment being removed from the site directly following the end of the term and once electricity ceases to be exported to the Grid. Therefore, the development is effectively fully 'reversible' on decommissioning.

The proposal will introduce important renewable energy generation to contribute towards Wales' strategic objectives of generating 70% of its electricity consumption from renewable energy by 2030 (ref. Welsh Government's 'Energy Generation in Wales 2018' and Planning Policy Wales Edition 10).

The application site areas have been chosen as they are naturally well concealed and the soil quality at each site is recognised as being of poorer agricultural grade quality. There will be no significant physical changes to the land of the application site such as earth removal or levelling and the land will remain in agricultural use through sheep grazing. The proposal therefore offers an important opportunity to secure farm diversification.

Planning Law requires that applications for planning permission must be determined in accordance with the development plan, unless material considerations indicate otherwise.

This report confirms that the application is in compliance with the strategy and policies of the adopted Carmarthenshire Local Development Plan as well as National Planning Policy Wales (PPW) v10 both of which support large scale solar renewable energy developments where appropriately sited and where the environmental impacts of a proposal are acceptable.

In addition, there are important environmental, ecological and socio-economic benefits to the proposal.

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APPENDICES

Appendix 1

Copy of Screening Direction ref. 3227364 dated 20th December 2019 in accordance with the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017

Appendix 2

Copy of Pre-Application Advice letter received from Carmarthenshire County Borough Council (ref. PA/16871) dated 9th October 2019

Appendix 3

Biodiversity Metric 2.0 Calculation Tool Beta Test Final Tycroes (002)

Appendix 4

Appendix 4 to Planning Statement - Pre-Application Comments from Welsh Government

1. INTRODUCTION

1.1 This report has been prepared in support of the proposal for a proposed solar (PV) development on Land to the east of the A48 (Coordinates E257386, N 209389) and Land to the south west of Tycores (coordinates E259219, N209551 & E259904, N209590). This report should be read conjunction with the following statements and plans / technical specifications that accompany the planning application submission:

- Application Form
- Site Location Plan ref. SPLP-D02-PL
- Site Plan Existing 1of3 ref. SP-EP1.D02-PL
- Site Plan Existing 2of3 ref. SP-EP2.D02-PL
- Site Plan Existing 3of3 ref. SP-EP3.D02-PL
- Site Plan Proposed 1of3 ref. SP-SL1-D02-PL
- Site Plan Proposed 2of3 ref. SP-SL2-D02-PL
- Site Plan Proposed 3of3 ref. SP-SL3-D02-PL
- Elevations Plan ref. SP-ELD2-PL
- Transformer Housing Plan ref. SP-IND2-PL
- Substation Plan ref. SP-SSD2-PL
- CCTV Plan ref. SP-CTD2-PL
- Site Clearances Plan ref. SP-SCD2-PL
- Fence Plan ref. SP-SFD2-PL
- Landscape and Visual Impact Assessment (LVIA); produced by Amalgam Landscape
- Landscape Masterplan; produced by Amalgam Landscape (Figures 18A and 18B contained within the LVIA)
- Preliminary Ecological Appraisal (PEA) - solar sites; produced by Western Ecology
- Preliminary Ecological Appraisal (PEA) - cable route; produced by Western Ecology
- Landscape and Ecology Management Plan (LEMP); produced by Western Ecology
- Habitats Regulation Screening Assessment; produced by Western Ecology
- Flood Consequences Assessment (FCA); produced by Clive Onions Ltd.
- Heritage Impact Assessment (HIA); produced by Archaeology Wales
- Transport Statement; produced by Acstro
- Coal Mining Risk Assessment; produced by Yellow Sub Geo
- Coal Mining Risk Assessment Technical Note; produced by Yellow Sub Geo
- Construction and Environmental Management Plan (CEMP); produced by Spring
- Glint and Glare Assessment; produced by Pager Power
- Arboricultural Impact Assessment & Method Statement [AIA&MS] Report + Appendices; prepared by Woodland and Countryside Management Ltd.

- AIA&MS Supplementary Report - Underground Cables + Appendices; prepared by Woodland and Countryside Management Ltd.
- Design and Access Statement; produced Renplan Ltd
- Copy of Screening Direction 3213704 - EIA Not Required (enclosed in Appendix 1 of this Report)
- Copy of Acceptance of Notification - Letter to Applicant 23.12.2019
- Consultation Report; produced by Renplan Ltd 29.04.2020

1.2 The Applicant Spring is a renewable energy development company whose purpose is to enable clean growth. This proposal at Tycroes is one of a number of large-scale solar projects Spring is developing in the UK.

1.3 Spring is proposing to install a ground-mounted Photo Voltaic (PV) solar development consisting of 3 separate parcels of land as outlined in the enclosed Site Location Plan. Permission would be required for 40 years and the installation would have the design capacity for between 36-40MW of electricity generation.

1.4 Together with associated infrastructure and housings the development is comprised of the following main elements:

- PV panels mounted on fixed metal frames with support posts driven into the ground to a depth of approximately 1.5m, avoiding the use of concrete foundations.

The panels are laid out in east-west orientated rows in order to optimise solar gain. The lowest edge of the panels would be approximately 0.8m above ground level with the highest edge being approximately 3.5 m above ground.

The rows are spaced approximately 4-5m apart to avoid one row of panels shading the next. The panels are non-reflective (i.e., to prevent glint or glare) and angled at approximately 20-25° to horizontal.

- Inverter technology, which converts direct current (DC) into alternating current (AC). These are likely to be string inverter (80 cm by 1m) affixed beneath the PV panels to the PV mounting system.
- There will be approx. 24 cabinets containing electrical equipment such as switchgear and transformers housed within flat roofed pre-fabricated units no higher than 3m and with a footprint of approximately 5m x 2.5m.

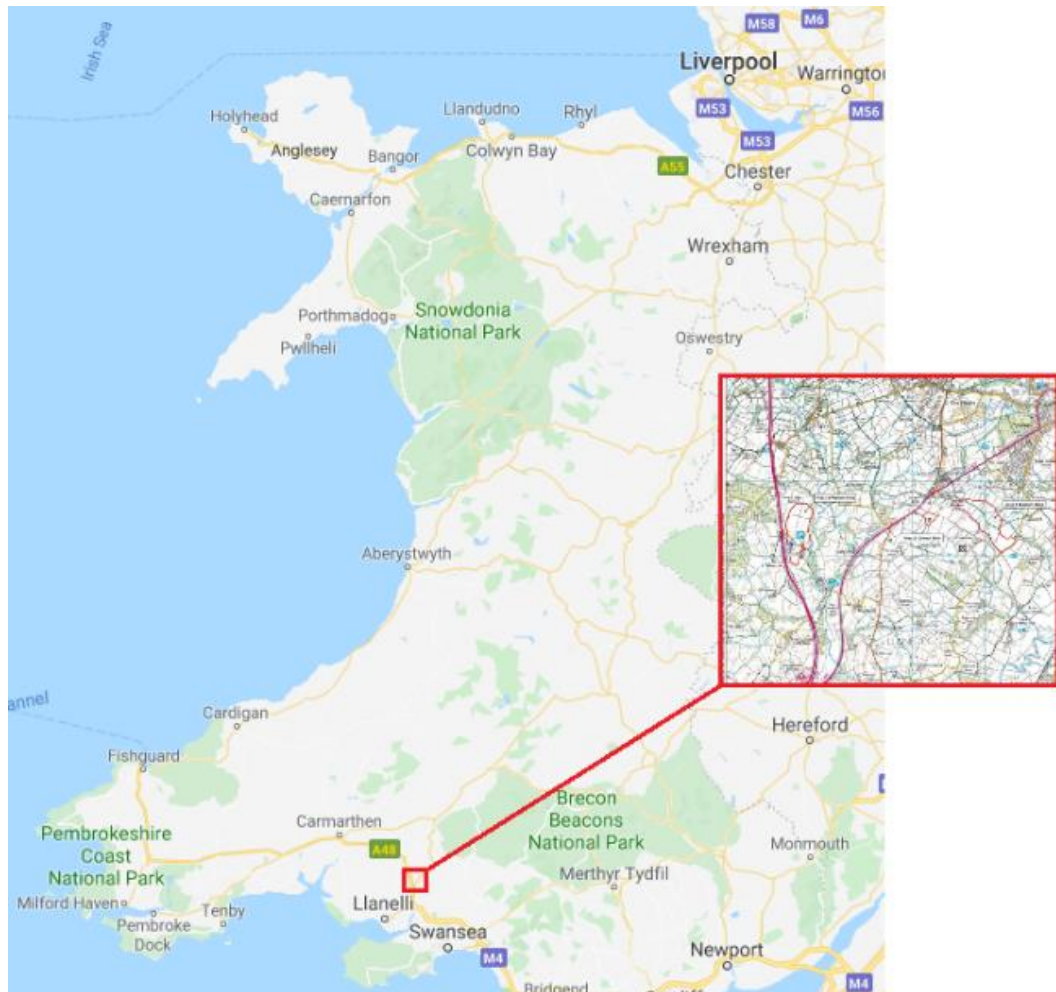
- An on-site sub-station.
 - Security fencing (most likely deer fencing) to a height of 2.4m along with infra-red security cameras which will feature around the perimeter of the development; directed inward only. There will be no external lighting.
 - Each of the three parcels of land benefits from an established vehicular access directly from both the A48 and the A483 suitable for the delivery vehicles required to deliver the equipment proposed to be installed at the site. Existing gateways and tracks will be used to access the site itself; the surfaces of which would be improved by way of providing additional gravel.
 - Cable route linking each of the 3 x solar sites the subject of the proposal. The cable is laid within a shallow and narrow trench measuring approximately 1.4m depth and 0.6m wide. The route utilises existing tracks including the A483 road verge and gated entrances between fields.
- 1.5 No major engineering works will be required. Following construction, any temporarily disturbed ground will be re-sown to grassland. Corridors of rough grassland will be allowed to develop beyond the perimeter fence which will help assimilate the development and provide an opportunity for ecological enhancement.
- 1.6 All infrastructure will be removed at the end of the life of the development (40 years) with the land then being restored to its original form. In effect, visual impacts arising from this development are entirely reversible.
- 1.7 The land is grassed and is well drained. Due to the undulating hilly landscape, the sites will be seen from parts of the surrounding landscape, however impacts are expected to be largely contained and landscape enhancements around the perimeter of each site will allow for ecological enhancement opportunities and additional screening.

2. LOCATION OF THE SITE

- 2.1 The proposal comprises three main areas of land described as Land to the east of the A48 (Coordinates E 257386, N 209389), and Land to the south west of Tycroes (coordinates E 259219 N 209551; & E 259904 N 209590).

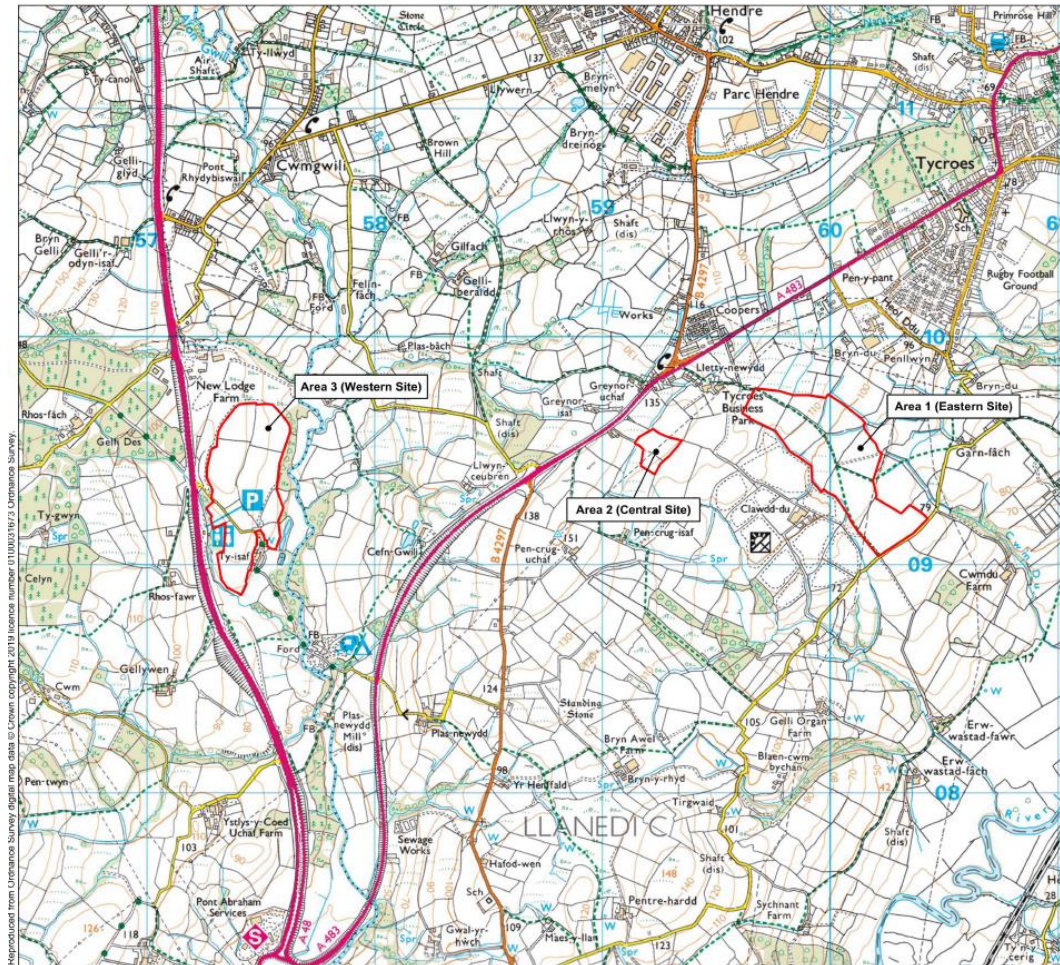
- 2.2 Area 1 and Area 2: Land to the south west of Tycroes (coordinates E 259219 N 209551 & E 259904 N 209590)
- 2.2.1 The land to the south west of Tycroes consists of 2 parcels of land and from a visual perspective these essentially extend the existing Clawdd-du Solar Farm.
- 2.2.2 The larger parcel of land is known as Area 1. It adjoins the northern boundary of the Clawdd-du solar farm and would consist of approximately 24ha. A local footpath runs through this parcel of land and will be temporarily diverted during installation of the development.
- 2.2.3 The smaller (western most) parcel of land is known as Area 2 in the application. This area of land consists of an area of approximately 1.8ha of land accessed directly from the A483. The coordinates for this land are E 259219 N 209551.
- 2.3 Area 3: Land to the east of the A48 (Coordinates E 257386, N 209389)
- 2.3.1 This area is referred to in the application submission as Area 3 and consists of approximately 21ha of land accessed directly from the A48 to the east.
- 2.3.2 The land in question sits alongside the A48 and slopes gently to the east. Direct access from the A38 is gained from the southbound carriageway.
- 2.4 Figures 1 and 2 below provide a reference to the location of the three areas of land the subject of the application.

Figure 1



Source: Google Maps/Earth

Figure 2



3. JUSTIFICATION AND SITE SELECTION PROCESS

- 3.1 The substation at Heol Ddu is the point of connection for the proposed development; as shown on the submitted Site location Plan Ref. SP-SL1031-PL.
- 3.2 Western Power Distribution (WPD) is the Local Distribution Network Operator for this area and they have identified this substation as one location within the Wales electricity distribution network where there is available connection capacity for connecting a 40MW solar installation without having to conduct extensive work to upgrade the electricity network.
- 3.3 Having identified the substation at Heol Ddu as a viable connection point for a solar proposal, the Applicant sought to establish suitable locations within the surrounding

landscape that could accommodate a solar installation with limited impact on its surroundings and environment.

- 3.4 The land areas the subject of this application have been carefully selected having regard for the need to ensure the development is well concealed from local views and residential locations whilst also ensuring minimal installation impacts to wildlife and presenting longer-term opportunities for ecology and landscaping.
- 3.5 It is also an accessible site for installation and a site that lies outside of any sensitive environmental designations. Also, Area 1 sits alongside an existing solar farm so will appear as an extension to the existing development.
- 3.6 The submitted Landscape and Visual Impact Assessment (LVIA) prepared by Amalgam Landscape confirms that the site is well hidden from the public realm and from local viewpoints and properties.
- 3.7 Furthermore, the site is of poor agricultural land quality and is recorded as not of the best and most versatile agricultural land.
- 3.8 This Report addresses the salient planning issues and potential environmental impacts, ultimately concluding that this site is very well suited for a solar (PV) installation. It also offers opportunities for ecological benefits in addition to the benefits of the project's generation capacity of 40MW of renewable electricity.

4. ENVIRONMENTAL IMPACT ASSESSMENT) (WALES) REGULATIONS 2017

- 4.1 A Screening Direction was sought by the applicant to establish whether the project is EIA development within the meaning of Schedule 2 to the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017.
- 4.2 On 20th December 2019, a Screening Direction was issued ref. 3227364 (copy enclosed in Appendix 1) to confirm that Welsh Ministers direct that the development is not EIA development within the meaning of the Regulations.
- 4.3 Although a formal Environmental Statement does not accompany the application, the application is accompanied by comprehensive environmental assessment work; each

report reviewing the anticipated impacts of the proposal in relation to specific environmental considerations.

- 4.4 The work the subject of these assessments is discussed throughout this report in the context of the relevant adopted local and national planning guidance. None of the reports conclude significant environmental impacts; the relative minor impacts being mitigated where possible results in a proposal that will be compatible with its surroundings and environment.

5. PLANNING POLICY CONTEXT

5.1 Introduction

- 5.1.1 In 2017, the Welsh Government announced a target of meeting 70% of Wales' electricity demand from Welsh renewable electricity sources by 2030. In 2018, Wales reached 50% of electricity consumption being generated by renewable energy, up from 19% in 2014 and 48% in 2017 (Source: Energy Generation in Wales 2018).
- 5.1.2 There remain significant challenges to meeting the 70% target by 2030. There is minimal economic support following the removal of Feed in Tariff and Renewable Obligation subsidy schemes. Furthermore, there are constraining factors on the electricity distribution system in many areas of the electricity network which require significant investment to overcome – often that level of investment required will render generation projects uneconomic.
- 5.1.3 This project represents an important opportunity to secure renewable energy generation that can be connected without major electricity network development and not reliant on Government subsidy support – this proposal presents a strategically important opportunity for Wales to connect 40MW of clean energy generation as part of a new era of subsidy-free, economically viable renewable energy developments.

5.2 Well-Being of Future Generations Act (Wales) 2015

- 5.2.1 The Well-Being of Future Generations Act (Wales) 2015 sets out a strategy for the journey we must take to secure the well-being of future generations.

5.2.2 The Wellbeing of Future Generations Act (Wales) Act 2015 sets out a ‘*sustainable development principle*’ requiring planning decisions to comply with the 7 ‘*well-being goals*’ set out in Table 1 on Page 4 of the Document. This is copied below for reference:

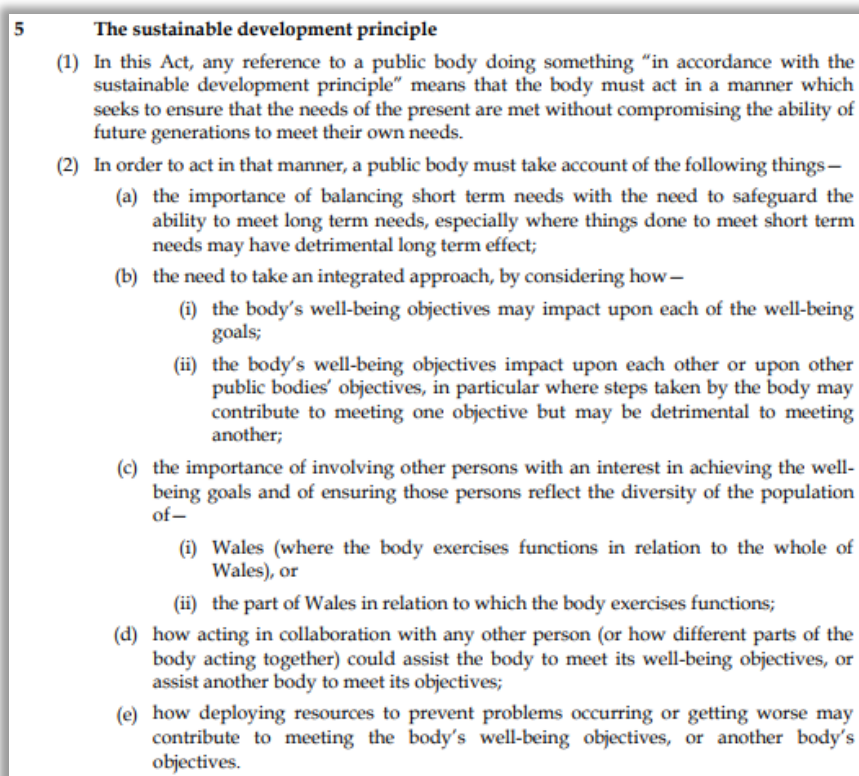
TABLE 1

| Goal | Description of the goal |
|---|---|
| A prosperous Wales. | An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work. |
| A resilient Wales. | A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change). |
| A healthier Wales. | A society in which people’s physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood. |
| A more equal Wales. | A society that enables people to fulfil their potential no matter what their background or circumstances (including their socio economic background and circumstances). |
| A Wales of cohesive communities. | Attractive, viable, safe and well-connected communities. |
| A Wales of vibrant culture and thriving Welsh language. | A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports and recreation. |
| A globally responsible Wales. | A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being. |

Source: Well-being of Future Generations (Wales) Act 2015 (anaw 2)
http://www.legislation.gov.uk/anaw/2015/2/pdfs/anaw_20150002_en.pdf

5.2.3 The proposal helps secure a sustainable future for the next generations by introducing a renewable energy generation facility that will ensure a future supply of clean power for local communities and businesses. The proposal actively contributes to many of the well-being goals of the Act and contravenes none.

- 5.2.4 The ‘**Sustainable Development Principle**’ as discussed in Paragraph 5 (1) sets out that public bodies “*must act in a manner which seeks ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.*”
- 5.2.5 Section 5 is copied below in its entirety. This proposal should be seen as an opportunity to help promote each of the actions as set out in Paragraph 5(2).



Source: Well-being of Future Generations (Wales) Act 2015 (anaw 2)
http://www.legislation.gov.uk/anaw/2015/2/pdfs/anaw_20150002_en.pdf

5.3 **Planning Policy Wales (PPW)**

- 5.3.1 Welsh Ministers revised Planning Policy Wales (PPW) to reflect the objectives of the strategically set Well-being of Future Generations (Wales) Act 2015. PPW Edition 10, December 2018 sets out the most up to date prevailing National Framework for planning guidance in Wales.
- 5.3.2 PPW Paragraph 1.17 states that the “*legislation secures a presumption in favour of sustainable development in accordance with the development plan unless material*

considerations indicate otherwise to ensure that social, economic, cultural and environmental issues are balanced and integrated.”

- 5.3.3 Section 5.7 of PPW discusses Energy:
- 5.3.4 Paragraph 5.7.8 of PPW states, inter alia, that *“The benefits of renewable and low carbon energy, as part of the overall commitment to tackle climate change and increase energy security, is of paramount importance.”*
- 5.3.5 Paragraph 5.7.11 of PPW states that *“Planning authorities should plan positively for grid infrastructure. Development plans should facilitate the grid infrastructure required to support the renewable and low carbon energy potential for the area, particularly areas identified for such development. Planning authorities should support appropriate grid developments, whether or not the developments to be connected are located within their authority.”*
- 5.3.6 Paragraph 5.7.16 sets out that Wales will set out to generate 70% of its electricity consumption from renewable energy by 2030.
- 5.3.7 Paragraph 5.7.15 of PPW states that *“The local balance of the energy network will be a crucial consideration in this regard, and planning authorities should consider the best places for local renewable energy generation to help improve the resilience of the grid in the future.”*
- 5.3.8 Section 5.9 of PPW discusses Renewable and Low Carbon Energy:
- 5.3.9 Paragraph 5.9.1 states that *“Planning authorities should facilitate all forms of renewable and low carbon energy development. In doing so, planning authorities should seek to ensure their area’s full potential for renewable and low carbon energy generation is maximised and renewable energy targets are achieved”.*
- 5.3.10 Paragraph 5.9.16 states that *“In determining applications for the range of renewable and low carbon energy technologies, planning authorities should take into account:*
- *the contribution a proposal will make to meeting identified Welsh, UK and European targets;*
 - *the contribution to cutting greenhouse gas emissions; and*
 - *the wider environmental, social and economic benefits and opportunities from renewable and low carbon energy development.”*

- 5.3.11 With reference the above important planning considerations:
- 5.3.12 The submitted application confirms that at an approximate 40MW design capacity, the proposal solar installation would generate approximately 47,400,000kWh per annum. The proposal therefore represents an important contribution towards the nation's efforts on tackling climate change; contributing significantly to Carmarthenshire County's contribution to achieving carbon emission targets and crucially making a significant contribution towards the nation's target of securing 70% of electricity generation being from renewable sources.
- 5.3.13 40MW of clean renewable power would also provide sufficient electricity to meet the demand of 15,290 average UK households (based on Ofgem's Typical Domestic Consumption Value of 3,100 kWh of electricity for a house).
- 5.3.14 The annual carbon saving would be 10,665 tonnes. This is the equivalent of taking 2,318 cars off the road; assuming the average vehicle on the road has a fuel economy of about 22.0 miles per gallon and drives around 11,500 miles per year.
- 5.3.15 The application is accompanied by environmental survey reports which all confirm the facility can be installed without unacceptable adverse environmental impacts.
- 5.3.16 The development will provide an opportunity for the expansion and further maturity of hedgerow habitats, and the introduction of species-rich grassland managed as meadow to encourage more wildlife locally.
- 5.3.17 Farming will continue alongside energy generation, with sheep used to manage the ground cover.
- 5.3.18 Enclosed within Appendix 3 of this report is a matrix assessment of the net ecological impacts of the proposal. The matrix used is that which is being developed by Natural England and which Natural Resources Wales have adopted until such time as they develop their own matrix. The calculations show that the proposal would have a net gain of 34.10% in habitat units and a net gain of 22.95% hedgerow units based on the proposed management given in the submitted Landscape and Ecological Management Plan (LEMP).
- 5.3.19 The solar energy industry provides thousands of jobs worldwide and many of those are in the Wales; jobs being created through both the consultancy, and construction and operation phases of solar developments. In addition, during construction phase, workers

will use local services and accommodation, providing support for local business and the economy.

5.3.20 Paragraph 5.9.18 states that *“Planning authorities should also identify and require suitable ways to avoid, mitigate or compensate adverse impacts of renewable and low carbon energy development. The construction, operation, decommissioning, remediation and aftercare of proposals should take into account:*

- *the need to minimise impacts on local communities, such as from noise and air pollution, to safeguard quality of life for existing and future generations;*
- *the impact on the natural and historic environment;*
- *cumulative impact;*
- *the capacity of, and effects on the transportation network;*
- *grid connection issues where renewable (electricity) energy developments are proposed; and*
- *the impacts of climate change on the location, design, build and operation of renewable and low carbon energy development. In doing so, consider whether measures to adapt to climate change impacts give rise to additional impacts.”*

5.3.21 With reference to the above important planning considerations, the submitted application confirms that local impacts will be minimised where possible. The submitted application is accompanied by a Construction and Environmental Management Plan that details measures that would be taken to minimise impacts from installation.

5.3.22 The application is also accompanied by a Landscape and Ecological Management Plan which details a management strategy to secure both landscape and ecological enhancements.

5.3.23 A detailed Historical Impact Assessment also accompanies the submission which concludes that minor heritage impacts could be partially offset by enhancing the hedgerows and designing the solar farm so that it fits in to the existing pattern of enclosed fields and blends into the mature trees in front and behind to more reflect the character of the surrounding field scape.

5.3.24 The submitted application has been specifically designed such to ensure minimal landscape impacts on the wider area and to retain trees, hedgerows and the existing pattern of enclosed fields.

5.3.25 A Transport Statement confirms that the installation of the proposal can be managed to ensure minimal disruption to the transportation network.

- 5.3.26 The application includes details of a cable route for connection to the local grid; the proposal benefitting from a connection offer to the local substation at Heal Ddu just to the south of Tycroes which is a rare and strategically important opportunity to secure additional renewable energy generation.
- 5.3.27 The equipment production and installation work of the proposal will create a carbon footprint. However, the carbon emissions created through the manufacture, transport and installation of the proposal will be balanced or 'offset' by the clean electricity generation of the proposal within 2 years of the commissioning of the facility. The proposal thereafter has important environmental benefits producing 40MW of renewable clean energy and offsetting 10,665 tonnes of carbon each year.
- 5.3.28 Enclosed within Appendix 3 of this report is a matrix assessment of the net impacts of the proposal. The matrix used is that which is being developed by Natural England and which Natural Resources Wales have adopted until such time as they develop their own. The calculations show that the proposal would have a net gain of 34.10% in habitat units and a gain of 22.95% in hedgerow units based on the proposed management given in the submitted Landscape and Ecological Management Plan (LEMP).

5.4 **Technical Advice Notes (TANs)**

- 5.4.1 Technical Advice Notes (TANs) take forward the policies and objectives of PPW and provides local authorities with guidance on the relevant factors with which to prepare their local plans and base their planning decisions.
- 5.4.2 TAN 12 (Design) 2016 provides guidance on how good design should be achieved. The objectives of good design as shown in Figure 1 of TAN12, relate to access, character, community safety, environmental sustainability and movement. An overview of the journey to siting and the design of this proposal are set out in a Design and Access Statement that accompanies the application.
- 5.4.3 TAN 18 (Transport) 2007 explains how transport impacts should be assessed and mitigated. The primary focus of TAN18 is on development that generates travel demand. However, in the context of this application, although the proposal generates traffic associated with the installation process (as discussed in the submitted Transport Statement), post-installation there would only be infrequent visits by a van for maintenance. No staff are employed at or near the site and there is no access into this

development for members of the public other than via a footpath that runs through Area 1 but which will be fenced off from the development.

- 5.4.4 TAN 11 (Noise) 1997 sets out to minimise the adverse impact of noise without placing unreasonable restrictions on development. Small amounts of noise created by transformer / inverter and substation housings are inaudible after a very short distance. All electrical equipment within the site that would generate small amounts of noise are a considerable distance from local noise receptors.
- 5.4.5 TAN 5 (Nature Conservation and Planning) 2009 provides guidance on how proposals should contribute to protecting and enhancing biodiversity. The submitted ecological work surveys the local area, provides advice in so far as the anticipated impacts and suggests mitigation where necessary.
- 5.4.6 Enclosed within Appendix 3 of this report is a matrix assessment of the net impacts of the proposal. The matrix used is that which is being developed by Natural England and which Natural Resources Wales have adopted until such time as they develop their own. The calculations show that the proposal would have a net gain of 34.10% in habitat units and a net gain of 22.95% in hedgerow units based on the proposed management given in the submitted Landscape and Ecological Management Plan (LEMP).
- 5.4.7 TAN 15 (Development and Flood Risk) 2004 seeks to direct new development away from areas that are at high risk of flooding. Its Development Advice Map classes land according to 3 flood risk zones. The application site is classed as Zone A (little or no risk of fluvial or tidal/coastal flooding). Adjacent / close areas considered to be at risk of flooding have purposefully been excluded from the development layout. Further information is contained within the submitted Flood Risk Assessment.
- 5.4.8 TAN 24 (The Historic Environment) 2017 provides guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning and listed building applications. The submitted Historic Impact Assessment confirms that the proposals would not unacceptably impact local heritage assets.
- 5.4.9 TAN 6 (Planning for Sustainable Rural Communities) 2010 provides guidance on how planning decisions can help support sustainable rural communities. The proposal the subject of this application provides renewable electricity generation for the local distribution network; providing Wales with a valuable contribution towards reducing carbon emissions and achieving its strategic environmental objectives.

5.4.10 TAN 23 (Economic Development) 2014 provides advice on various aspects relating to this area including developing high-level economic planning objectives, assessing the economic benefits of new development, economic development and the rural economy. The solar energy industry provides thousands of jobs worldwide and many of those are in Wales; jobs being created through both the consultancy, and construction and operation phases of solar developments. In addition, during construction phase, workers will use local services and accommodation, providing support for local business and the economy.

5.5 **Welsh Government Practice Guidance: Planning Implications of Renewable and Low Carbon Energy February 2011**

5.5.1 The Welsh Government Practice Guidance: Planning Implications of Renewable and Low Carbon Energy, published February 2011, summarises the potential impacts and design, mitigation and enhancement measures of solar installations as:

- Landscape and visual
- Glint and glare
- Ecology
- Historic environment
- Agriculture
- Hydrology and flood risk; and
- Cumulative impacts

5.5.2 The DNS application addresses each of these considerations within the submitted Landscape and Visual Impact Assessment (LVIA), the submitted Glint and Glare Assessment, the submitted Ecological reports, the Historical Impact Assessment, the Flood Risk and Surface Water Drainage report, and cumulative impacts in particular covered within the submitted LVIA.

5.5.3 In so far as the Agricultural impacts of the proposal are concerned, during pre-application discussions with the LPA Carmarthenshire County Council (CCC), consultation was made with Welsh Government (WG) with regard to the agricultural land classification of the 3 site areas. Welsh Government confirmed (copy of email in Appendix 4) that in relation to Agricultural Land Classification (ALC), *“According to the Predictive ALC Map, the land East of the A48 is ALC Subgrade 3b and the land South West of Ty Croes is ALC Grade 4 and 5.”*

5.5.4 WG’s response continued to advise that *“An ALC survey is not required for this site as it is unlikely to include BMV agricultural land. Therefore BMV Agricultural Land Policy (PPW paragraph 3.54 & 3.55) does not apply to this application.”*

5.6 Local Development Plan

5.6.1 The current adopted Local Development Plan is the Carmarthenshire Local Development Plan (CLDP) that was adopted in December 2014. The relevant policies are:

| | |
|--------|---|
| SP1(i) | Sustainable Places and Spaces |
| SP2 | Climate Change |
| SP11 | Renewable Energy & Energy Efficiency |
| SP14 | Protection and Enhancement of the Natural Environment |
| GP1 | Sustainability and High Quality Design |
| TR3 | Highways in Developments- Design Considerations |
| EQ4 | Biodiversity |
| EQ5 | Corridors, Networks and Features of Distinctiveness |
| EQ7 | Development within the Caeau Mynydd Mawr SPG Area |
| RE3 | Non-Wind Renewable Energy Installations |
| EP3 | Sustainable Drainage |

5.6.2 The CLDP was written over 6 years ago and adopted more than 5 years ago against the backdrop of policy framework of PPW Edition 7. It remains the adopted and most up to date local planning policy framework for Carmarthenshire. However, it is anticipated that PPW Edition 10 will carry significant weight in the determination of this application; particularly in the light of the speed with which the national and local strategic renewable energy objectives have progressed in recent years and the associated planning guidance aimed at helping deliver objectives has evolved in PPW Editions 8, 9 and now 10.

5.6.3 However, CLDP remains an important material consideration in the determination of the application and Policy RE3 (Non-Wind Renewable Energy Installations) provides the most applicable local planning policy context for the principle of this proposal.

5.6.4 Policy RE3 states inter alia, that *“Large scale schemes located outside defined Development Limits may be permitted in exceptional circumstances, where there is an overriding need for the scheme which can be satisfactorily justified, and the development will not cause demonstrable harm to the landscape.*

Proposals that would cause demonstrable harm to the landscape, visual impact, noise, ecology, or ground and surface water as a result of the cumulative effect of renewable energy installations will not be permitted.”

- 5.6.5 The wording of Policy RE3 is not reflective of CCC's prevailing position in relation to encouraging proposals for renewable energy development or indeed reflective of national planning policy guidance that has a deeply engrained focus on encouraging delivery of proposals for renewable energy generation.
- 5.6.6 Nevertheless, taking the policy wording in the context of prevailing circumstances in 2020, the applicant believes there are 'exceptional circumstances' in so far as the national pressing need to deliver more renewable energy generation. This underpins the 'overriding need' for the scheme. Furthermore, the submitted environmental reports confirm that there would not be *"demonstrable harm to the landscape, visual impact, noise, ecology, or ground and surface water as a result of the cumulative effect of renewable energy installations will not be permitted."*
- 5.6.7 In the circumstances, the proposal the subject of this application complies with Policy RE3.
- 5.6.8 In respect of Policy EQ7, the Policy of the CLDP states, inter alia, that *"Proposals will be permitted where they accord with the Council's commitment to promote and contribute to the delivery of the Conservation Objectives of the Caeau Mynydd Mawr Special Area of Conservation (CMM SAC) in line with the Habitats Directive. Where applicable, proposals in the SPG area will be required to contribute towards increasing the quality and amount of suitable habitat for Marsh Fritillary butterfly available within the SPG Area. The SPG Area is defined on the Proposals Map."*
- 5.6.9 As demonstrated in the following Section 5.7.2, the proposal the subject of this application will indeed *'accord with the Council's commitment to promote and contribute to the delivery of the Conservation Objectives of the Caeau Mynydd Mawr Special Area of Conservation'*. Furthermore, the application is supported by a Habitats Regulations Assessment screening that confirms no likely significant effects to Annex I habitats or Annex II Species.
- 5.6.10 As discussed and justified in Sections 7.7.2, it would not be *applicable* in this instance to *'contribute towards increasing the quality and amount of suitable habitat for Marsh Fritillary butterfly available within the SPG Area'* via a monetary contribution as the proposal results in an important opportunity to secure net positive benefits for the marsh fritillary habitat area.
- 5.6.11 In addition to the above, and with reference to the other salient planning policies of the adopted CLDP, a decision of approval for this application would accord also with the

policies and objectives of the adopted CLDP; the subjects of which are discussed in Section 6 of this report.

5.7 Local Supplementary Planning Guidance (SPG)

5.7.1 Wind and Solar Energy SPG

5.7.1.1 The Wind and Solar SPG has been prepared to support the Renewable Energy policies contained within the Carmarthenshire Local Development Plan (LDP). The SPG provides further, more detailed guidance for facilitating the development of renewable energy schemes, focusing on wind and solar energy.

5.7.1.2 Paragraph 4.11.3 states that *“Applicants must ensure that they take account of all the potential effects of the proposed development and make sure that avoidance and mitigation are appropriate to the site. All stages of a development must be considered, as should the extent of any required land take or potential indirect effects during the construction, operation, and where applicable the decommissioning of the proposed development.”*

5.7.1.3 The various submitted planning reports and assessments that accompany this DNS submission are comprehensive and thorough and are as informed by pre-application discussions. Any impacts associated with the installation of the development have been properly accounted for and where necessary, mitigation has been proposed to offset impacts. In the case of ecology and biodiversity, mitigation will implement net positive outcomes.

5.7.1.4 Paragraph 4.12.1 states that *“Applicants will be expected to justify the choice of site and the choice of renewable energy generation. The applicant will be required to demonstrate that the chosen technology is the most appropriate for the site.”*

5.7.1.5 This application has confirmed that the location is determined by the rare opportunity to complete an economically viable connection to the local substation at Heol Ddu to the North of the site and to the south of Tycroes. This substation enables a strategically important opportunity for Wales to connect 40MW of clean energy generation that, without subsidy support, is an economically viable renewable energy development.

5.7.1.6 It is important to note that even relatively short increases in distance between a given site and its connection point would render the project the economically unviable, hence the applicant chose the most suitable, available and therefore deliverable areas of land

for this project. The locations benefit from being well screened and Areas 1 and 2 are locations that will essentially extend an existing solar farm that already forms part of the character of the local landscape.

5.7.1.7 In so far as the availability of the technologies, only wind has the realistic on-shore renewable energy capabilities to deliver 40MW of clean energy generation. However, the vicinity does not have a suitable wind resource and the density of dwellings within the proximity of the substation point of connection make a wind project unfeasible. A wind development would be significantly more intrusive to the local landscape, significantly more harmful to local residential amenity and significantly more impacting to local heritage, ecology and habitat.

5.7.1.8 Solar (PV) is the only viable renewable technology that can be installed at this substation point of connection.

5.7.2 Caeau Mynydd Mawr SPG

5.7.2.1 The Caeau Mynydd Mawr SPG *“provides specific guidance in relation to the consideration of proposals for potential developments impacting upon the Caeau Mynydd Mawr Special Area of Conservation (SAC) and the need to establish a management strategy to ameliorate for the loss of and secure the ongoing and future management of habitat used by the Caeau Mynydd Mawr SAC marsh fritillary butterfly metapopulation.”*

5.7.2.2 Paragraph 1.1 progresses to state that the guidance *“is pivotal to mitigating likely significant effects at a strategic level”*.

5.7.2.3 The SPG sets out the policy framework to secure monetary contributions from development proposals under prevailing Planning Obligations guidance at a national and local level to compensate for loss of and to secure future management of habitat as quoted above. Contributions sought are done so under the legal effect the Community Infrastructure Levy Regulations 2010 has to securing the three tests of guidance contained in Circular 13/97: Planning Obligations: Wales (<https://gov.wales/planning-obligations-circular-1397>). The three tests read as follows:

“a planning obligation may only constitute a reason for granting planning permission if it complies with the three tests...namely, that it is:

(a) necessary to make the development acceptable in planning terms;

(b) directly related to the development; and

(c) fairly and reasonably related in scale and kind to the development.”

- 5.7.2.4 The submitted application is accompanied by a Habitats Regulation Assessment Screening. The screening advises no likely significant effects on Annex I Habitats or Annex II Species associated with the Caeau Mynydd Mawr SAC.
- 5.7.3 Through implementation of the mitigation proposed within the submitted Landscape and Ecological Management Plan (LEMP), the project in fact presents the opportunity to introduce and manage new habitats, most notably species-rich grassland, rough grassland, and species-rich hedgerows which will improve habitat connectivity and diversity locally. It will also result in secondary benefits to the wider area by improving ecological function, and foraging opportunity for a range of local fauna.
- 5.7.3.1 Enclosed within Appendix 3 of this Report is a matrix assessment undertaken by Western Ecology of the net ecological impacts of this proposal. The matrix that has been used is being developed by Natural England and is currently the relevant tool Natural Resources Wales have adopted until such time as they develop their own matrix. The matrix formula assists in justifying the net ecological benefits of a proposal; as required by Planning Policy Wales V10.
- 5.7.3.2 The matrix calculations show that the proposal would have a net gain of 34.10% in habitat units and a net gain of 22.95% in hedgerow units based on the proposed management given in the submitted LEMP. Much of this habitat will directly complement the Caeau Mynydd Mawr SAC.
- 5.7.3.3 There are only very minor short-term negative impacts on the Caeau Mynydd Mawr SAC. These are associated with installation and these impacts are quickly offset through the implementation of the Landscape and Ecological Management Plan (LEMP); introducing the positive net benefits discussed above. In the circumstances, the fabric of this proposal will directly contribute towards the objective of *“a management strategy to ameliorate for the loss of and secure the ongoing and future management of habitat used by the Caeau Mynydd Mawr SAC marsh fritillary butterfly metapopulation”*. Over its lifetime, the proposal will have significant positive impacts on the SAC.
- 5.7.3.4 A monetary contribution under the Caeau Mynydd Mawr SPG cannot therefore be required under the law as such a contribution would not be *‘necessary to make the development acceptable in planning terms’* and nor would it be *‘directly related to the development’*, or *‘fairly and reasonably related in scale and kind to the development’*.

5.7.4 Planning Obligations SPG

5.7.4.1 The case in support of this proposal not being expected to contribute towards a Management Strategy for the SAC has been discussed in Section 5.7.2 above.

5.7.4.2 There are no other impacts associated with this proposal that would warrant monetary contributions under prevailing Planning Obligations guidance.

5.7.4.3 This includes any expectations under Paragraph 3.5.5 of PPW V10 which seeks community funds via contributions from developers as part of large schemes to offset negative consequences of development.

5.7.4.4 The proposal is not akin to a large-scale wind farm where Paragraph 3.5.5 of PPW would typically inform contributions associated with visual and noise impacts.

5.7.4.5 The likely impacts are minor at most. In the circumstances, it is not expected that the LPA will seek contributions under their Planning Obligations SPG. Indeed, no contributions were mentioned as being expected to be necessary during pre-application consultations.

5.7.5 Nature Conservation and Biodiversity SPG & Archaeology and Development SPG

5.7.5.1 The proposal is accompanied by Preliminary Ecological Appraisals, a Habitats Regulations Assessment Screening, a Landscape and Ecological Management Plan (LEMP) and a Net Gain Case in support of contributions towards habitat for protected species (contained in Appendix 3 to this report); all prepared by Western Ecology. The application is also supported by a Heritage Impact Assessment prepared by Archaeology Wales.

5.7.5.2 These planning considerations are discussed in more detail in these reports and summarised within this report under the next Section of this report; Section 6: Review of Potential Impacts.

6. REVIEW OF POTENTIAL IMPACTS

6.1 Introduction

6.1.1 Section 6 of this report should be read in conjunction with the submitted Design and Access Statement, the Pre-Application Consultation Statement and the various submitted environmental reports discussed below.

6.2 Use of Agricultural Land for Ground-Mounted Photovoltaic Solar Farms

- 6.2.1 In so far as the Agricultural impacts of the proposal are concerned, during pre-application discussions with the LPA Carmarthenshire County Council (CCC), consultation was made with Welsh Government (WG) in regard for the agricultural land classification of the 3 sites. Welsh Government confirmed (copy of email in Appendix 4) that *“According to the Predictive ALC Map, the land East of the A48 is ALC Subgrade 3b and the land South West of Ty Croes is ALC Grade 4 and 5.”*
- 6.2.2 WG’s response continued to advise that *“An ALC [agricultural land classification] survey is not required for this site as it is unlikely to include BMV agricultural land. Therefore BMV Agricultural Land Policy (PPW paragraph 3.54 & 3.55) does not apply to this application.”*
- 6.2.3 In the circumstances, an ALC Survey is not deemed necessary and has not been undertaken as part of this DNS application.

6.3 Landscape and Visual Impact

- 6.3.1 One of the main potential impacts of a solar farm development is its landscape and visual effects.
- 6.3.2 Chartered landscape consultancy Amalgam Landscape has been commissioned by the Applicant to consider the landscape and visual considerations of the proposal. In doing so, they have prepared a Landscape and Visual Impact Assessment (LVIA) in accordance with the Landscape Institute’s prevailing guidance for such proposals. The LVIA report is submitted with this planning application together with its associated Figures and Photomontages.
- 6.3.3 The purpose of the LVIA is to identify and outline the existing landscape character and visual amenity receptors within the study area and to assess the potential impact. Impacts and effects are assessed at significant stages in the life of the proposed development, including construction, operation and decommissioning.
- 6.3.4 The Assessment also considers the cumulative effects of the proposed development when perceived with others that are operational, under construction, consented and ‘In Planning’ within the study area.

- 6.3.5 Amalgam Landscape has carefully selected and agreed with the LPA viewpoints from within a Zone of Theoretical Visibility (ZTV) when preparing montages to accompany the application. The photomontages reflect the existing and the proposed; having regard also for any cumulative impacts with other renewable development proposals. Some of the closer viewpoints also include a third montage to represent the proposal in 5 years' time, once existing and proposed maturing landscaping has established.
- 6.3.6 The proposed development site is not recognised for its value through any landscape relevant designations, although there are locally recognised Special Landscape Areas (SLA) present, including the Llŵchwr Valley SLA which occurs immediately to the south of the proposed development site (Area 1 - Eastern Site) at its closest point. There are however other scattered landscape relevant designations within the study area. Scattered Scheduled Monuments are present and Listed Buildings are focussed within the settlements, as well as sparsely scattered within the farmland landscape. Numerous Ancient Woodlands are also present adding to the overall well-vegetated character of the study area.
- 6.3.7 The LVIA states in Paragraph 8.4 that *“The proposed development’s location set in large and relatively contained regular fields within a gently sloping and undulating well-vegetated landscape are appropriate for solar development, as identified within the Landscape Sensitivity and Capacity Study. The sensitive siting and location of the proposed development also minimises the wider impacts on landscape character, landscape relevant designations and nearby visual amenity receptors”*.
- 6.3.8 Existing field boundary vegetation will be protected and enhanced, to retain and improve the landscape pattern and increase screening for nearby visual amenity receptors. Selected hedgerow in-fill planting to existing boundaries will also improve screening and promote the field pattern and regular landscape structure.
- 6.3.9 Paragraph 8.8 of the LVIA progresses to state that *“Although selectively perceived, the proposed development will be viewed as a contained built element, within a regular and well-vegetated landscape which will easily become ‘lost’ within the wider landscape. The majority of effects on landscape character, landscape relevant designations and visual amenity receptors and their views will therefore be neutral largely because of the enclosure provided by the surrounding dense hedgerows, trees, copses and woodlands, subtle variations in the surrounding gently sloping and undulating landform and the screening vegetation focussed around residential properties, settlements and transport corridors in the immediate and wider landscape”*.

6.3.10 Amalgam Landscape also state in paragraph 8.10 that *“Exposed views of the proposed development from visual amenity receptors will be extremely limited and will be generally only from those very few receptors in close proximity or from more distant and elevated locations to the south-east as well as where there are ‘gaps’ in the nearby enclosing vegetation. The proposed additional mitigation measures, as shown in the Illustrative Landscape Masterplan, including in-fill planting of the existing retained boundaries will help to restrict even further any potential views of the proposed development, particularly for those receptors in close proximity, over time. Relatively few visual amenity receptors will have close range views of the proposed development, the majority of views will be obscured by localised screening from vegetation, subtle variations in landform and adjacent development.”*

6.3.11 Amalgam Landscape set out in Paragraph 8.11 the following conclusions: *“In summary, the proposed development will:*

- *Add a relatively contained built element to the landscape;*
- *Avoid and will not have a direct and limited indirect influence on any designated landscapes;*
- *Be set within the regular landscape pattern within mainly mature and well-vegetated field boundaries, which will be protected and enhanced through additional planting, including in-fill planting to the existing boundaries, where necessary;*
- *Only be partly overlooked from in very close proximity, from gaps in enclosure, its influence dramatically reducing over time and swiftly with distance from the proposed development. Although selectively initially perceived, the proposed development will be a contained built element, set within a well-vegetated landscape, notwithstanding it is temporary and reversible;*
- *Will be perceived from selected open and elevated locations to the south-east, where it will be viewed in combination with the adjacent Clawdd du operational solar scheme. The addition of the proposed development will not significantly increase the perception of numerous solar schemes on either the landscape or views and therefore there will be limited additional cumulative effects as a result of the proposed development; and*
- *Overall, will have limited impacts on landscape relevant designations, landscape character and visual amenity receptors and their views.”*

6.4 Residential Amenity

- 6.4.1 The planning system seeks to protect residential amenity by guiding development to ensure it does not result in a material harm to the living conditions enjoyed by the occupants of residential properties.
- 6.4.2 Providing it is carefully sited, a solar development is not usually prominent from residential premises. The application site Areas referred to as Areas 1, 2 and 3 are all considered appropriate locations for a solar (PV) development. The land is predominantly screened by the surrounding topography from the nearest residential properties. The site also benefits from extensive mature screening along its perimeters..
- 6.4.3 Additional study work has been included in the submitted LVIA document to identify the closest residential properties to the site and to discuss the likely impacts to these properties. Paragraphs 3.90 – 3.92 and 6.58 – 6.61 of the updated LVIA are applicable in respect of discussing this issue.
- 6.4.4 The LVIA concludes (ref. Para 6.61 of the LVIA) that properties that are not ‘involved’ (as a landowner) in the project would experience either a ‘low impact’ or ‘neutral impact’. Of those properties that are involved, one property (Ty-Isaf - immediately to the south and east of Area 3) would be expected to experience a ‘medium impact’.
- 6.4.5 In relation to noise, the relevant test for assessing commercial noise on nearest noise-sensitive receptors are suggested in the guidance contained within BS4142:2014+A1-2019; which is a standard for rating and assessing industrial and commercial sound is recognised by planners and Environmental Health Officers, for assessing the likely effects of industrial or commercial sound.
- 6.4.6 Small amounts of noise created by transformer / inverter / substation switch gear is inaudible after a very short distance. These units of electrical equipment within the site have been intentionally sited a considerable distance from local noise receptors.
- 6.4.7 During operation the only noises are from the inverters and transformers on site.
- 50dB(A) @1m for invertors
 - 58dB(A)@3m for transformers.
- 6.4.8 The following table provides comparative noises:

| Noise Source | Decibel Level |
|--|----------------------|
| Jet take-off (at 25 meters) | 150 |
| Thunderclap, chain saw. Oxygen torch (121 dB). | 120 |
| Boeing 737 | 90 |
| Dishwasher | 80 |
| Passenger car at 65 mph at 25 ft | 70 |
| Conversation in restaurant | 60 |
| Quiet suburb, conversation at home. | 50 |
| Library | 40 |
| Quiet rural area | 30 |
| Whisper | 20 |
| Breathing | 10 |

Source:

6.4.9 There would be no adverse impacts associated with noise from proposed solar farm electrical equipment and therefore the operation of the solar farm would comply with the BS4142:2014+A1-2019 Standard. The submitted Construction and Environmental Management Plan confirms in Paragraph 4.1 that construction of the development will be undertaken 7 days a week. No activities audible from the boundary of the nearest noise sensitive receptor shall take place on Sundays during the construction period or at times outside 07:30 and 19:30 (or dusk if earlier). Vehicular deliveries including all HGV movements shall arrive, be received or dispatched from the site between the hours of 07:30 and 19:30 (or dusk if earlier) Monday to Friday and 07:30 to 12:00 on Saturdays.

6.4.10 The Glint and Glare Assessment formed part of the pre-application consultation documentation. It has amended in the light of comments received by Trunk Roads (Item 74). The Assessment reviews anticipated impacts on residential receptors as well as road users and concludes the proposal would not result in significant glint or glare impacts.

6.5 Heritage

6.5.1 A detailed Historical Impact Assessment has been carried out by Archaeology Wales and accompanies the application.

6.5.2 This Heritage Impact Assessment has examined the impact of the proposed installation of a ground mounted Photo Voltaic (PV) solar farm development and associated infrastructure over three separate but neighbouring sites, on the sites themselves and the surrounding landscape. It has also considered the impact of the development on designated heritage assets within the wider historic environment.

- 6.5.3 The Assessment concludes that minor heritage impacts could be partially offset by enhancing the hedgerows and designing the solar farm so that it fits in to the existing pattern of enclosed fields and blends into the mature trees in front and behind to more reflect the character of the surrounding field scape.
- 6.5.4 The submitted application has been specifically designed such to ensure maximise opportunities for containing the proposal from the wider area, retaining trees, hedgerows and the existing pattern of enclosed fields.
- 6.5.5 With reference to the potential of such solar installation impacting buried archaeology, the PV panels would be mounted on fixed metal frames with support posts driven into the ground to a depth of approximately 1.5m, avoiding the use of concrete foundations and causing negligible ground disturbance to a depth of 1.5m and absolutely no ground disturbance beyond a depth of 1.5m.
- 6.5.6 The submitted Heritage Impact Assessment concludes that in relation to archaeology, the impacts of the proposal *“may be mitigated against by an appropriate level of archaeological recording to add in a positive way to the existing evidential value. The site does not contain known archaeological features of sufficient significance to preclude development of the site. However, the possible presence of archaeological remains may require further archaeological mitigation as part of the development process, a process utilised at the nearby Clawdd Du solar farm site where a programme of archaeological work was included as a Condition in the planning approval. This work comprised a geophysical survey before groundworks commenced, and an archaeological watching brief during the groundworks, a similar scheme on this proposed development could help to better understand and record the potential archaeological resource.”*
- 6.5.7 The Assessment also concludes advice in relation to the expected impacts of the proposal on the setting of important locations of heritage interest. It states that the *“Development will also have an impact on the aesthetic value of the site, and most notably the setting of the scheduled monuments on Graig Fawr (GM386 & GM513). The more visible proposed development in Area 1 is considered to have a moderate impact on this particular aesthetic aspect of the setting, due to its distance from the heritage assets and its proximity to an existing solar farm. The impact from Area 2 is substantially smaller and the impact from Area 3 negligible.”*
- 6.5.8 However, the report progresses to advise that *“These impacts could be partially offset by enhancing the hedgerows and designing the solar farm so that it fits in to the existing pattern of enclosed fields and blends into the mature trees in front and behind to more*

reflect the character of the surrounding field scape. Other than the views from Graig Fawr, the communal value of the site is low and will not be significantly impacted by the development, especially if sympathetic design features are incorporated.”

6.5.9 It would be anticipated that subject to a pre-commencement condition of approval being to secure the further investigative work advised by Archaeology Wales in their Heritage Impact Assessment, the relatively minor heritage setting impacts can be justified when regard is born for the benefits of this proposal.

6.6 Ecology

6.6.1 The land is approximately 0.5km north of the SSSI designation Caeau Afon Gwili and approximately 0.5km south of FelinFach Meadows Cwmgwili SSSI. Both are grassland SSSI designations. The proposed solar array when commissioned and operational will offer ecological enhancement opportunities for species rich grassland corridors and therefore is unlikely to have an adverse impact on these SSSI's.

6.6.2 All hedgerows surrounding the solar site areas would be retained as part of the installation of the solar panels and these would also be protected with an adequate buffer from the installation.

6.6.3 Research consistently shows that solar farms benefit wildlife by enhancing and diversifying the flora beneath and around the solar arrays.

6.6.4 Western Ecology has produced an Ecological Assessment to accompany the planning application. For detailed consideration of the ecological issues surrounding this proposal, reference should be born to the Ecological Preliminary Assessment (PEA) report for the solar site areas and the Ecological Preliminary Assessment PEA) report for the cable route. In addition, Western Ecology has produced a Landscape and Environmental Management Plan (LEMP).

6.6.5 The desk study and field surveys undertaken for the project has enabled the ecological baseline of the site and wider area to be identified and the features / resources which are present, or potentially present to be identified and evaluated. Where potentially adverse effects may arise, impact avoidance by design and/or reduction through suitable mitigation measures has been identified and will be implemented.

- 6.6.6 The proposed solar farm will occupy what is currently intensively managed agricultural land. All the infrastructure of the solar farm will be contained within the existing field boundaries, and the existing gateways used for access.
- 6.6.7 The project presents the opportunity to introduce and manage new habitats, most notably species-rich grassland, rough grassland, and species-rich hedgerows which will improve habitat connectivity and diversity locally, and result in secondary benefits to the wider area by improving ecological function, and foraging opportunity in particular for a range of local fauna.
- 6.6.8 The Western Ecology Surveys confirm that the facility can be installed without unacceptable adverse environmental impacts. The PEA's and LEMP acknowledge the potential for impacts on protected species of otter and dormice and therefore sets out a detailed mitigation for avoiding these impacts.
- 6.6.9 Enclosed within Appendix 3 of this report is a matrix assessment of the anticipated net ecological impacts of the proposal. The matrix used is that which is being developed by Natural England and which Natural Resources Wales have adopted until such time as they develop their own calculation method. The calculations show that the proposal would have a net gain of 34.10% in habitat units and a net gain of 22.95% in hedgerow units based on the proposed management given in the submitted Landscape and Ecological Management Plan (LEMP).

6.7 **Flood Risk and Surface Water Drainage**

- 6.7.1 A Flood Consequences Assessment (FCA); prepared by Clive Onions Ltd. has been prepared to accompany this planning application. This includes a surface water drainage strategy for the site.
- 6.7.2 Natural Resources Wales (NRW) has been consulted on the proposal and the proposed arrays have been located outside all the areas identified to be at high and medium risk of flooding.
- 6.7.3 The solar panel equipment is resilient to wet weather, and is designed to operate in all predicted weathers, subject to normal maintenance. The materials from which the panels, supporting structure, cabling and transformers are manufactured are all durable and will not cause any level of pollution in the ground. The solar farm infrastructure will be set back from watercourses.

6.7.4 The removal of intense grazing and compaction of the soil by animals and farming machinery tracks (tramways) will be eliminated, resulting in improved soil conditions and adding to the overall betterment of hydrological performance. The flourishing grassland will also prevent silt runoff, and the elimination of animal associated waste (from feed and waste) will improve the quality of water entering the environment.

6.7.5 The Clive Onions Ltd. report advises that the proposed change of use will provide a real contribution to soil improvement and biodiversity, will improve runoff/infiltration water quality and result in a significant reduction in the occasions of runoff, runoff rate and volume, bringing significant overall benefits to the local environment and downstream. It will also deliver an important supply of renewable energy. The site will be safe and durable, is not at risk of flooding, will reduce flood risk off-site and improve the receiving waters, and therefore is appropriate in terms of the TAN 15 advice on flood risk.

6.8 **Trees**

6.8.1 Woodland & Countryside Management Ltd. was commissioned to carry out a BS5837 (2012) Tree Survey in November 2019. An Arboricultural Impact Assessment and Method Statement is provided with the DNS application to reflect the proposed project layout and cable route.

6.8.2 The Impact Assessment confirms that the proposed works can be carried out without adverse impacts to trees providing advice is followed in respect of the protection of trees during construction.

6.9 **Transport and Access**

6.9.1 It is anticipated that the construction of the solar farm will take some 18 weeks. Peak traffic generation will occur during the initial weeks when materials to fabricate the compound areas and access roads are brought to site

6.9.2 Traffic management will be in place during the construction period. At the A48 access to Site Area 3 arriving construction traffic will not be permitted to turn right and cross the southbound carriageway. Instead traffic will continue north for some 5km and U-turn at the Cross Hands Business Park grade-separated junction. Appropriate temporary signage will be deployed during the construction period.

- 6.9.3 After commissioning, the site will only experience very infrequent visits for maintenance, by van/4x4-type vehicle.
- 6.9.4 The application is accompanied by a Transport Statement prepared by Acstro that reviews the various transport and access related considerations to installation of the proposal. It also details the number of vehicle deliveries across the 3 site areas.
- 6.9.5 The Transport Statement demonstrates that the construction traffic associated with the development will be modest in volume and will have no significant impact on the operation of the surrounding highway network. It also demonstrates that safe access to the sites will be provided from the public highway.
- 6.9.6 Construction Traffic Management recommendations are made in Section 5 of the Transport Statement.
- 6.9.7 The applicant fully intends to comply with the above recommendations and in doing so will ensure the proposed development can be installed within minimal disruption on the highway network and minimal highway safety impacts to users of the highways.
- 6.9.8 The Transport Statement concludes that “the proposed mitigation measures will ensure that construction traffic can safely access the site and that there will be no significant permanent impact on the operation and safety of the surrounding highway network. As such it is considered that the proposed development is acceptable in terms of its Transport impacts.”
- 6.9.9 In the light of the above advice, it can be concluded that the proposal will comply with the relevant access and highway safety planning policy framework of the adopted Development Plan as well as relevant National Planning Policy Guidance.
- 6.10 **Glint and Glare**
- 6.10.1 Pager Power have been appointed by the Applicant to carry out a Glint and Glare Assessment. The assessment reviews the potential glint and glare impacts on highway users and local dwellings.
- 6.10.2 Areas 1 and 2 are accessed directly from the A483 to the north west. The analysis discussed in the Pager Power report states that:

“A solar reflection from the proposed solar development towards road users travelling in both directions on the A48 is geometrically possible for seven locations out of nine. However, screening in form of vegetation has been identified therefore no impact is anticipated for any type of vehicle travelling on A48 at all seven receptor locations, and no mitigation is required..”

6.10.3 Area 3 is accessed directly from the A48 to the north west. The Pager Power report states that

“The analysis has shown that a solar reflection from the proposed solar development towards road users travelling in both directions on the A483 is geometrically possible for eight locations out of ten. In six of the eight locations the impact is categorised as no impact, due to sufficient screening in form of vegetation, and in two of those ten is categorised as “low” impact, due to the fact that:

- *The reflection will not originate in front of drivers;*
- *Sunlight and reflection will originate from the same point in space as sunlight which produces a greater intensity of light.*

Therefore, the maximum impact forecasted is “low” and no mitigation is required under such condition.”

6.10.4 In relation to the potential for impact on local dwellings, Pager Power’s assessment advises that:

“Based on a review of the geometric analysis and available imagery, residents located within 10 of the 20 assessed dwelling receptors could potentially experience a solar reflection from the proposed solar development. In four of those 10 case the impact is categorised as “no impact”, due to sufficient screening in form of vegetation, while for the remaining six is categorised as low because the reflection will last for less than three months per year.

Therefore, the maximum impact forecasted is “low” and no mitigation is required under such condition.”

6.10.5 Overall, the assessment confirms that *“maximum impact forecasted is categorised as “low” which means no mitigation is required in any case.”*

6.11 Coal Mining Risk Assessment

6.11.1 The Coal Authority were consulted during pre-application discussions with the LPA. Their response stated that *“in considering the nature of the development proposed, and on the basis that parts of the site are within the defined Development High Risk Area, the planning application should be supported by a Coal Mining Risk Assessment, or equivalent, which will assess the risk to the development from coal mining legacy.”*

6.11.2 Yellow Sub Geo Limited has been appointed by the Applicant to prepare a Coal Mining Risk Assessment Report of the proposed development site, in order to provide the Local Planning Authority with information on coal mining and an assessment of its impact on land stability. Their report is supplemented by a Technical Note dated 25th March 2020.

6.11.3 The Yellow Sub Geo report advises in Section 7 that *“The risk posed to the proposed development by known or potential shallow coal mining is generally assessed to be of a LOW to NEGLIGIBLE order, with no further assessment work required, with the exception of the presence of three historic shafts”*. The Technical Note details the risks associated with the three historic shafts and provides a mitigation strategy for development.

6.11.4 It is anticipated that these mitigation works can also be prescribed through use of a pre-commencement planning condition to any permission granted.

6.12 Lifespan of the Development / Decommissioning

6.13 The proposed development would be installed for a 40-year period after which all panels and associated equipment can be removed from the site.

6.14 Concerning decommissioning, despite this phase of the development being some 40 years away, the applicant can advise that the development contains mostly recyclable materials including non-reflective recyclable glass, copper, aluminium, steel, and silicon in semi-conductors.

6.15 Since 2012, solar (PV) modules have fallen within the remit of the Waste Electrical and Electronic Equipment Regulations (The WEEE Directive). This regulates the appropriate treatment of end-of-life products and requires that manufacturers and importers of electronic and electrical equipment ensure the take-back and recycling of their discarded end-of-life products in Europe.

- 6.16 As and when the decommissioning of this development is required to take place, the applicant will take full advantage of such schemes which are available. A company will be contracted to collect the materials and take them to be recycled.
- 6.17 An example of such a scheme operating today is 'PV Cycle' which is a Europe-wide company that operates within the UK. It helps solar plant operators to recycle materials through a free take-back scheme, thereby allowing them to comply with their legal obligations under the WEEE Directive.

7. CONCLUSION

- 7.1 This report has been prepared in support of the proposal for a proposed solar (PV) development on Land to the east of the A48 (Coordinates E257386, N209389) and Land to the south west of Tycroes (coordinates E259219 N209551; & E259904 N209590).
- 7.2 The proposed solar PV development is a temporary installation with permission being required for 40 years and after this time the site can be returned to its original appearance with all equipment being removed from the site immediately at the end of the term and once electricity ceases being exported to the Grid. Therefore, the development is effectively fully 'reversible' on decommissioning.
- 7.3 The proposal will introduce an important renewable energy generation to contribute towards Wales' strategic objectives of generating 70% of its electricity consumption from renewable energy by 2030 (ref. Welsh Government's 'Energy Generation in Wales 2018' and Planning Policy Wales Edition 10).
- 7.4 The application site areas have been chosen as they are naturally well concealed and the soil quality at each is recognised as being of poorer agricultural grade. There will be no significant physical changes to the land of the application site such as earth removal or levelling and the land will remain in agricultural use through sheep grazing. The proposal therefore offers an important opportunity to secure farm diversification.
- 7.5 Planning Law requires that applications for planning permission must be determined in accordance with the development plan, unless material considerations indicate otherwise.

7.6 This report confirms that the application is in compliance with the strategy and policies of the adopted Carmarthenshire Local Development Plan as well as National Planning Policy Wales (PPW) v10 both of which support large scale solar renewable energy developments where appropriately sited and where the environmental impacts of a proposal are acceptable.

7.7 In addition, the proposal presents important environmental, ecological and socio-economic benefits

- The proposal will produce 40MW of renewable clean energy and offsetting 10,665 tonnes of carbon each year.
- 40MW of clean renewable electricity would provide sufficient electricity to meet the demand of 15,290 average UK households (based on Ofgem's Typical Domestic Consumption Value of 3,100 kWh of electricity for a house).
- The proposal would have a net gain of 34.10% in habitat units and a gain of 22.95% in hedgerow units based on the proposed management given in the submitted Landscape and Ecological Management Plan (LEMP).
- The proposal promotes and contributes towards the objectives of the Caeau Mynydd Mawr Supplementary Planning Guidance which provides the policy guidance for securing the ongoing and future management of habitat used by the Caeau Mynydd Mawr SAC marsh fritillary butterfly metapopulation.
- Jobs are created through both the consultancy, and construction and operation phases of solar developments. In addition, during construction, workers will use local services and accommodation, providing support for local business and the economy.
- Income generated from the development will also provide important additional payments of local business rates to Carmarthenshire County Council.
- The development constitutes agricultural diversification. The proposal introduces an economically viable use of poor-quality agricultural land that has limited to no potential for arable production. The land will continue to be grazed post installation of the solar farm.

APPENDICES

Appendix 1

Copy of Screening Direction ref. 3227364 dated 20th December 2019 in accordance with the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017

Appendix 2

Copy of Pre-Application Advice letter received from Carmarthenshire County Borough Council (ref. PA/16871) dated 9th October 2019

Appendix 3

Biodiversity Metric 2.0 Calculation Tool Beta Test Final Tycores (002)

Appendix 4

Appendix 4 to Planning Statement - Pre-Application Comments from Welsh Government

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