Non-Technical Summary

Glyn Taff Solar Farm

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Contents

1. INTRODUCTION

Background

1.1. Neo Environmental Ltd has been appointed by Renantis UK Limited (the "Applicant") to undertake an Environmental Impact Assessment for a proposed solar farm (the "Proposed Development") on lands at Bryntail Farm, Bryn Tail Lane, Pontypridd (the "Application Site"). Please see **Figure 1** for the layout of the Proposed Development.

Development Description

1.2. Installation, operation and subsequent decommissioning of a renewable energy scheme comprising ground mounted photovoltaic solar arrays together with substation compound, transformer stations, internal access track, landscaping, biodiversity measures, boundary fencing, security measures, CCTV posts, monitoring house, storage containers access improvement and ancillary infrastructure. The solar arrays will have a combined capacity of up to 39.9MWp.

SCREENING

1.3. Screening is a procedure used to determine whether a proposed development is likely to have significant effects upon the environment. Solar PV arrays are not explicitly listed in Schedule 2 of the EIA Regulations however they are considered by PEDW to the description at paragraph 3(a) in column 1 of the table in Schedule 2 to the Regulations "Industrial installations for the production of electricity, steam and hot water". Developments of this nature fall within Schedule 2 where the area of the development is over 0.5 ha. Consequently, the Proposed Development falls within Schedule 2 and was subject to EIA Screening.

1.4. A request for Screening Opinion was submitted to PEDW on the 4 January 2024 and a Screening Opinion received on the 13 February 2024, confirming that an EIA would be required and an ES is required to be submitted alongside the application for consent to PEDW, for determination by the Welsh Ministers.

ENVIRONMENTAL IMPACT ASSESSMENT

1.5. The purpose of the EIA process is to identify potentially significant environmental effects. The ES should include a description of the nature, scale and significance of effects. The technical assessments of the topics in the ES were undertaken to predict the potential effects

associated with the Proposed Development during construction, operation and decommissioning.

1.6. When assessing potential effects, it is important to distinguish between those that are significant and those that are non-significant. The significance of an effect depends principally upon the sensitivity and the value of the receptor, together with the magnitude of change of the receptor.

1.7. An assessment of a significant effect does not imply that the effect would be unacceptable. It provides an indication of activities for which further consideration or mitigation may be required. Where the EIA procedure shows that a project will have an adverse impact on the environment, it does not automatically follow that planning permission must be refused. It remains the task of the determining authority to judge each planning application on its merits within the context of the Development Plan, taking account of all material considerations, including the ES.

STRUCTURE OF THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

1.8. The EIA has been coordinated by Neo Environmental with specialist input from Kaya Consulting (Hydrology Consultants). The Environmental Impact Assessment (EIA) is presented within the ES which comprises of the following:

Volume 1:

- Non-Technical Summary

Volume 2:

- ES Chapters
  - Chapter 1: Introduction;
  - Chapter 2: Development Description and Reasonable Alternatives;
  - Chapter 3: Planning Policy;
  - Chapter 4: Landscape and Visual Impact Assessment;
  - Chapter 5: Hydrology;
  - Chapter 6: Highways and Transportation;
  - Chapter 7: Glint and Glare;
  - Chapter 8: Noise;

- Chapter 9: Ecology;
- Chapter 10: Cultural Heritage and Archaeology;
- Chapter 11: Climate Change;
- Chapter 12: Mining; and
- Chapter 13: Summary and Mitigation

Volume 3

- Annex 1 – Flood Risk and Drainage Assessment
- Annex 2 – Outline Construction Environmental Management Plan
- Annex 3 – Construction Traffic Management Plan

Volume 4

- Figures

1.9. This Non-Technical Summary (NTS) summarises the findings of the EIA which are contained within the ES.

Availability of Environmental Impact Assessment Report

1.10. An electronic version of the ES and supporting documents are available online free of charge from the PEDW planning portal and https://glyntaffsolar.co.uk/. Hard copies of the ES can also be available to purchase at a cost reflecting printing and distribution costs. To request copies in any format, please email info@neo-environmental.co.uk or write directly to Neo Environmental at; Spaces 8th Floor , The Programme Building The Pithay, Bristol, BS1 2NB.

Representations to the Application

1.11. Further information including all planning documents are available to review on the website: glyntaffsolar.co.uk

1.12. Please provide feedback by completing your feedback form on the website. If you would like a paper copy of the feedback form, please contact Grasshopper Consulting:

1.13. Please submit your comments by Monday 21 April 2025.

t: 01443 584238

e: hello@grasshopper-comms.co.uk

1.14. Paper copies of the feedback form can be sent to Freepost GRASSHOPPER CONSULT (no stamp or further address required).

2. PROPOSED DEVELOPMENT

DEVELOPMENT DESCRIPTION

The Proposed Development can be summarised as follows;

2.1. Application Site Area – **70.9** hectares (**709,391m²**)

Solar Farm

- 1,333 module racks in total. Total Area = 92.7m²
  - Large Racks – 897 Racks / 50,232 Modules / 8,970 pile driven poles

    Total Area – 71.8m²
  - Small Racks – 435 Racks / 12,180 Modules / 2,610 pile driven poles

    Total Area – 20.9m²

- 13 x Transformers (3.8m (L) x 3.8m (W))– Total Area = **187.7m²**
- Fence is mesh fencing with wooden posts at 3.5m centres. The fence is 2m high with a 0.1m gap at the bottom. The total length is 7,500.8m with a total of 2,143 posts. Total Area = **64.3m²**
- CTV Posts are 3.5m in height and we have 58 (0.65m x 0.75m foundations) Total Area = **28.3m²**
- The internal access track is 3.5m wide and will involve an average of 300mm depth of soil removed. Local widening at turns for access reasons. Occasionally they will use a geosynthetic reinforcement or soil stability to reduce depth. Total length approximately **2,455.5m** (**8,594.1m²** in total)
- Cable trenches are circa 1m deep and up to 1m wide. Estimated at **3,250m** in length.
- 1 x Temporary Construction Compounds (50.0m (L) x 60.0m (W)) – Total Area = **3,000m²**
- 4 x Storage Container (13.7m (L) x 2.4m(W)) – Total Area = **131.5m²**
- Aux Transformer (2.9m (L) x 2.3m (W)) – Total Area = **6.7m²**
- Substation (7.7m (L) x 2.6m (W)) – Total Area = **20.0m²**
- Monitoring House (3.9m (L) x 3.2m (W)) – Total Area = **12.5m²**

<u>Overall</u>

2.2. Overall, the proposed footprint constitutes a relatively small percentage of the total area of the Application Site (**70.9ha**):

- 15,137.5m² for infrastructure (c. 2.13% of the Application Site area); and
- 157.0m² for piling (c. 0.02% of the Application Site area).

2.3. The total ground disturbance area resulting from the Proposed Development is therefore 15,294.5m² or c. 2.15% of the Application Site area.

SITE DESCRIPTION

2.4. The area of the Proposed Development (the "Application Site") lies at an elevation of approximately 140m – 330m AOD and covers a total area of c. 70.9 hectares. It is centred around Bryntail Farm at approximate National Grid Reference (NGR) E 309333, N 189800. It is south of Eglwysilan Road. The site extends west of Bryntail Farm and east of the Bryn Tail Lane. The site is within the administrative area of Rhondda Cynon Taf Council.

2.5. The site comprises 38 agricultural fields that are currently in use for livestock farming. It is on the east side of the Taff Valley c. 1.6 km east of Ynysangharad War Memorial Park. Access will be gained from the Bryntail Lane.

2.6. The site is adjacent to the Twyn Hywel Energy Park a consented wind farm including 14 turbines (DNS/3272053).

3. SUMMARY OF ENVIRONMENTAL EFFECTS

3.1. The following section provides a summary of the findings of the environmental assessment process which has been undertaken. The full assessments are contained **within Chapters 4 to 12 of the main ES (Volume 2)** and the accompanying technical annex **(Volume 3)**.

POPULATION AND HUMAN HEALTH

3.2. Impacts on population and Human Health were assessed under the following in the following Chapters; Highways and Transport, Noise, Glint and Glare, Climate Change, Landscape and Visual.

3.3. The Proposed Development will produce up to 39.9MW of energy 35 years from solar energy, which is a renewable resource. The Proposed Development is expected to generate enough clean energy each year to supply the electricity needs of approximately 12,000 homes per annum. This will offset approximately 18,000 tonnes of CO_2 emissions per annum, which is the equivalent of driving 80 million miles. Therefore, with the additional planting as detailed in the Landscape and Ecology Management Plan (LEMP; see **Figure 8.20 of Volume 2**) and **Technical Appendix 5.1**: BMP, the solar farm will have a **Long-Term Moderate Positive effect** to air quality for the duration of the operational phase.

3.4. The **Long-Term Positive effects** from the production of renewable energy over 35 years at this Application Site, will far outweigh any negative effects on air quality or other natural resources resulting from the construction of the project.

3.5. It is expected that approximately 100—115 people will be employed in the construction of the solar farm with as many employed locally as possible, resulting in a **Minor Temporary Positive effect.**

3.6. In terms of glint and glare, Solar reflections are only possible at seven of the 65 residential receptors assessed within a 1km study area of the Application Site. With the appropriate identified mitigation in place, there would be **no effects** at all 65 receptors.

3.7. Effects on one local road network were assessed in detail and the forecast construction phase traffic has demonstrated that, while the forecast percentage increase in traffic flows is large for some periods on Bryntail Lane, that this is as a result of the very low baseline traffic flows. When further taking into account that the forecast construction trip generation will be on the local road network outside of the observed peak periods. the traffic impact of the Proposed Development is deemed to be a **negligible residual impact**.

3.8. With regards to noise, during the construction phase most of the HGV movements are likely to only increase by 15 per day for a few weeks, these effects are considered to be temporary, and as such the effect of traffic noise upon residents will be a low impact and therefore effects

are of **temporary, minor adverse** significance. **No effect** during the operational phase are anticipated.

3.9. The primary landscape and visual effects during the construction stage will be experienced in the vicinity of the Site, from locations with open or partial views. Construction works may be visible beyond the 5km core study area in views at elevation towards the hill side location of the site. While discernible, the construction effects in long-distance views are not considered significant as they will form part of a wide panoramic view in which they form one visible component of many. During the operational stage potential views of the Proposed Development will be experienced by a number of local receptors including some of the nearest residential receptors and passing transient receptors on recreational routes and minor roads. Longer distance views will largely be limited to a small part of the overall Proposed Development experienced from higher elevations to the west, north and south. The most significant effect is an identified **Major/Moderate adverse** visual effect from the public rights of way network within the Application Site. However, the significance is fleeting, as quickly the views are screened given the nature of the topography and existing screening, quickly screening visibility in its entity.

3.10. There are no anticipated effects that would be deemed significant in terms of population and human health. With the exception of certain visual impacts all other residual effects are not Significant or less for the various elements identified above. The Proposed Development will result in positive effects for climate change which, given the importance of climate change to population and human health in the long term, is considered to significant outweigh the negative effects identified.

LANDSCAPE AND VISUAL

3.11. The primary landscape and visual effects during the construction stage will be experienced in the vicinity of the Site, from locations with open or partial views. Construction works may be visible beyond the 5km core study area in views at elevation towards the hill side location of the site. While discernible, the construction effects in long-distance views are not considered significant as they will form part of a wide panoramic view in which they form one visible component of many.

3.12. During the operational phase the Proposed Development will locally alter the existing agricultural use of the Application Site to a landscape comprising a solar farm with associated infrastructure, mixed agricultural land use and new hedgerow and tree planting. During operation, the Proposed Development will initially have a **Moderate** adverse landscape effect on the characteristics of the Application Site. Although mitigation planting will help contain the lower elevations of the Proposed Development.

3.13. The Proposed Solar Farm will directly affect LCA 37 South Wales Valley and will result in a solar farm located over 70.34 hectares of this landscape. This will result in a localised direct

Moderate adverse landscape effect within c. 2km and a Minor adverse effect across the wider extents of these landscapes.

3.14. Potential views of the Proposed Development will be experienced by a number of local receptors including some of the nearest residential receptors and passing transient receptors on recreational routes and minor roads. Longer distance views will largely be limited to a small part of the overall Proposed Development experienced from higher elevations to the west, north and south. The most significant effect is an identified Major/Moderate adverse visual effect from the public rights of way network within the Application Site. However, the significance is fleeting, as quickly the views are screened given the nature of the topography and existing screening, quickly screening visibility in its entity.

HYDROLOGY

3.15. The hydrology chapter of the ES considers the likely significant effects of the Proposed Development in relation to the following:

- Flood risk;
- Surface water quality (watercourses [rivers and canals]; reservoirs, lakes and ponds; and wetlands);
- Flood risk management; and
- Land drainage.

3.16. The study area used for this assessment includes both the Site and its nearby relevant hydrological features (extending at least to 2 km from the Site), including the catchments of local watercourses, surface water features and dependant habitats. It also includes hydrogeological features, including underlying geology, aquifers and nearby groundwater dependent features.

3.17. This chapter utilises the results of the Site specific Flood Consequence Assessment (FCA) prepared for the Proposed Development as a requirement of and in accordance with Technical Advice Note 15: Development and Flood Risk (TAN15), 2004.

3.18. This chapter of the ES is supported by the following Figures and Technical Appendices:

- Flood Consequence Assessment and Drainage Strategy (FRA and DS) that is presented in Appendix 5-1.

3.19. The assessment covers the construction and operational phases of the Proposed Development and identifies aspects that have the potential to affect the existing baseline situation.

3.20. Within the DAM and Flood Map for Planning, it shows the Site to be wholly situated within Flood Zone A and Flood Zone 1. Therefore, in accordance with TAN15, the Site is situated in an area that has less than 1 in 1000 (0.1%) (plus climate change) chance of flooding in a given year. of fluvial or tidal / coastal flooding. Consequently, a justification test is not required for this Proposed Development, however a Drainage Strategy will still be required to ensure that the Proposed Development will not increase flood risk elsewhere.

3.21. In addition to fluvial and coastal flood risk, NRW also provide surface water flood maps. This indicates areas across the Site, which appear to be restricted mainly to the field drains except for a small area of surface water flooding in Field 37 and 38.

3.22. Where the Natural Resources Wales map demonstrates areas of surface water risk, the topographical survey, as well as aerial maps, were studied to determine if there will indeed be surface water flooding within the Site. There is an area located within Field 33 and 35 that is at risk of surface water flooding which contains only solar panels. As the solar panels will be pile driven into the ground and raised to a height of at least 0.8m off the ground, it will not increase the flood risk elsewhere and will remain safely operational during time of a flood. Therefore, this would be appropriate and in line with the TAN15 guidance.

3.23. The Drainage Strategy ensures that a sustainable drainage solution can be achieved, which reduces the peak discharge rate to manage and reduce the flood risk posed by the surface water runoff from the Site as well as providing water quality benefits.

3.24. The Drainage Strategy proposes to construct soakaway channels/ filter drains within the Site. The location of the channels has been chosen to intercept flows before they enter the existing drainage system surrounding the site. These will be in working order before the construction phase commences.

3.25. It will provide a total storage volume of approximately 156.25 m3. This is greater than the volume of additional runoff generated as a result of the impermeable buildings (45.0 m3). It is therefore considered that this adequately mitigates the increase in flow rates as a result of the minor increase in impermeable area and provides improvement.

3.26. The size of this attenuation storage has been calculated such that the Proposed Development has the capacity to accommodate the 100 year rainfall event including a 20% increase in rainfall intensity that is predicted to occur as a result of climate change.

3.27. A range of pollution prevention and mitigation measures have been described that would adequately manage the flood risk and water quality/quantity during construction. The assessment concludes that the mitigation measures described would reduce the magnitude of impacts to a negligible level and would prevent significant adverse effects arising.

3.28. In terms of operational impacts, a series of mitigation measures are incorporated into the design to avoid potential adverse effects on flood risk and water quality/quantity. The assessment concludes that the mitigation measures described would reduce the magnitude of impacts to a negligible level and would prevent significant adverse effects arising.

3.29. The findings of this assessment have demonstrated that the development would not result in any significant residual adverse impacts on surface waters, groundwaters or flood risk.

HIGHWAYS AND TRANSPORT

3.30. This Chapter of the ES identifies the impact of the Proposed Development on the surrounding transport network; and identifies any measures required to mitigate the impact of the proposed development.

3.31. Effects on one local road network were assessed in detail and the forecast construction phase traffic has demonstrated that, while the forecast percentage increase in traffic flows is large for some periods on Bryn Tail Lane, that this is as a result of the very low baseline traffic flows. When further taking into account that the forecast construction trip generation will be on the local road network outside of the observed peak periods. the traffic impact of the Proposed Development is deemed to be a negligible residual impact.

3.32. An assessment of severance, pedestrian delay, pedestrian amenity, and fear and intimidation is normally based on changes in traffic flows on the junctions in the study area network. While there are a number of junctions along Dyffryn Road and the A4054 that will have additional traffic, the impact is low. There are no junctions relevant to the assessment and traffic flows are low. Therefore, the overall effect on severance and pedestrians is considered to be negligible.

3.33. The assessment of driver delay is normally based upon any capacity assessment undertaken at the relevant junctions. Again, given the minor impact on Dyffryn Road and the A4054 Cardiff Road along with the very low level of traffic flows on Farm Access Lanes and the small and minimal levels of additional traffic during the construction and operational phases respectively, the impact upon driver delay will be negligible.

3.34. Overall, it is considered that with the introduction of the proposed mitigation measures, the environmental impact of the Proposed Development will be negligible from a traffic, transport and movement standpoint.

Mitigation

3.35. A Draft Construction Traffic Management Plan (CTMP) has been produced as an accompanying document, in order to help minimise construction traffic impacts, which includes the mitigation measures listed below.

3.36. A banksman will guide the construction and delivery vehicles to the site and a banksman will also be stationed at the site access to ensure no conflict occurs and to regulate access to the site.

3.37. No vehicle parking, loading or unloading will take place from the public highway and suitable wheel washing facilities will be installed, to ensure no mud or debris is deposited on the public highway during the construction period.

GLINT AND GLARE

3.38. There is little guidance or policy available in the UK at present in relation to the assessment of glint and glare from proposed solar farm developments. However, it is recognised as a potential impact which needs to be considered for a proposed solar farm development, therefore this assessment considers the potential impacts on ground-based receptors such as roads, rail, and residential dwellings as well as aviation assets.

3.39. The assessment concludes that solar reflections are possible at seven of the 65 residential receptors assessed within the 1km study area. The initial bald-earth scenario identified potential impacts as High at two receptors, Low at five receptors, including one residential area, and None at the remaining 58 receptors, including five residential areas. Upon reviewing the actual visibility of the receptor, glint and glare impacts remain High at one receptor and reduce to None at 64 receptors. Once mitigation measures were considered, glint and glare impacts reduce to None at all receptors. The effects from the Proposed Development are therefore **None**.

3.40. Solar reflections are possible at 22 of the 25 road receptors assessed within the 1km study area. The initial bald-earth scenario identified potential impacts as High at six receptors, Low at 16 receptors and None at the remaining three receptors. Upon reviewing the actual visibility of the receptors, glint and glare impacts reduce to Low at two receptors and None at all remaining receptors. Once mitigation measures were considered all impacts reduce to None at all receptors. The effects from the Proposed Development are therefore **None**.

3.41. Solar reflections are possible at all the rail receptors assessed within the 1km study area. The initial bald-earth scenario identified potential impacts as Low at five receptors. Upon reviewing the actual visibility of the receptors, glint and glare impacts reduce to None at all receptors. The effects from the Proposed Development are therefore **None**.

3.42. Solar reflections are possible at all the byway receptors assessed within the 1km study area. The initial bald-earth scenario identified potential impacts as Low at two receptors. Upon reviewing the actual visibility of the receptors, glint and glare impacts reduce None at all receptors. The effects from the Proposed Development are therefore **None**.

Mitigation

3.43. Mitigation is required to ensure the **High** impact views from Residential Receptor 12 into the Proposed Development are screened, and mitigation is recommended to screen the **Low** impact views from Road Receptors 23 and 24. This includes native hedgerows/woodland to be planted/infilled along the eastern boundaries of Fields 32 and 34, along the northeast boundary of Fields 4, 7 and 11 and along the northern boundary of Fields 12, 13 and 14 and maintained to a height of at least 3m.

NOISE

3.44. A Noise Impact Assessment has been undertaken for the construction, operational and decommissioning phases of a Proposed Development consisting of the installation and operation of a proposed Solar Farm and associated grid infrastructure, on lands centred around Glyn Taff Farm north of Pontypridd.

3.45. In order to assess the potential noise impacts of the Proposed Development, the current baseline characteristics of the Application Site and the surrounding area have been identified as well as the predicted impacts of the Proposed Development.

3.46. A total of 35 noise sensitive receptors, including three residential areas, were included in the assessment within a Study Area of 500m around the Application Site. All of the identified receptors are residential dwellings. As per the methodology section, where there are a number of residential receptors within close proximity, a representative dwelling or dwellings is/are chosen for full assessment as the impacts will not vary to any significant degree, however this was not required as part of this assessment.

3.47. No baseline monitoring was undertaken due to the usually low noise effects from a solar farm development, therefore a 25dB background level has been assumed taking into account a typical rural nighttime setting in a low wind scenario. Although this is typical, rural noise levels can vary from site to site. It is thought that a suitable noise condition should be able to adequately protect receptors from significant noise levels.

3.48. A simulation of noise associated with the Proposed Development was produced using SoundPlan modelling software to predict noise levels for the purpose of undertaking an ISO9613-2 assessment. Source noise levels were modelled based on a candidate noise source.

3.49. An assessment of the acoustic impact of the Proposed Development was undertaken in accordance with BS 4142: 2014+A1:2019. The results showed only **Negligible impacts** at all receptors during the day time and night time periods within the study area are anticipated. **A Negligible impact** in relation to noise does not constitute a significant effect as the impact rating is **Minor**. A **Negligible impact** being a rating level at a receptor below background noise levels. This change in noise level for the baseline will be barely perceptible at the receptor location.

3.50. In addition to this, the levels at each receptor are below the Night Noise Guideline value of 40dB set out in the WHO Night-time Guidelines. This is the level recommended for the primary prevention of subclinical adverse health effects related to night noise in the population.

Mitigation

3.51. Recommended mitigation during the construction phase comprises standard good practice measures such as core working hours between 08.00 until 18.00, Monday to Friday and 08.00 until 16.00 on a Saturday. Appropriate phasing of works to reduce the effects of any particularly noisy periods is also recommended. Due to the low level of the effect acoustic barriers will not be required to mitigate noise impacts, however a temporary acoustic barrier

is recommended to mitigate noise from construction of the access track near the landowner property.

ECOLOGY

3.52. An ecological appraisal of the Proposed Development assessed the potential for the proposal to affect designated sites and found that within 20km of the Application Site boundary there are six internationally designated sites. Within 5km of the Application Site boundary there are three nationally designated sites. Within 2km of the Application Site there are four non-statutory locally designated sites.

3.53. The impact assessment process examined the potential for these impacts and found:

- No direct ecological, hydrological, or ornithological connectivity exists between the Proposed Development at the Application Site and any statutory designated sites.
- Two of the four non-statutory designated sites (Cyldach Vale SINC and Mynydd Eglwysilane, North of Senghanydd SINC) are located immediately adjacent to the Application Site, and Ecologically and Hydrologically connected to the Proposed Development.

3.54. With the implementation of appropriate best practice and industry standard measures, **no likely significant effects were identified**.

3.55. The Phase 1 Habitat surveys undertaken in 2021, 2023, and 2024 identified eighteen habitat types (not including land not accessed) within the Application Site and a suitable peripheral buffer (the Ecological Study Area, "ESA"). **None of the habitats beneath the development footprint are conservation priority habitats**.

3.56. The presence of, or potential presence for, protected or notable species was assessed and found that precautionary measures for badgers, bats, breeding birds, dormice, invasive species, and reptiles are recommended to support the Proposed Development.

3.57. The main ecological impact during the construction phase will be the direct loss of habitats under the Proposed Development's footprint, and indirect temporary loss of habitat due to potential noise and vibration disturbance, dust, and water pollution. The loss of these low condition and primarily agricultural areas, which predominantly comprise existing grazing livestock fields is considered to be of **negligible significance to the nature conservation interest within the local area.**

3.58. There will be risks of potential indirect habitat impacts due to vehicular movements, temporary construction compounds and welfare facilities, lights, noise and vibration disturbance, and from the risk escaping dust and water pollution. However, considerate siting

and design, together with best practice construction and pollution prevention measures will each **avoid, reduce and minimise any potential for adverse impacts**.

3.59. The accompanying Landscape and Ecological Management Plan proposes habitat creation and enhancement measures centred around the implementation of 57.44ha of wildflower grassland habitats, 1.16ha of species rich scrub, and creation and enhancement of 5.78km of hedgerow. With the implementation of this, **the potential of the local area to support local wildlife will increase**.

3.60. The ecological investment from the Proposed Development will conserve and enhance biodiversity, minimise impacts, provide net benefits for biodiversity, and strengthen local green infrastructure. This investment will also aid in achieving national planning environmental enhancement targets in the respective framework and policies.

Mitigation

3.61. Habitat loss beneath the development footprint has been considered, and whilst the Application Site is predominantly of low ecological value, compensatory planting in excess of loss is proposed within the Landscape and Ecological Management Plan. The recommended wildlife enhancements designed into the Proposed Development identifies habitat creation and enhancement opportunities comprised of:

- Creation of 46.09ha of shade tolerant wildflower grassland
- Creation of 1.16ha of native species rich scrub
- Creation of 8.70ha of acid favouring wildflower grassland
- Creation of 2.65ha of Welsh species diverse wildflower grassland
- Enhancement of 1.41km of existing hedgerow habitat with native species rich planting
- Creation of 3.85km of native species rich hedgerow
- Creation of 0.53km of native species rich hedgerow and tree screening habitat

3.62. This will ensure a net benefit for biodiversity in the local area.

3.63. Areas of habitat of high ecological value should be demarcated with robust brightly coloured waist high fencing under supervision by a suitably experienced Ecological Clerk of Works (ECoW) prior to construction. This will prevent accidental impacts relating to resting materials or movement of large vehicles which may have a 'crush effect' upon the habitat. Additional measures to mitigate potential impacts relating to dust, noise, and vibration are included within the OCEMP.

3.64. It is recommended that the presence of an is provided to supervise the initial groundbreaking and commencement of construction activities and any vegetation removal activities. The

ECoW presence would provide a suitable qualified and experienced resource to monitor the ongoing work and provide advice to the contractor onsite in a timely manner, if required.

3.65. A 'Toolbox Talk' would be conducted with the contractors onsite to raise awareness of the potential presence of badgers, nesting birds, reptiles, and dormouse and highlight the dangers the work may present and any additional mitigation measures that may need implementing, should their presence be confirmed or suspected.

3.66. Such additional mitigation measures may include minor alterations to the methods, equipment used, or timing of ground clearance works, which would be determined in-situ by the ECoW.

3.67. Due to the scope and scale of the Proposed Development it is also recommended that a Non-Licence Protected and Notable Species Method Statement is created. This document should be suitably robust to cover protocol relating to precautionary measures for; badgers, bats (including an appropriate lighting plan in line with the Institute of Lighting Professionals guidelines), breeding birds, dormouse, noteworthy habitats, invasive species, and reptiles. This document should be submitted and agreed in writing by the relevant stakeholders, and secured by a suitably worded planning condition.

CULTURAL HERITAGE AND ARCHAEOLOGY

3.68. A Cultural Heritage and Archaeology Chapter has been included within this EIA to identify and evaluate the potential direct and indirect effects on archaeological and built heritage resources during the operational, construction, and decommissioning phases of the proposed solar farm on lands at Glyn Taff Farm, Bryntail Lane, Pontypridd.

3.69. The desk-based assessment, site walkover survey and geophysical survey of the Application Site indicated that the potential of the Proposed Development to directly impact archaeological remains of significance is low, with such impacts expected to be limited to the post-medieval agricultural and quarrying usage of the fields, primarily former field boundaries, trackways and cultivation remains. Nonetheless, as with all greenfield land within a general area of archaeological potential, there is a small chance that significant sub-surface archaeology is present within the Application Site that has not been detected by the various surveys and analyses. In addition, while no remains associated with the adjacent scheduled Cross Ridge Dyke & Earthwork on Cefn Eglwysilan (NA11) were identified to continue into the Application Site, this possibility of surviving remains within Field 13 or within the boundary between Fields 13 and 14 cannot be entirely dismissed at this point.

3.70. Indirect effects resulting from the Proposed Development are expected to be Moderate Adverse upon the Cross Ridge Dyke & Earthwork on Cefn Eglwysilan (NA11) scheduled monument to the northeast and the listed buildings at the Church of St Ilan (NB18, NB31 & NB59 – 60) to the southeast, in the absence of any mitigation. However, additional planting and screening measures have been adopted within the Proposed Development design, as

described within the Landscape Chapter of the EIA and the landscape and environmental management plan. With the growth of the additional proposed vegetative screening, indirect effects are expected to reduce slightly over time for certain heritage assets, with residual indirect effects upon NA11, NB18, NB31 & NB59 – 60 anticipated to be Minor Adverse overall, lasting for the operational duration of the proposal. All other indirect effects upon heritage assets are anticipated to be Minor Adverse or Negligible and do not require any specific mitigation measures.

Mitigation

3.71. As with all greenfield land within a general area of archaeological potential, there is a small chance that significant sub-surface archaeology is present within the Application Site and has not been detected by the various surveys and analyses. As such, it is recommended that a pre-construction programme of archaeological test trenching be undertaken within the Application Site in the event that planning permission is obtained.

3.72. The implementation of an appropriate archaeological Written Scheme of Investigation (WSI) for test trenching is recommended in the event that planning permission is granted, with the objective of verifying the results of the geophysical survey, further confirming the absence or presence of any hitherto-unknown sub-surface remains, and informing the need for any further appropriate investigative or mitigative measures. This approach allows for a programme of archaeological works which would ensure the identification and preservation *in-situ* and/or by record of any hitherto-unknown sub-surface remains within the Application Site.

3.73. With the implementation of the proposed and recommended mitigation measures, it is considered that the Proposed Development will not result in substantial harm or significant effects to archaeology and heritage resources.

CLIMATE CHANGE

3.74. An assessment ig the effects of the Proposed Development on climate change found that there would be a major benefit as whilst there would be a degree of emissions during the donstruction and operational phases, this would be substantially outweighed by the operational benefits

3.75. The development of the Proposed Development will mean a substantial reduction of approximately 18,000 tonnes of CO_2 emissions annually. Scaling this up to the CO_2 displaced over the 35 year lifetime of the Proposed Development this would be approximately 630,000 tonnes of CO_2 displaced. This represents a significant contribution to the legally binding national and international requirement and associated targets to increase renewable energy generation and reduce CO2 emissions. Therefore, overall, the project will result in a **Major Beneficial** long-term effect. As such, no mitigation is required.

MINING

3.76. An assessment of the effects that the construction of the Proposed Development may have on the mining characteristics within the Site has been undertaken. No mine entries have been identified in the area, however this doesn't rule out the possibly that an undocumented entry may exist. Localised areas of the solar panels and access track and cable corridors are located in / close to Development High Risk Areas defined by the Coal Authority; however, these appear to be associated with the outcrop of coal seam, rather than to workings themselves. No evidence has been found of mining of the seam in question. As such for both mineworking collapse and mineshaft collapse, a **negligible to minor** effect has been identified.

3.77. During the operational phase there is considered to be a residual risk of ground instability disruption impacts during operation. This is due to the fact that the presence of unrecorded mining features can never be completely ruled-out in any historic mining area. Again, a **negligible to minor effect** has been identified.

Mitigation

3.78. While there is no evidence of features such as mine entries or shallow mineworkings within the Site, in any historic mining area, the possibility of unrecorded features can never be completely ruled out. A Toolbox Talk will be delivered to the site construction team by Engineering Geologists to highlight the features and typical manifestations that can occur. The matter shall be recorded on the construction phase Geotechnical Risk Register, within the Construction Environmental Management Plan (CEMP), and observational monitoring procedures of unrecorded mineworkings will be included to check for any evidence of potential mining related subsidence or features. In the event of any such features being discovered, appropriate investigation would be undertaken and stand-off zones and/ or remedial action would be determined, as stipulated in the CEMP.

INTERACTIONS OF THE FOREGOING

3.79. **Chapters 4—12** assess the potential impacts and cumulative effects as well as their significance within their relevant disciplines. Chapter 13 discusses the interactions, if any, of these potential impacts and the magnitude of effects with each other, to determine if in combination, potential impacts will increase or remain the same. **Chapter 13** includes a table which lists the potential interactions (positive, negative, none) during the construction, operational and decommissioning phases.

3.80. Interactions are evident between:

- Population and Human Health with: ecology, noise, climate change, landscape & visual impact.

- Landscape and Visual Impact with: Cultural Heritage and Biodiversity
- Biodiversity with: hydrology, climate and noise.

3.81. Where potential interactions have been identified, appropriate mitigation measures have been recommended and can be found in Volume 2 Chapters 4---15.

4. CONCLUSION

4.1. This NTS has outlined the main findings of the EIA undertaken for the Proposed Development at Glyn Taff. It is considered that with the implementation of the recommended mitigation measures outlined within each of the chapters of the ES, potential impacts on the receiving environment will primarily be of low to no significance. The exception is the effect of the Proposed Development on local views, which in certain circumstances will be significantly effected. As the solar PV panels themselves do not generate noise or toxins and the site is considered unmanned during the operational phase (35 years), the long-term benefits of increased biodiversity and renewable energy generation far outweigh the negative effects.

4.2. Significant Positive Long-Term Effects are anticipated for local biodiversity and the project will increase Wales' sustainable, locally generated, energy supply, by providing enough clean energy to power approximately 12,000 homes per year. Growing our renewable energy generation capacity will both reduce our carbon emissions and enhance security of energy supply by lowering our reliance on volatile international fossil fuel markets. The proposal complies with and is supported by the relevant planning policy framework therefore, planning permission should be granted.