The Planning Inspectorate
Yr Arolygiaeth Gynllunio

Adroddiad

gan Hywel Wyn Jones BA(Hons) BTP MRTPI

Arolygydd a benodir gan Weinidogion Cymru

Dyddiad: 26.03.2021

Report

by Hywel Wyn Jones BA(Hons) BTP MRTPI

an Inspector appointed by the Welsh Ministers

Date: 26.03.2021

TOWN AND COUNTRY PLANNING ACT 1990

SECTIONS 62D & 62F

The Developments of National Significance (Wales) Regulations 2016

Application by Wentlooge Farmers' Solar Scheme Limited

Land on the Wentlooge Levels to the west of Hawse Lane, near Marshfield, Newport

Cyf ffeil/File ref: DNS/3216558

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List of Abbreviations

AA	Appropriate Assessment
ASIDOHL	Assessment of the Impact of Development on Historic Landscape
CEMP	Construction and Environmental Management Plan
CPRW	Campaign for the Protection of Rural Wales
CTMP	Construction Traffic Management Plan
DNS	Development of National Significance
EIA	Environmental Impact Assessment
ES	Environmental Statement
FCA	Flood Consequences Assessment
FoGL	Friends of The Gwent Levels
GGAT	Glamorgan-Gwent Archaeological Trust

HLCA	Historic Landscape Character Area
HRA	Habitats Regulations Assessment
LBAP	Local Biodiversity Action Plan
LDP	Local Development Plan
LEMP	Landscape Environment Management Plan
LOHI	Landscape of Outstanding Historic Interest
LPA	Local Planning Authority
LVIA	Landscape and Visual Impact Assessment
M4 CAN	M4 Corridor around Newport
the Council	Newport City Council
NRW	Natural Resources Wales
PPW	Planning Policy Wales, Edition 11
PROW	Public Right of Way
RSPB	The Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAM	Scheduled Ancient Monument
SLA	Special Landscape Area
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
TAN	Technical Advice Note
TMP	Traffic Management Plan
WG	Welsh Government
ZTV	Zone of Theoretical Visibility

File Ref: DNS/3216558

Site address: Land on the Wentlooge Levels to the west of Hawse Lane, near Marshfield, Newport

- The application dated 3 March 2020, was made under section 62D of the Town and Country Planning Act 1990 (as amended by the Planning (Wales) Act 2015).
- The applicant is the Wentlooge Farmers' Solar Scheme Limited.
- The application was confirmed as valid on 17 July 2020.
- Site visit took place on 29 January 2021.
- Hearings were held on 19, 20 and 21 January 2021.
- The development is described as the erection of a renewable energy hub comprising ground mounted solar panels, battery storage units (160 units) with a combined installed generating capacity of up to 125MW, underground cabling, grid connection hub, associated infrastructure, landscaping and environmental enhancements, for a temporary period of 40 years.

Secondary Consent Application:

- The secondary application was made under section 62F of the Town and Country Planning Act 1990 (as amended by the Planning (Wales) Act 2015).
- The development proposed is the erection of battery container storage units (160 units) to support the solar energy hub.

Summary of Recommendation: That planning permission be granted for both applications subject to conditions.

Procedural Matters

1. As a consequence of the potential impact on the National Sites Network this report includes a Habitats Regulations Assessment (HRA) report.

2. Within the meaning of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017, the proposed development is EIA development. Accordingly, the application is accompanied by an Environmental Statement (ES).

3. Following comments received in response to the application from consultees and others the applicant was requested to provide further information[1]. The requested information included material to supplement the submitted ES and encompassed matters relating to archaeology, heritage assets, ecology and hydrology, and landscape. The opportunity was also afforded to the applicant to provide more information in response to concerns raised by interested parties, including the local community councils. The Council was requested to provide additional information in relation to its Local Impact Report (LIR).

4. The application process was suspended on 14 September 2020 for 12 weeks to allow the submission of the requested information and to enable publicity and consultation on its content. During that time the requested information was duly submitted[2] and subjected to consultation and publicity. The comments received[3] in response to that exercise have been taken into account in this report, alongside those received in response to the initial publicity and consultations.

[1] Under Regulation 24 of the EIA Regulations and Regulation 15(2) of The Developments of National Significance (Wales) Regulations 2016
[2] Docs A2-A11
[3] Docs IP1-IP12

5. The secondary consent is described as seeking permission only for the container units that would be available to house batteries. The secondary consent is sought on the basis that the units would constitute a facility that generates electricity from stored energy for the purposes of the relevant regulations[4]. It is confirmed[5] that the main DNS proposal for the solar farm is not dependent upon the battery storage to make the scheme functional or viable.

6. It was agreed at the hearing that the reference in the description of development to a 'combined installed generating capacity' was a legacy of a previous iteration of the project, and that this description would be more accurate for the deletion of 'combined'. That description would also be more accurate for the deletion of the reference to the battery storage units which is not part of the main application.

7. The submitted scheme shows a single point of connection to the national grid via a 132Kv electricity line that traverses the site. The applicant has subsequently discovered that it is likely that 2 points of connection would be required. This is because the Distribution Network Operator has stipulated that, given the scale of the scheme, its grid connection offer is based upon two separate tee-offs to the grid, requiring connection at two different electricity pylons. A second connection would also increase the security of the supply from the development as it would allow for continued electricity export during periods of planned outage on either of the connected sections of power lines. Accordingly, the applicant has requested that the option of a second grid connection be accommodated by means of a condition, necessary for the efficacy of the distribution of the energy produced. The second connection has been shown on an alternative layout plan and the various potential impacts have been assessed using the same methodology as adopted in the ES[6].

8. The local community councils, other organisations and local residents have expressed concern over the extent of the local pre-application consultation and engagement undertaken by the applicant, particularly as it fell during a period of Covid-19 related restrictions on public gatherings. Some 53 letters of objection to the scheme were submitted along with several other letters expressing concerns among 25 other representations. One letter of support was received. I am satisfied that the minimum requirements of the legislation were complied with, and that the second consultation and publicity provided a further opportunity to make comments and which resulted in an additional 11 representations.

9. During hearing 1, I pointed out to the applicant that the Council in its Local Impact Report (LIR) had drawn attention to the fact that the Glint and Glare Study that formed part of the ES (Appendix 14.1) suggested that further consideration should be given to additional screening for nearby properties and to the use of hoods on light signals over the train line, and that the applicant had not provided additional information on either matter. I request that the applicant addressed both matters as part of a points of clarification note that was to be submitted before the final hearing.

10. Photographs were duly presented which confirmed that the signals had hoods installed[7]. However, at the last hearing the applicant acknowledged that it had failed

[4] The Developments of National Significance (Specified Criteria and Prescribed Secondary Consents) (Wales) Regulations 2016 (as amended)

[5] Doc A17
[6] Doc A2
[7] Doc A19

to address the matter of the screening for neighbouring residents. I agreed that an explanation be provided by the following day but, rather than explaining its position, the applicant submitted a revised Glint and Glare Study (dated January 2021)[8]. It is evident that this version amends the previous assessment of the potential effect on neighbours as well as clarifying the position in relation to the railway signal lights. The revised study was made available to all who had participated at the hearing and I have taken into account the comments that were subsequently received.

11. During the course of the application, including at the hearing sessions, further clarification and explanation was provided by the applicant. Several objectors representing local residents and specialist interest groups have found the need for such information to be provided after submission of the application to be frustrating. Nonetheless, I am satisfied that such information does not materially alter the scheme and has not prejudiced interested parties' ability to properly engage with the process.

12. As agreed at the last hearing, I undertook an unaccompanied site visit in weather of sunshine and showers which meant that visibility varied accordingly. The visit included extensive parts of the site and the immediate and wider surroundings, including public rights of way and several more distant vantage points. I also visited a solar park under construction on the Caldicot Levels near to the former Llanwern steelworks site and the villages of Goldcliffe and Whitson, which I shall refer to as the 'Llanwern' scheme[9].

13. After the hearings were closed Welsh Government published the first National Development Framework, 'Future Wales: the national plan 2040' ('Future Wales'),and Edition 11 of Planning Policy Wales (PPW) and confirmed the revocation of Technical Advice Note (TAN) 8: Renewable Energy and the Wales Spatial Plan. Whilst the publications and revocations were anticipated at the time of the hearings, some of the content of the new documents were not known. Therefore, all participants were given the opportunity to comment on those changes and I have taken into account the representations[10] that were subsequently received.

Site and Surroundings

14. The site extends to some 162ha[11] of flat, low lying land a short distance to the south east of the village of Marshfield, and between the settlements of Peterstone Wentlooge and St Brides Wentlooge. The site is broadly rectangular in shape, and for the most part is bounded on 3 sides by highways – to the north east lies Hawse Lane, the B4239 runs along the south eastern boundary with Broadway to the south west. The north western boundary is, for the most part, defined by the main South Wales railway line.

15. The character and appearance of the site and most of its immediate surroundings is typical of the Wentlooge Levels, an area that lies between the conurbations of Cardiff and Newport and the M4 motorway and the Bristol channel.

[8] Doc A22
[9] DNS application ref: APP/G6935/A/16/3150137 (3213968)
[10] Docs A24, IP21-24
[11] In light of discrepancies in the applicant's supporting documents, the site area dimensions of various components of the scheme has been confirmed by the applicant Doc A17

16. In the immediate vicinity of the site there are several private properties, some commercial as well as residences which, along with agriculture is typical of the land use of the surrounding countryside. There are 2 golf courses and a caravan site nearby.

17. The site mostly comprises open fields bounded by hedges and drainage ditches and reens which form part of the distinctive drainage network of the Levels. It is crossed by a 132KV electricity line supported by pylons whilst another similar line runs parallel to it, a short distance to the north of the site.

18. There are several public rights of way within the surrounding area[12], including the coastal path, but none traverse the site[13]. A National Cycle Route follows Ty Mawr Lane a short distance to the north of the site.

19. The site falls within the St Brides Site of Special Scientific Interest (SSSI) designation. Immediately to the west lies the Rumney and Peterstone SSSI. These nationally designated sites form part of a network of nature conservation designations that extend over the Gwent Levels and the Severn estuary.

20. To the west of the site is an area that would serve as an ecological mitigation area. It is variously referred to by the applicant; I shall refer to it as the Lapwing Compensation Land. It lies within the Rumney and Peterstone SSSI.

21. The site lies within 500m or so of the Severn Estuary Special Protection Area (SPA) and Ramsar site and some 2km from the Severn Estuary Special Area of Conservation (SAC) which form a European Marine Site (EMS). In accordance with the Conservation of Habitats and Species Regulations 2017, as amended[14] the SAC and SPA form part of the National Sites Network.

22. There are several locally designated Sites of Importance for Nature Conservation (SINCs) within 3km of the site as well as the Peterstone Wentlooge Wildlife Reserve.

23. The site and compensation land lie within the Gwent Levels Historic Landscape Area as designated under the Register of Landscapes, Parks and Gardens of Outstanding Historic Interest in Wales.

24. Natural Resources Wales' (NRW) Development Advice Maps identify the site and surroundings as falling within zone C1 as defined in Technical Advice Note (TAN) 15, Development and Flood Risk. The land also lies within Flood Zone 3 on NRW's Flood Maps.

25. The application site, defined by a red line on the site location plan, includes an area containing several ponds referred to later in this report as Area C[15] within which no development is proposed. At the hearings the applicant explained[16] that this land had been required in an earlier iteration of the scheme and that it had decided to keep the

[12] ES, Appendix 10.1

[13] A public right of way formerly crossed the site connecting Hawes Farm to Ty Mawr Lane. Local residents at the hearing explained that this was formally stopped up when the train line was electrified.

[14] The ES and other documents refer to the 2017 Regulations (and in some places to the earlier 2010 Regulations). The 2017 Regulations were amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 on the last day of 2020, after these documents were produced.

[15] As shown in Wentlooge Level Invertebrate Survey, 2019 – Appendix 11.7 of ES

[16] Doc A18

land within the application site to avoid the 'complication' of amending the site boundary. It confirmed that the Area C landowner has effectively withdrawn the land from the project. The location plan also identifies the Lapwing Compensation Land as blue edged land which the applicant confirmed is within its control.

Proposed Development

26. The scheme comprises solar panels laid out in rows and mounted on a framework secured by poles driven into the ground together with supporting infrastructure comprising inverter cabins, transformers, grid connection apparatus, a 2m post and wire stockproof fence, CCTV, underground cabling, temporary vehicle tracks, access and landscaping.

27. Approximately 250,000 solar panels are proposed over an area of some 129ha. They would be framed by aluminium affixed to a galvanized steel framework that would be driven or screwed into the ground. The sloping panels would be elevated some 1m above the ground at its low point and the highest point would be some 2.7m high.

28. The scheme would have an installed generating capacity of 125MW. The applicant has provided clarification on the electricity that it is anticipated would be generated by the scheme, factoring in a range of considerations that prevents the nameplate capacity from being realised in real world conditions. On that basis the annual output is expected to be some 117,092,112kWh per year, which is equivalent to the average consumption of 32,525 households[17].

29. The scheme also includes up to 160 storage containers[18] that are intended to house batteries that would store some of the electricity generated by the panels. During the hearing it was clarified that the storage containers would be supported by a framework to elevate them above ground level by up to a metre or so in response to flood risk. It was further confirmed that, while such storage containers are commonly 3.5m high, in recognition of their elevated position it was proposed to utilise 2.4m high containers.

30. The permission sought is time limited to 40 years after which the scheme would be de-commissioned with virtually all the structures and equipment removed and the land would revert to its present undeveloped condition or as may otherwise be agreed closer to the time. It was explained that, since the cessation of public subsidy for such schemes, a 40-year lifetime is deemed the minimum necessary to ensure the financial viability of the project.

31. On the western periphery of the site a 2.6ha wildflower meadow is proposed and further west, on the other side of Broadway, it is proposed to provide 22.1ha of Lapwing Compensation Land[19].

Planning Policy

32. On its publication on 24 February 2021 Future Wales became part of the development plan. The Plan acknowledges the impacts of a climate emergency and an ecological emergency and identifies key priorities, risks and opportunities to achieve the

[17] Doc A17

[18] Although the application also contains references to 200 units, at the hearings it was agreed that the number is that specified on the formal description ie 160, see Doc A17.

[19] The applicant has confirmed that this does not include an additional field of approx. 2.3ha which was shown on the dormouse strategy (Doc A13) which should be omitted from the plan.

sustainable management of natural resources, including addressing the climate emergency and reversing biodiversity decline. It identifies the Gwent Levels as one of 9 National Nature Resources, which is important for its biodiversity, recreation, flood alleviation, carbon storage and food production.

33. In relation to climate change Future Wales recognises that Wales' potential for solar generation, the Government's support for large scaled projects and a planning system that provides a strong lead for such development, provides support to the renewable sector to attract new investment and to reduce carbon emissions. It also recognises that the need to reverse biodiversity decline and assist nature recovery is of imperative importance in its own right. Environmental pressures are causing global biodiversity decline at rates not previously encountered in human history and the rate of species extinction is accelerating.

34. Policy 17, 'Renewable and Low Carbon Energy and Associated Infrastructure', emphasises that Welsh Government strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs and states that decision makers must give significant weight to the need to meet Wales' international commitments and Government's target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency.

35. Policy 18 permits Renewable and Low Carbon Energy Developments of National Significance subject to satisfying 11 criteria and the requirements of policy 17. The cumulative impacts of existing and consented renewable energy schemes should also be considered.

36. The latest iteration of PPW, Edition 11, includes a factual update of Edition 10 and removes some content which is now contained in Future Wales. It seeks to protect and enhance landscapes, habitats, biodiversity, geodiversity and the historic environment in their own right. Among key issues it identifies is the long term and chronic decline of biodiversity and habitat loss.

37. PPW describes the benefits of renewable and low carbon energy, as part of the overall commitment to tackle the climate emergency and increase energy security, as of paramount importance. In this context it explains that the planning system should integrate development with the provision of additional electricity grid network infrastructure, optimise energy storage and maximise renewable and low carbon energy generation. PPW confirms that Future Wales sets out the Welsh Government's policies for the determination of renewable energy schemes of 10MW and more under the Developments of National Significance procedure.

38. PPW is supplemented by Technical Advice Notes (TANs) which provide additional detail on a variety of topics. Of particular relevance to this case are: TAN 5, Nature Conservation and Planning; TAN 11, Noise; TAN 14, Coastal Planning; TAN 15, Development and Flood Risk; and, TAN 24, The Historic Environment.

39. The Environment (Wales) Act 2016 includes a requirement on Welsh Ministers to reduce emissions in Wales by at least 80% by 2050. The Well-being of Future Generations (Wales) Act 2015 is concerned with improving the economic, social, environment and cultural well-being of Wales.

40. Alongside Future Wales, the development plan comprises the Newport Local Development Plan 2011-2026 (LDP) which was adopted in 2015[20]. The site and surrounding land is subject to the following LDP designations: Green Wedge, Special Landscape Area, Coastal Zone, and Archaeological Sensitive Area.

41. The most relevant policies are: SP1 – Sustainability; SP3 – Flood Risk; SP4 – Water Resources; SP5 – Countryside; SP7 – Green Wedges; SP8 – Special Landscape Areas; SP9 – Conservation of the Natural, Historic and Built Environment; GP1 – Climate Change; GP2 – General Amenity; GP3 – Service Infrastructure; GP4 – Highways and Accessibility; GP5 – Natural Environment; GP6 – Quality of Design; GP7 – Environmental Protection and Public Health; CE4 – Historic Landscapes, Parks, Gardens and Battlefields; CE6 – Archaeology; CE9 – Coastal Zone; CE10 – Renewable Energy; T2 - Heavy Commercial Vehicle Movements; T3 – Road Hierarchy; T4 – Parking; T7 – Public Rights of Way and New Development; and T8 – All Wales Coast Path.

42. The development plan is supported by supplementary planning guidance (SPG) documents[21] which have been adopted by the Council, of particular relevance are: Wildlife and Development SPG (Aug 2015); Archaeology and Archaeologically Sensitive Areas SPG (Aug 2015); Trees, Woodland, Hedgerows and Development Sites SPG (Jan 2017).

The Case for the Applicant

43. On submission the application was supported by an Environmental Statement (ES) with a Non-Technical Summary, and several other documents including a Planning, Design and Access Statement. The ES describes the site and its designations, the proposal, the planning policy context, consultations and site selection and alternatives. It includes chapters that assess the scheme's effect on traffic and transport, heritage and archaeology, landscape and visual impact, ecology and nature conservation, ornithology, flood risk and drainage, glint and glare, noise, population and human health, and agricultural land quality and trees. There is also a chapter on mitigation measures.

44. ES chapter 9, on heritage and archaeology, has subsequently been revised and the ES is supplemented and supported by a bundle of additional information accompanied by a report dated October 2020[22]. In addition to the revised chapter 9 it comprises a desk-based heritage assessment (to replace ES Appendix 9.1), an ecological impact assessment of the Lapwing Compensation Land, a revised shadow Habitats Regulations Assessment (subsequently further revised twice), an outline Construction and Environmental Management Plan, a LVIA addendum statement, and a revised technical note addendum to the Flood Consequences Assessment. A covering statement setting out the applicant's response to my request for additional information summarises the position and addresses other concerns raised in the responses to the formal consultation. It also recorded correspondence with a local community council relating to potential community benefit contributions.

45. The October bundle also included additional information which addressed the effects of a second grid connection within the site, and included assessments of ecology, noise, glint and glare, and arboricultural effects.

[20] The LIR provides detail on the relevant policies and extracts are provided in Doc IP1
[21] Doc IP1
[22] Docs A2-A11

46. Subsequent to the October bundle of additional information, more information has been received mostly during and after the hearings. This information has clarified certain matters and informed the scope of planning conditions.

47. The main points raised by the applicant in support of the application are set out below, and are based on the written evidence, as revised or supplemented by oral evidence presented at the hearing sessions.

Site Selection and Alternatives

48. For reasons detailed in the Site Selection Sequential Test document supporting the application there are no existing, available, suitable and viable alternatives within the search area which meet the criteria required for a successful solar photovoltaic scheme of this scale. The site is low quality agricultural land and the scheme would allow farming to continue, at a low intensity, and to fully resume after 40 years. Most parcels of previously developed land in reasonable proximity are too small and any potential sites command higher land values associated with alternative uses that would make the scheme unviable. Securing a site of sufficient size with willing landowners and a grid connection in a location with relatively high solar irradiation are prerequisites for a viable scheme. Site topography and orientation are further limitations on site suitability.

Environmental Benefits

49. The proposal has the capacity to generate 125 MW of electricity and is expected to deliver enough electricity to serve the total power needs of around 32,525 UK households per annum[23]. Utilising the guidance outlined by the Solar Trade Association this would offset around 53,750 tonnes CO_2 per annum, and 2,150,000 tonnes over the life of the scheme. The CO_2 savings represent a potential 0.12% reduction in Wales' overall greenhouse gas emissions and 0.3% of the country's energy supply. Such a contribution is significant in the face of the commitment to meeting the internationally agreed targets of reducing CO_2 emissions by 40% by 2020 from 1990 levels, and the need for immediate action for decarbonisation of the country's electricity supply[24].

50. The proposals include supporting infrastructure and an area to house battery storage devices. Energy storage is an important "missing piece of the jigsaw" that would help to optimise the energy production avoiding the otherwise intermittent supply of energy to the grid and would allow the solar farm to more closely align its output with the peak daily demand on the network. This would provide grid and distribution network operators with a flexible tool to ensure electricity grids are fit for purpose as generation and supply continues to decarbonise.

51. The Energy Generation in Wales 2018 report produced for the Welsh Government shows that in 2018 Wales derived 50% of its electricity consumption from renewable sources. This demonstrates strong progress towards the 2030 target of 70% and has been achieved through a combination of decreased electricity consumption and increased renewable energy capacity. However, achieving the remaining 20% will be very challenging given that 'quick wins' on energy saving have already been achieved and that government subsidies are no longer available to support the deployment of renewables. Although national planning policy does not require need to be

[23] Doc A17
[24] Para 3.3.2 of ES.

established for renewable energy schemes, the scale of this project means that it has the potential to significantly contribute towards this target and to make a real difference in reducing CO_2 emissions.

52. The Renewable and Low Carbon Energy Assessment[25] identifies that for the LDP plan period (2026) the 'Potential accessible resource' from solar power is 17 GWh/yr, as part of 338 GWh/yr for all renewable technologies within Newport. 2018 figures show Newport to be one of the lowest generators of renewable energy in Wales.

53. The environmental benefits of the scheme far outweigh the impacts resulting from the carbon footprint of the panels themselves, given that research has shown that it would take around 2.5 years to "pay back" the energy cost of the panel.

Social Benefits

54. There is potential for engagement with local schools, educational establishments, and community groups relating to both biodiversity enhancements and clean energy production and use. Research by the UK Government demonstrates that there is strong public support for renewable energy and that solar energy is the most strongly supported.

55. The proposal would also help to reduce the UKs reliance on imported fossil fuels and help the UK gain more control over its energy provision and therefore more control over future energy prices and more energy security. Contributing towards the stable, cost efficient local energy production would reap benefits for all households in Wales in the short and longer term.

56. There are also various local benefits to be accrued, most notably through the diversification of the land, which would support the ongoing viability of the landowners' farming businesses for years to come.

57. Whilst accepting that it is not a material consideration to this application, the applicant has followed the advice of Welsh Government on community benefit and to that end it has offered the Wentlooge Community Council a financial contribution to a community fund of £10,000 per annum for 20 years.

Economic Benefits

58. The economic benefits include: 25 direct construction jobs; 101 new jobs across Wales over a 14 month period; 4 operational jobs over 40 years; economic output of £2.2 million GVA over 14 months; £170,000 business rates generated per annum (£6.8m total) to Newport City Council; and significant spin-off benefits for the supply chain. The developer would seek to use local contractors wherever possible in the scheme's construction. During the operational phase work would be created given the proposed ongoing land management and ecological enhancements.

59. The scheme involves a group of local farmers and would enable them to reinvest in their farms and would result in increased spending in the local economy as well as the potential for longer term job creation resulting from more locally successful farming enterprises subsidised by the solar farm income. This income would ensure that the farmers can secure their farms for future generations and guard against going out of business, at a time when the single farm payment is being reduced, farmers are

[25] Renewable and Low Carbon Energy Assessment, produced by Carbon Trust Wales on behalf of Torfaen and Newport Councils

reliant on subsidy to keep otherwise marginal farming operations viable and in an area where climate change can pose a real threat, including in respect of flooding. It would allow the grazing of the land thereby providing an additional agricultural income to landowners and help support the local economy.

60. The project would be delivered without any government subsidy and would reduce the country's reliance on fossil fuels and the economic exposure to international price fluctuations.

Traffic and Transport

61. At the hearing the applicant confirmed that, contrary to the indication in the supporting documents, there was no need to utilise the route via the village of Marshfield for construction traffic. That route had initially been identified as required for abnormal loads but it has subsequently been confirmed that no such loads are anticipated to be attracted to the site. Thus, all HGV traffic would use the route via Lamby Way, approaching the site from the west on the B4239.

62. Any potential impact on the highway network during the work would be mitigated to an acceptable level by the proposed Traffic Management Plan (TMP). The submitted draft version[26] would be revised and agreed with the Council as required by a suggested condition. The only point of vehicular access during construction would be on to Broadway utilising an access which would provide the appropriate visibility splays. Thereafter there would be minimal traffic attracted to the site during its operation phase. During that phase other existing field gate accesses may be utilised for future maintenance.

Cultural Heritage

63. One of the potential direct effects of the scheme is on archaeology given that the Levels are known to contain palaeo-environmental remains that date from the prehistoric period onwards. Such remains are likely to provide archaeologically important information. There is the potential for archaeological artefacts and structures dating to the Bronze Age associated with human effort to drain and protect the saltmarshes.

64. The professional judgement of the applicant's Heritage Consultant based on the archaeological assessment undertaken, including consideration of investigations previously undertaken in the vicinity, demonstrates that the impacts of the scheme can be suitably mitigated through adherence to a robust Written Scheme of Investigation (WSI), palaeo-environmental sampling and assessment strategy, and targeted watching briefs (as has been agreed on the Llanwern solar farm). The impact on the site is temporary and reversible and the monitoring may give rise to valuable new information regarding the archaeology of the Gwent Levels.

65. Another direct impact of the scheme is on the Maerdy and Western St Brides Historic Landscape Character Areas (HLCAs) which form part of the Gwent Levels Landscape of Outstanding Historic Interest (LOHI). These have been assessed within the Assessment of the Significance of Impact of Development on the Historic Landscape of Historic Interest in Wales (ASIDOHL2)[27]. Taking into account the impact on all

[26] ES Appendix 8.1
[27] ES, Appendix 9.2

affected HLCAs a combined impact of moderate magnitude is recorded. There would be a considerable direct effect and a severe indirect effect on Maerdy HLCA.

66. The scheme's potential effect on all listed buildings, scheduled ancient monuments (SAMs), conservation areas and a registered park and garden, have been assessed within the 4km study area in a Desk-Based Assessment, which has also been informed by visits to the site and surroundings. The Assessment finds that there would be no direct or indirect effect on any such assets with one exception, the Pen-y-Lan Camp SAM. However, at the hearing it was clarified that, whilst there would be a degree of visibility of the development from this asset, given the 2.9km separation distance and the fact that from the Camp the scheme would be seen in a very wide vista containing many other more prominent man-made features, the slight effect of the proposal on its setting would not affect the significance of this asset. The only other asset susceptible to some impact is the Grade II Gelli-ber Farmhouse, but as its significance is focussed on its evidential and historic importance, any effect on its setting would not be harmful.

Landscape and Visual Effects

67. The topography of the site and the surrounding area means that the visual impact of the proposed development is very limited. Furthermore, the existing trees, hedge lines and vegetation would provide a significant degree of screening to the installed panels and associated infrastructure. Although the initial assessment makes reference to the potential for additional landscaping to screen the development, it has subsequently been acknowledged that the scope to do this is very localised eg infilling gaps in existing hedgerows, given that introducing significant tall screening would be alien to the historic landscape character of the area.

68. The ES describes the LANDMAP evaluation of the landscape quality of the site and wider area under the 5 aspect layers of landscape habitats, visual and sensory, and the geological, historical and cultural landscape. For the site and the surrounding area, all the layers are evaluated as high or outstanding.

69. As defined in the Gwent Levels Landscape Character Assessment (LCA) the site straddles the Western St Brides and Maerdy LCAs. The former is described as "a simpler landscape, laid out within a framework of elements" and includes long narrow fields. The description goes on to state that the "western half of this area has been affected by agricultural improvement and the construction of a golf course… Though not visually intrusive, they have destroyed the historic fabric of the landscape by removing many reens and grips". The latter is described as a "regular landscape" with "long narrow fields are characteristic of the Wentlooge Level." It goes on to state that "this is a very open landscape, and the reed filled ditches give a strong wetland feel, typical of the lower-lying back-fen areas."

70. The proposed solar arrays and associated apparatus, including the grid connection and battery storage facilities, would retain the field boundaries and reens which form the main landscape characteristics of the area. The photovoltaic panels are to be aligned within existing field boundaries. The removal of certain sections of hedgerows is proposed for ecological reasons but would result in only the loss of one side of double lines of hedgerows and would not impact on the presence of boundary hedgerows and field patterns.

71. The visual impact of the scheme has been informed by mapping the Zones of Theoretical Visibility (ZTV) of the scheme in isolation and in combination with solar farms and other developments in the pipeline. In practice the visibility would be more

limited because of the screening effects of landscape features, particularly vegetation. The topography of the flood plain means that outside the immediate vicinity of the site the main areas of theoretical visibility are from the higher ground which lies on the other side of the M4 motorway. The 11 viewpoints chosen for the photomontages provide a visual representation of the scheme from a variety of vantage points.

72. The choice of viewpoints was informed by several considerations, including the presence of vegetation, buildings and localised topographic variation, and presence of receptors. The effect from each of the viewpoints has been assessed. From viewpoint 1, a close-up and elevated position on the railway bridge on Hawse Lane, the effect is assessed as moderate adverse. Of the remaining viewpoints only 3 would be materially affected, and these are assessed as a minor adverse effect.

73. The proposed development has been set back from the highway network and as the site is flat and well screened there would be limited visual impacts. However, at hearing 1 the applicant's landscape specialist acknowledged that in the eastern portion of the site panels were proposed within the fields adjacent to Hawse Lane, including the fields closest to the railway bridge which offered elevated views over the site.

74. There would be no significant impacts on users of any public right of way, including the Coastal Path. The scheme has been amended to avoid impact on the nearby caravan park.

75. The assessment of landscape and visual effects has taken into account the 3 phases of the development, the potential cumulative effects associated with other solar farms and other types of development that are in the planning pipeline in the area, and the scope to mitigate effects through measures that could be secured by conditions.

76. The overall finding of the LVIA is that the solar arrays and battery storage development would have a moderate adverse impact on the immediate rural character within 1km of the site. Between 1km and 5km from the site the effect of the solar arrays and battery storage development would reduce to minor adverse. From between approximately 5km and 10km the proposed solar arrays would have a negligible effect on landscape character as it becomes integrated into the landscape.

77. These impacts must be viewed against the benefits of the scheme which would be considerable with the scheme generating clean, renewable power. It follows that the proposals satisfy the requirements of LDP policy CE10 and are acceptable in planning terms.

Ecology and Nature Conservation

78. The mitigation strategy in relation to SSSIs set out in Welsh planning policy is avoid-mitigate-compensate. The delivery of a scheme of this scale with available grid connection and willing landowners can only be achieved within a SSSI.

79. A full suite of ecology surveys has been completed over the period 2017-2018 as detailed within the ES and appendices. This has assessed the impact of the proposed development on the range of habitats and species identified within the area, noting those habitats and species identified in the Newport Local Biodiversity Action Plan (LBAP). Avoidance and mitigation measures are identified to not only qualifying features of the SSSI but to all other protected species and habitats of relevance.

80. In accordance with pre-application guidance received from Natural Resources Wales (NRW) the scheme proposes buffer zones. A stock proof fence, with a gap at ground

level for small animals, would be installed at the edge of these buffer zones and there would be unhindered access for routine reen and ditch management. These zones would provide a high level of connectivity of foraging and nesting habitat across the site. Research evidence into similar provision on established solar farms points to the biodiversity gains that arise in such circumstances.

81. Within the site the historic grips and reens that form a distinctive element of the Levels provide a valuable ecological as well as drainage function. Technical evidence demonstrates how these would be protected and would be likely to be less at risk than from normal farming activities. Measures would be secured to ensure that ditch management would provide diverse habitats suited to the different requirements of the important species that rely on the aquatic environment. It has also been demonstrated that it is highly unlikely that the type of aquatic invertebrates present on the site would lay their eggs on the panels, mistaking them for water.

82. Where reens or ditches have hedgerows on both banks one side would be removed to enable reen and ditch management to take place; the aim being to improve the SSSI features. Additional hedge planting would take place to infill gaps in the hedgerows and improve habitat connectivity. All mitigation proposed is detailed in the draft Landscape and Ecology Management Plan (LEMP) which would be refined prior to development.

83. Mitigation measures to be secured by planning condition would ensure that there would be no effect on the favourable conservation status of dormice or water voles, and it is acknowledged that the requirement for a European Protected Species (EPS) licence in the case of any direct effects provides additional protection.

84. During the construction phase, a strategy for the installation of the panels and associated infrastructure would ensure minimal disruption to ecology which would be set out in a Construction and Environmental Management Plan (CEMP).

85. In response to NRW's concern over the fact that Area C cannot be utilised for shrill carder bee habitat enhancement, the applicant considers that there are other areas within the applicant's control that would provide greater benefits than the already good habitat in Area C. Through further discussion[28] the applicant has demonstrated to the satisfaction of NRW specialists that parts of the site can be managed such that it would provide improved habitat and connectivity through the seeding and management of buffer strips. This would result in an enhanced environment for the shrill carder bee, particularly given the poor habitat that much of the site's improved and semi-improved grassland provides as a consequence of the current farming practices, particularly heavy grazing by horses.

86. The land used for the solar farm would create a place for nature and wildlife to thrive, protected from human contact. The land around the panels would be grassland with hedging retained, enhanced and managed and newly planted around the fence. These environments provide better habitats than intensively farmed land and are akin to a nature reserve.

87. Resting the land from intensive grazing use for a period of 40 years would have significant benefits in terms of allowing native grassland species to re-establish and for the land to restore fertility for future farming use after the solar farm has been removed. The development would also mean the land is no longer subjected to

[28] Doc A21

intensive use of pesticide or fertilizer, to the benefit of local soil and fluvial environments.

88. Intensive grazing by cattle and intensive arable use tends to result in compacted soil and more incidents of bare soil which accelerates run off to watercourses. The solar farm would allow a rich mix of plant and grassland species to become established which would help retain water and slow run off rates, reducing local flood risk. The proposal would also provide new biodiverse areas around the edges of the reens and ditches, which would encourage local biodiversity to thrive.

89. The panels would be some 1m above ground level rising to some 2.7m. This would not only provide solar gain to the underside of the panels but would also ensure that grassland could flourish and sheep could graze in these areas.

90. The ES has concluded that 'the low ecological value of the affected area in combination with the proposed ecological enhancements, such as the creation of planted biodiversity areas and species rich grassland areas, means that the scheme has potential to have a net benefit to biodiversity during the operational phase'. It also demonstrates that the special qualities of the St Brides SSSI would be preserved and where possible enhanced through the implementation of the scheme.

91. A standalone Ecological Impact Assessment has been completed of the Lapwing Compensation Land. This concludes that the land would experience only positive or neutral residual effects as a result of the proposed development.

92. The proposals would be fully reversible and temporary for a period of 40 years. The land could be quickly restored to its former use. There would therefore be no long-term harmful impacts from the development.

93. If consented this development would bring much needed financial resource and management to the reens that are hugely neglected in this area. This direct intervention would not only prevent damage to the SSSI and its qualifying features but would deliver on-going benefits of a scale that would be completely undeliverable should the scheme not move ahead.

Ornithology

94. Two years of robust bird surveys have been undertaken in accordance with recognised methodologies, covering wintering and breeding seasons. The associated reports have assessed the impact of the proposed development upon the range of bird species identified within the area, and additional survey work has been undertaken since the application was submitted. Because of the close proximity of the Severn Estuary SPA and Ramsar Site, specific attention has been paid to the species associated with these sites. These are mainly wintering populations of wading birds and waterfowl, which could potentially use the application area for roosting or foraging at high tide. Lapwing are of particular importance due to their current low breeding status in Wales and decline across the UK generally.

95. SPA and Ramsar qualifying species were not found to be using the site at high tide during the winter months in any significant numbers. During the breeding season most species were confined to hedgerows and reens. Lapwing was found to be breeding in certain fields within the application site and surrounding area.

96. A number of land management measures are proposed which would benefit birds, including 22.1 hectares of nearby land which would be managed for breeding lapwing. During the construction phase, timing of works would be targeted to avoid the core

breeding bird season including sensitive times in the crane breeding period. Grassland habitats would be protected from vehicle damage by avoidance and through the targeted use of trackways. A programme of post-construction bird monitoring would also be introduced. Mitigation measures are detailed in the LEMP.

97. The applicant agrees with the RSPB that the compensation/enhancement land is functional before construction begins and this can be secured by planning condition.

98. Overall, the impacts of the solar farm on birds are predicted to be minimal and habitat would be enhanced for species associated with reens and ditches and field margins. The loss of some fields used by lapwing would be compensated for by a provision specifically managed for this species.

Habitats Regulations

99. A shadow Habitats Regulations Assessment (sHRA) has been undertaken, and subsequently refined in the light of advice from NRW. It has adopted a precautionary approach and has found that the potential for likely significant effects on the SAC and SPA cannot be ruled out without mitigation measures being undertaken. However, once such measures, which would be secured through the suite of suggested conditions, are taken into account the scheme would not, either alone or in combination with other projects, have an adverse effect on the integrity of the National Sites Network.

Flood Risk and Water Resources

100. The site is located within Flood Zone C1 which means that it sits within an area of the floodplain which is developed and served by significant infrastructure, including flood defences. This designation is used to indicate that development can take place subject to it passing the justification test, including acceptability of consequences.

101. To this end a Flood Consequences Assessment (FCA) and an addendum[29] have been prepared which considers the impact of the proposed development on hydrology in the area. The document also details the specific mitigation measures which would be incorporated in association with the built infrastructure including solar panels, battery storage units and ancillary equipment.

102. At the hearing the applicant confirmed an intention to raise battery storage containers and other apparatus above the worst-case flood level prediction in the event of the sea wall defence being breached. Localised surface water flooding which affects the site and surroundings, including roads, would not reach similar levels.

103. With regards to the installation of the solar panels (which make up the bulk of the proposed development), these would be individually spaced to allow thermal expansion which would provide gaps that would facilitate the dispersal of rainwater. Battery containers and other apparatus would lie on permeable surfaces to avoid accelerating surface water run-off.

104. The proposal would bring to an end for its lifetime any arable farming, intense grazing and soil compaction by animals and machinery thus improving surface water drainage. In turn, grassland would flourish, resulting in improved water quality due to the reduction in silt run-off and the elimination of fertilizers and pesticides.

[29] Doc A8

Glint and Glare

105. An assessment of glint and glare has been carried out along sections of nearby roads and rail and from residential properties which has informed chapter 14 of the ES. The study[30] explains that the intensity of reflected light from solar panels is similar to that of still water at approximately 5% of light reflected and is considerably less intense than reflected from snow or steel.

106. The presence of hoods on the railway light signals would avoid the potential for reflected light to impact on their efficacy. Whilst at some points there would be a moderate impact on train drivers travelling towards Newport this would be experienced concurrently with direct views of the sun. It would be experienced on a length of track where drivers' workload would not be particularly high given the distance from interchanges or stations. Current examples where the potential effect would be greater are operating without any problems.

107. In its original iteration the effect on 5 of the nearest dwellings was described in the study as of moderate[31] significance and is based on a 'conservative assessment of visibility' and suggests that the 'provision of further screening should be considered'. For reasons already provided it is accepted that screening is not an acceptable measure. The revised Study takes into account the extent of existing screening and describes the effect as 'low' for which no mitigation is required. Local residents would only be affected when weather conditions permit and only at a particular time of day. The viewer would see this reflected light, which would only arise from part of the development, in the same field of vision as the much brighter sun.

108. For motorists the intensity of any reflected light would be significantly less bright than direct sunshine, against which it would generally be seen. For the most part the effect would occur outside the driver's primary field of vision. Even from the elevated sections of highways crossing the railway line where drivers may see the reflected light they would not be directly facing that light. The reflective surface area would also be relatively small. There would be no significant effects on aviation.

Noise

109. An assessment of noise has demonstrated that there would be no significant impact on noise-sensitive receptors. The assessment advises that noise generating plant is to be located away from site boundaries that are close to such receptors. As there are no immediate noise sensitive receptors to the proposed plant a specific noise condition is not necessary. Measures would be incorporated to minimise noise during the construction phase which would be secured via the CEMP.

Agricultural Land Quality and Tree Survey

110. Through engagement with the Soil Research Department in Welsh Government, it is considered that the land is classified as grade 4 on the Predictive Agricultural Land Classification Map for Wales, and as such is not within the category of 'best and most versatile' agricultural land[32].

[30] ES, Appendix 14.1 and Doc A22

[31] The Study defines a 'moderate' impact significance as one where solar reflection is geometrically possible and visible but in conditions that are not 'worst-case'. It indicates that further consultation and/or analysis be undertaken to determine the requirement for mitigation.

[32] ES, Appendix 16.1

111. All trees recommended for protection in the Tree Survey would be protected in accordance with best practice to be secured by the LEMP.

Population and Human Health

112. The battery storage containers would be above the relevant modelled flood risk level and would be provided in accordance with recognised industry standard and located away from combustible materials. A robust risk assessment would be undertaken as would be required by the terms of insurance policy cover. The means of energy storage has yet to be finalised. There are rapid technological advances which suggest that there may be a preferred alternative to lead-acid batteries that have traditionally been used in such circumstances.

113. A decommissioning plan would ensure that the solar panels are removed from the site responsibly. During the operational phase the panels would be subject to regular maintenance. The panels' composition is such that they would not pose a risk of ground or water pollution.

Green Wedge

114. The site falls within a green wedge, but not within a Green Belt. Renewable energy and in particular solar farms are subject to different planning policies so would not set a precedent for other developments that may be damaging to such designations. PPW confirms that renewable energy generation developments may be appropriate within the green wedge provided they preserve its openness and do not conflict with the purposes of including land within it. The supporting text to LDP policy SP7 explains that the primary purpose of green wedges is to prevent coalescence between urban areas and that the designation is not necessarily based on the physical quality of the landscape but on their openness and their role in maintaining the distinct identity of separate communities.

115. In addition to the above ES topics the applicant has presented information on other matters, the main ones are covered below.

Planning Policy

116. For reasons detailed in section 5 of the Planning, Design and Access Statement the scheme performs well against the objectives and policies of the LDP and the SPG documents. Future Wales and the latest iteration of PPW makes clear the support for the large-scale renewable projects[33].

Sustainability and Well-being

117. The scheme performs well against the placemaking aims of PPW and the goals of the Well-being and Future Generations Act[34].

Additional Grid Yard

118. As explained in the October bundle of additional information a second grid yard to provide another point of connection to the 132 kv overhead line may be necessary, depending upon specific technical and commercial considerations which have not yet been resolved[35]. The potential impacts of an additional grid yard have been assessed

[33] A24
[34] A15
[35] A17

in the same way as the scheme has been assessed. Whilst the additional vertical elements associated with a second grid connection would be visible from several vantage points the magnitude of change would not increase to an extent that would change the significance of the visual effect experienced by receptors. No other significant impacts have been identified in relation to the other matters assessed and thus the findings of the ES are not be altered by the inclusion of a second grid yard.

Community benefit

119. The applicant has sought to engage with the local community councils despite the restrictions imposed by Covid-19 legislation which included a full public consultation. Subsequent engagement with Wentlooge Community Council resulted in the applicant offering it a community benefit package which would be secured via a legal agreement outside the planning process.

Lifetime of Project

120. It is recognised that some other solar farms, including Llanwern are subject to a 30-year lifetime, but in the current economic climate, including the withdrawal of public subsidies, a 40-year period is required to ensure the scheme's financial viability.

121. The applicant is confident that modern solar panels have the longevity to operate for this period. However, it was accepted that given the number of panels that would be required it was likely that some would fail and that a condition should be imposed to safeguard against the uncontrolled mass scale replacement of panels during the operational phase of the project.

Conditions

122. The applicant has confirmed general agreement with the suite of conditions suggested by the Council in its LIR. These have subsequently been refined and a revised list[36] has been agreed with the Council, NRW and GGAT following discussion at the hearing.

123. The conditions identify a range of matters that would require the Council's agreement before development can commence. Responsibility for the submission of such details would fall on the developer, who has yet to be identified for the project. Compliance with such conditions, including those that would restrict the timing of certain works, would require careful timetabling of the project, influencing when the scheme might become operational.

Conclusions

124. The scheme would be delivered without any government subsidy and would reduce the country's reliance on fossil fuels and the economic exposure to international price fluctuations. It is compatible with the objectives of the Living Levels Landscape Partnership.

125. The proposed development is sustainable in terms of the environmental, economic and social strands of sustainability set out in PPW. The numerous gains that would arise in this respect can be secured without giving rise to any unacceptable harm.

126. The solar farm permitted at Llanwern shares many of the site's characteristics and planning designations including SSSI, historic landscape area, flood zone C1, Special Landscape Area and proximity to the SAC, SPA and Ramsar site.

[36] A23

Local Impact Report

127. The LIR is based on the information available within the submitted documents and prior knowledge of the site. Limited internal consultation has been undertaken within the Council, with no external consultation. It is presented as a factual document that identifies anticipated impacts as positive, negative or neutral without attributing weight to any impact. It has considered the solar hub and battery storage as a single development.

128. Relevant local planning policies and supplementary planning guidance are identified and the location of development is described by reference to relevant designations and classifications. The assessment of the likely impact of the proposal is summarised below.

Landscape & Visual Impact (character & appearance)

129. The LVIA follows the industry standard but does not take into account elements other than the solar arrays and does not acknowledge the proposed hedgerow removal within the site or the proposed removal of vegetation to create a more open habitat within the compensatory land. The potential to soften existing views through additional planting has not been assessed.

130. With reference to specific examples, in particular viewpoint 1, it is suggested that the landscape character and visual amenity impacts set out in the LVIA are generally underplayed for the site and immediate setting. Whilst the LVIA recognises that to meet local authority policies enhancement measures are required, none have been proposed. The submitted LEMP contains inadequate detail of landscape mitigation measures.

131. The Council considers that the landscape and visual impact of the proposal would be negative. The Council also considers the impact on the Wentlooge Levels Special Landscape Area to be negative.

Ecology

132. Insufficient information has been provided for the Welsh Government to consider the 'Three Tests' under the Conservation of Habitats and Species Regulations 2017 and appropriately fulfil the wider duties under that same legislation and the Wildlife and Countryside Act 1981 and Environment (Wales) Act 2016.

133. The surveys of the proposed development site have been comprehensive and followed the requirements detailed in the NRW scoping opinion. However there have been no surveys undertaken of the off-site lapwing mitigation area which would be enhanced and managed for wintering lapwing to compensate for on-site loss of habitat. The associated removal of vegetation is likely to result in the loss of priority habitat, potentially including habitat supporting European protected species (dormice and bats). The assessment can therefore not fulfil the "three tests" requirements, under Regulation 55 of the Conservation of Habitats and Species Regulations 2017.

134. In the absence of sufficient information, it would result in a negative impact on the local overwintering lapwing population which is an interest feature of the SAC and Ramsar site. Further information is necessary to enable the Competent Authority to undertake an Assessment under the Habitats Regulations.

135. As would be expected of a SSSI designated site the surveys have confirmed that the development site is of national importance for wildlife, including nationally notable

species such as the shrill carder-bee and brown-banded carder-bee. In addition to this, surveys have confirmed the presence of other protected and priority species such as dormouse and grass snake, as well as breeding and overwintering birds and 300+ lapwing. The ES would benefit from more information on the positive and negative effects on the reens and ditches.

136. The submitted information, including the LEMP, does not provide sufficient certainty that suitable management can be enforced to guarantee that the development does not result in a loss for biodiversity. Opportunities to create new habitats to achieve an overall enhancement should be considered.

Historic Landscape

137. Based on the ASIDOHL2 report the impact on the Historic Landscape would be negative.

Archaeology

138. The site lies within an Archaeological Sensitive Area. Impacts on the archaeological resource could be permanent and irreversible depending on the extent of ground intrusion. Without securing mitigation measures agreed with GGAT the impact would be negative.

Flooding

139. The scheme does not satisfy the justification tests set out in TAN15 for development within the floodplain (in this case zone C1) and as such the impact would be negative. If the scheme can be justified and the Flood Consequences Assessment found to be acceptable consideration should be given to the impact of power loss from the grid. In any event the impact is likely to be negative as the scheme would lead to the replacement of a less vulnerable use with a more vulnerable use. [37]

Coastal Zone

140. The site is located within the undeveloped coastal zone and is subject to an LDP designation that provides that only development which is required to be on the coast to meet an exceptional need which cannot be met elsewhere is permitted. If the site is in a flood risk area, this must not exacerbate erosion, land instability or flood risk. An exceptional need should be demonstrated to satisfy LDP policy CE9 (Coastal Zone). The Welsh National Marine Plan would need to be satisfied. It is noted that this plan is not mentioned in the planning statement. It is considered that it should be considered if only to screen it out.

Access and Highways

141. The impacts are considered to be negative without mitigation, which should include controlling HGV peak traffic flows, carrying out a road condition survey, the possible need to improve the highway around the proposed main access, the provision of sufficient on-site parking and adequate visibility splays for the access. Minor anomalies in the Transport Assessment should be addressed.

[37] During hearing 3 the Council confirmed that it wished to retract its negative stance in relation to this point in light of the Minister's decision on the Llanwern solar scheme

Rural Character / Mitigation

142. Consideration should be given to detailed aspects of the scheme to minimise the impact on the rural character. Such mitigation secured under condition is likely to reduce adverse impacts but there would be a significant and prolonged change in the character of the area should the proposal go ahead. This would be negative in landscape and visual terms. However large solar facilities are not atypical in rural areas and there is no presumption against them.

Noise

143. Details, including of layout, type and quantities of plant and tonal character of any noise, are not known. Obtaining information on these details could vastly change the outcome of the assessment as no correction factors have been applied. The impact on residential properties could be negative without mitigation, which should be controlled by condition.

Glint and Glare

144. The technical assessment of glint and glare concludes that potentially glint and glare could occur at 5 dwellings. However, through the subsequent detailed assessment it was determined that the nature of these effects would be reduced due to a range of mitigating factors. Consequently, it was considered that only a low significance of effect would occur in respect of all identified receptors. The impact of glint and glare is considered to be neutral.

Power Generation

145. The contribution to electricity generation and consequent reduction in CO_2 emissions is positive.

Publicity

146. The Council's publicity in relation to the application is set out in an Appendix to the LIR.

Post-LIR representations

147. Subsequent to preparing the LIR, and the production of the October further information bundle by the applicant, the Council has refined its position as set out in hearing statements, on ecology, landscape and visual impact and an updated list of suggested conditions. Its position on conditions was subsequently refined in light of discussions at the hearing and it agreed an amended list of conditions with the applicant as detailed in the 'Conditions' section of this report

148. On ecology the production of the outline CEMP is noted but it is not sufficient to be reasonably certain that ecological features would be protected during construction. The Ecological Impact Assessment Report for the off-site lapwing mitigation area does not satisfy the Council that the focus on creating habitat suitable for lapwing would not lead to the loss of priority habitat and loss of habitat diversity, unknown impacts on European Protected Species, and the loss of breeding bird habitat, including Schedule 1 species.

149. The field hedgerows, which include 15 mature trees, are recognised as priority habitats and as such there is a duty under s6 of the Environment (Wales) Act 2016 on public authorities to "seek to maintain and enhance biodiversity". The primary position to meet this duty should be to avoid and mitigate for loss where possible, but

if it cannot be avoided the loss should be compensated for with replacement planting. The Council's Wildlife and Development SPG seeks a compensation replacement ratio for hedgerows at 1:1.5 or 50% above the area lost. The Trees, Woodland, Hedgerows and Development Sites SPG follows the three design principles which are: retention, mitigation and compensation. Where tree loss can't be avoided, replacement planting is required.

150. As the presence of dormice in the, albeit suboptimal, hedgerows to be removed cannot be ruled out, in line with TAN5 their presence should be established prior to permission being granted.

151. Whilst the proposed management would result in improved habitat for some of these species, for most it would result in loss or degradation of habitat, for which no compensation has been provided.

152. No loss/gain analysis has been provided to show how much benefit to biodiversity the proposed management would provide (e.g. increased carrying capacity for lapwing) and how this compares to the biodiversity loss that would occur as a result (e.g. loss of nesting habitat for birds, loss of dormouse habitat, etc.). The proposed management may result in the improvement of habitat for one species at the expense of loss or degradation of habitat for a number of species.

153. As the shortcomings of the LEMP have not been addressed by the applicant, a condition requiring its approval as a pre-commencement condition is vital.

154. In relation to the landscape and visual impact, concerns remain that elements of the scheme other than the solar arrays have not been included in the LVIA, most notably the battery containers. The intention to use livestock fencing and to retain hedgerows along the north side of ditches are noted but this does not alter the findings of the LIR that the landscape and visual impact, including on the SLA, would be negative.

Consultation Replies

Most of the representations summarised below were submitted prior to the presentation of additional information by the applicant and the publication of the latest national policy documents.

Cadw

155. It agrees with the results of the applicant's ASIDOHL2. The impact of proposed development on the registered Gwent Levels Landscape of Outstanding Historic Interest would be significant.

156. Cadw concurs with the applicant's Heritage Assessment[38] that the effect on the settings of other designated historic assets has been appropriately assessed and agrees with its findings that any impact would not be significant. It confirms that the applicant's archaeological assessment is appropriate and defers to GGAT.

Glamorgan-Gwent Archaeological Trust

157. The impact of ground screws or piles, that would secure the panels, on the reclaimed alluvial deposits and buried landscapes would not be reversible and would create a pin cushion effect that extends beyond the screws. Such effects have the potential to not only directly impact archaeological features but also to have an indirect effect through

[38] Doc A3

introducing oxygen into the anaerobic conditions that are currently preserving the organic material, potentially leading to significant long-term damage.

158. Responding to the additional information provided by the applicant after submission of the application, GGAT is satisfied that the archaeological assessment is adequate. It does not take issue with its findings that any effect on the site's archaeological value could be acceptably mitigated, which should include a programme of palaeo-environmental sampling and analysis, and the undertaking of an archaeological watching brief. It also recommends that a topographical survey of the drainage system is undertaken, partly to inform reinstatement works during the de-commissioning phase.

Campaign for the Protection of Rural Wales

159. In line with some other organisations that presented evidence in objection to the application CPRW emphasised its general support for renewable energy production. The project conflicts with policy 18 of Future Wales in that: it fails to minimise visual impact on nearby communities or ensure acceptable cumulative impact; would give rise to adverse impacts on designated nature conservation sites; and fails to ensure a net benefit for biodiversity. The scheme is also in conflict with the LDP, including green wedge designation, and is not consistent with the Renewable and Low Carbon Energy Assessment. The physical works could result in harm to important archaeological features. The application has failed to properly consider alternative sites and would give rise to a harmful cumulative impact on the landscape.

160. The site is not within a priority area for renewable energy and its coastal location and risk of flooding means that it is unsuitable. The harmful impact on the SSSI, which would result in the loss of 50% more of the designated area than the M4 CAN scheme, would be a breach of the duty under section 28G of the Wildlife and Countryside Act 1981.

161. In response to the publication of Future Wales concerns are raised with the way that the protection afforded to nationally designated nature conservation sites has been weakened and questions are raised with the process that led to the change. It also welcomes, as does the Gwent Wildlife Trust and FoGL, the omission in the latest edition of PPW of paragraph 5.9.17 of Edition 10. That paragraph, in setting out support for renewable and low carbon energy generation, advised that only the direct irreversible impacts on statutorily protected sites and buildings and their settings should be considered.

Natural Resources Wales

162. In its original representation NRW identified 5 requirements for further information which, following the submission of additional information by the applicant in October 2020, was reduced to 2 outstanding requirements. One related to information to demonstrate that there would be no likely significant effects on dormice, the other related to information on the in-combination effects on ornithology to allow the competent authority to carry out an assessment under Regulation 63 of the Conservation of Habitats and Species Regulations 2017. During hearing 2 NRW confirmed that in relation to dormice its requirement was satisfied by Doc A13 and that the in-combination requirement had been met in the latest sHRA[39].

[39] Doc A16

163. NRW does not object to the scheme provided a series of conditions are imposed, mostly relating to management and monitoring plans sought in the interests of the ecological value of the site and its environs. Other conditions are sought to deal with surface water and tidal flood risk.

164. The applicant explained at hearing 2 that Area C could not be relied upon to provide enhanced habitat for the shrill carder bee. In response NRW has confirmed[40] that the applicant's latest strategy demonstrates that the scheme can deliver measures to satisfactorily avoid, mitigate and compensate the potential adverse effects on the shrill carder bee although detailed aspects may require modification before discharge of the necessary controlling conditions.

Gwent Ornithological Society

165. There is a lack of peer-reviewed scientific studies into the impacts of solar farms on ecological receptors. Solar farms are likely to displace wader and hunting species. As the third large solar farm proposal on the Levels the cumulative impact on the European sites is a particular concern, especially given the reliance placed by each proposal on the availability of similar nearby habitats. It advises that a moratorium is needed to allow the effects of the solar farms being developed to be understood. If permission is granted bird surveys should be undertaken to provide evidence of its effect.

Gwent Wildlife Trust

166. The site is designated as a SSSI and is valuable grazing marsh and LBAP habitat, including for the shrill carder bee. The compensation wildflower area is inadequate compensation for the area lost. Lapwing would be impacted by loss of grassland. The surveys undertaken are inadequate for wintering/passage waterbirds, dormice and otters. No CEMP has been provided to demonstrate how the impact of the works would be minimised. The sHRA fails to address cumulative impacts and there would be no net benefit for biodiversity. The scheme would cause heavy metal run-off to the water environment. The M4 CAN decision means that the earlier decision to approve the Llanwern solar farm does not constitute a precedent for approving this scheme, which would breach the duty under section 28G of the Wildlife and Countryside Act 1981.

167. As Government's renewable energy targets would be met there is no need for this development, in any event there are many parts of Wales that are more suited for this type of development. The decision maker should adopt the precautionary principle in this case, and in the absence of reliable evidence to demonstrate no harm the application should be refused. Future Wales affords tackling the challenges of climate change and biodiversity equal status and requires that the scheme should have no adverse impact on important nature conservation assets. In relation to mitigation, no weight should be given to the outline CEMP because it lacks sufficient detail to demonstrate that the scheme would not cause ecological harm, including to fragile wetland habitats.

168. As Future Wales forms part of the development plan it should be afforded great weight. In relation to criterion 4) of policy 18, which refers to no unacceptable impacts on national statutory designated sites for conservation there are considered to be 2 categories of acceptability: trivial or inconsequential impacts, and where any

[40] In an email to the applicant from James Davies, dated 5 February 2021 – Doc A21

material adverse impacts is clearly outweighed by the need for the development. Neither justification applies in this case. Citing an email from the Welsh Government's Chief Planner the presumption against harmful development, along with the no unacceptable adverse impact test, is a high bar[41].

RSPB Cymru

169. The site lies entirely within a SSSI. The impact of the scheme would largely depend on the efficacy of the Ecological Management Plan and the Lapwing Management Plan which have yet to be provided. The potential adverse impacts on wintering lapwing have not been fully addressed.

170. The cumulative impact of the numerous large-scale solar farms on the Gwent Levels SSSIs would lead to the increasing marginalisation of biodiversity, protected species and key ecological features. Wintering lapwing impact has not been adequately addressed and the suitability of the compensation land is not clear. The approach to avoid-mitigate-compensate is not consistent with PPW and TAN5.

The Severn Estuary Levels Research Committee

171. The Committee expresses major concerns over the impact on the historic landscape and the SSSI. Based on its specialist knowledge it considers that there is potential to harm archaeological features which are highly probable to be present. It is also concerned at the impact on the character and appearance of the area.

Wentlooge Community Council

172. The highway network cannot accommodate the large vehicles that would be attracted to the site during the construction and de-commissioning phases. The chosen route involves sections of highway that have been deemed unsuitable for HGVs by the Council and by commercial operators. The absence of footways would endanger cyclists and walkers on a local highway network popular with recreational users and there are inadequate details on the access points. The effects on the wildlife and historic value of the site and visual impact of the scheme are also concerns as are noise disturbance particularly during construction, impact on bee breeders, potential pollution from leaking solar panels, the safety risks of the batteries including from fire, risks from glare affecting aircraft using flight paths over the site, and possible increase in crime. The Gwent Levels salt marsh is a great contributor to carbon absorption, so removing this would increase pollution. The scheme would cause the industrialisation of the countryside and harm local businesses and tourism.

173. As it is a green wedge bordering a green belt the scheme would open up the whole area for development. It is also concerned at the implications of the site flooding and the visual impact of the raising of the proposed structures above flood levels, pointing to inconsistencies and inaccuracies in the applicant's information. The absence of detail is identified in relation to several concerns, including the means of suitably controlling the growth of grass within the site and the maintenance and disposal of the panels. The scheme runs counter to numerous objectives and policies of the LDP and is at odds with the aims of Future Wales and PPW.

174. The Living Levels Landscape Partnership (LLLP) has come together to promote and reconnect people to the heritage, wildlife and wild beauty of the historic landscape of the Gwent Levels. It is supported by significant public funding and seeks to conserve

[41] Appended to Doc IP23

and restore the important natural heritage features of the area, contrary to the effects of this development. The public consultation process conducted by the applicant was inadequate.

Marshfield Community Council

175. The scheme is being promoted for the commercial interests of an English based company and would provide no meaningful local benefits. The limited availability of alternative sites does not justify the harm that would be caused to the ecology, landscape (noting that any screening measures would be incompatible) and tourism. Construction traffic would impact highway safety as would the glare experienced by drivers. The public consultation process conducted by the applicant was inadequate.

Friends of the Gwent Levels

176. The Gwent Levels are identified in national policy as a National Nature Resource. It has been eroded over the past fifty years by human activity and is approaching a tipping point where its integrity will no longer be viable. There are at least four solar farm applications lodged with the Inspectorate. Tackling a climate emergency cannot be at the expense of the ecological emergency.

177. Adopting a precautionary principle, the scheme would conflict with Policy 18 of Future Wales which seeks to avoid any adverse impacts on important ecological features. Any such harm in relation to one aspect could not be outweighed by benefits to other relevant aspects. The application has failed to consider the impact of the scheme on the carbon sequestration potential of the site. The latest glint and glare study contains errors and assumptions that undermine its credibility. As screening cannot be relied upon, local residents and drivers on rail and road are likely to be affected by glint and glare. The study makes no mention of the daily use of the area as a helicopter flight path.

178. The applicant does not provide details to substantiate the claimed economic benefits of the scheme. There are no social or cultural benefits that have been demonstrated. The project is not community owned and any financial contribution to the community cannot be guaranteed. The Levels is particularly valued as a recreational resource as people seek to re-connect with nature in response to the pandemic.

179. The battery storage units would lead to extensive soil compaction. There is frustration that the applicant has sought to amend the scheme and provide additional information during the application process, with some details that are yet to be provided. This undermines confidence in the developers.

180. The latest iteration of PPW makes clear that Welsh Government views the biodiversity crisis as of equal urgency to the climate crisis. This stance provides a different policy context to the Minister's decision to approve the Llanwern scheme in 2018.

Other Representations

181. In addition to the representations from organisations mentioned above, some 71 letters were submitted in response to the application and an additional representation was received in response to the October 2020 bundle of additional information. All save one representations have raised objections or concerns over a wide range of matters.

182. The scheme gives rise to harm that means it would not preserve future generations as required by the Well-being of Future Generations (Wales) Act 2015. It conflicts

with national policy as the site lies outside areas identified for large scale renewable projects. There is no justification for the scheme as Wales already produces more electricity than it consumes; its resources should not be exploited for the benefit of England. This is a sensitive site carrying a range of designations which should not be developed merely for the cost and convenience benefits it would afford the developer.

183. The scheme would erode the gap between Newport and Cardiff which the green wedge designation seeks to protect. It would last for 40 years which is a long time and would probably be followed by other development. Allowing the scheme would undermine the LDP. There are many other projects in the pipeline on the Gwent Levels which cumulatively would cause extensive harms further eroding the qualities of the Levels and undermine the Living Levels project. Solar panels should be provided on buildings and brownfield land not greenfield sites. The farmland that would be lost would be needed post-Brexit. A livery would be lost.

184. The scheme would harm the SSSIs and biodiversity more generally. Its impact on the Gwent Levels is comparable to that which led the First Minister to refuse the M4 CAN scheme. An ecological consultancy employed by an objector is critical of the ecological information in relation to dormice[42]. It considers that the extent of the harm that would be caused to the SSSI cannot be predicted with any certainty, particularly given the recognised lack of relevant research, and may not be reversible after decommissioning. The Llanwern scheme includes a programme of ecological mitigation, which in due course will inform a better understanding of the likely effects of the proposed development.

185. The landscape, which is designated an SLA because of its quality and is classed as outstanding by LANDMAP, would be harmed. The tranquil, open space offered by the site is valued by local residents and visitors who use the area recreationally. A report[43] by landscape architects commissioned by a local objector is critical of the applicant's LVIA, including a failure to consider important viewpoints close to the site, and a lack of clear and consistent approach to some findings. The outstanding historic interest of the landscape and the site's archaeology would be harmed.

186. The scheme would accelerate surface water run-off and increase flood risk in an area where flooding is commonplace and has serious consequences, including on the safety of motorists. It would increase HGV traffic on already busy roads and would cause noise to residents. The panels and batteries use precious resources to manufacture and cannot be effectively recycled. The agricultural land classification is questioned.

187. The application contains inaccuracies. Local residents have not been properly consulted, and there would be no benefits to the local community or economy. House prices would reduce.

188. One letter of support refers to the scheme's creation of greener energy with no ongoing emissions on land that is mainly low value agricultural grassland. It would reduce local fertiliser, pesticide and livestock manure pollution into valuable water courses. The developers should utilise 10% of the land for environmental enrichment and the grassland should be planted with flower rich mixes to support biodiversity. The developer should support a local student on a STEM course, provide educational support related to the scheme and should utilise local labour.

[42] Doc IP6
[43] Doc IP6

Appraisal

189. The main considerations are:

(i) The effect on the green wedge, specifically:

a. whether the development is inappropriate development within the green wedge for the purpose of local and national planning policy;

b. the effect of the scheme on the openness of the green wedge and the purposes of including land within it;

c. if the scheme is inappropriate development, whether the harm by reason of inappropriateness, together with any other harm to the green wedge, is clearly outweighed by other considerations, so as to amount to the very exceptional circumstances necessary to justify the harm to the green wedge;

(ii) the effect on the landscape character and visual amenity of the area;

(iii) the effect on the historic landscape;

(iv) the effect on the ecology of the area, particularly the special features of the designated SSSIs and protected species;

(v) whether the proposed development is acceptable within a floodplain, having regard to local and national planning policy;

(vi) the effect on traffic flows and highway safety, particularly during the construction phase;

(vii) whether any harm identified in relation to the foregoing and any other considerations is outweighed by the benefits of the scheme, particularly its contribution to renewable energy generation and combating the climate change emergency.

Green Wedge

190. The site lies within the LDP green wedge designation and is close to the Green Belt which lies to the west. PPW explains that the essential difference between the designations is that Green Belt land should be protected for a longer period than the current development plan period, whereas green wedge policies should be reviewed as part of the development plan review process.

191. PPW identifies openness as an essential characteristic of a green wedge. Its purpose includes: the prevention of coalescence of large towns and cities with other settlements; managing urban form; assisting in safeguarding the countryside from encroachment; protecting the setting of an urban area; and assisting urban regeneration.

192. PPW provides a general presumption against development which is inappropriate in relation to the purposes of the designation. Certain forms of development, including renewable and low carbon energy generation, may be appropriate in the green wedge 'provided they preserve its openness and do not conflict with the purposes of including land within it'.

193. LDP policy SP7 explains that its green wedges have been identified to prevent the coalescence of settlements, in this case Newport and Cardiff, and seeks to prevent development which prejudices the open nature of land.

194. The Courts have held that the concept of openness is not limited to the visual aspect but also includes a spatial dimension. I consider that the introduction of solar panels elevated above ground level together with the other proposed apparatus, including the transformer units, grid connection infrastructure and battery containers would reduce the physical and visual openness of the presently undeveloped fields.

195. The applicant suggests that, as renewable and low carbon energy generation is specifically listed as a potentially suitable form of development, 'openness' must instead be interpreted more as a description of landscape character. Otherwise, it argues, a narrower interpretation of the term would represent an inherent contradiction in the policy given that all forms of renewable energy development would undermine openness. I disagree; whatever the particular implications that might arise to the internal consistency of policy, it cannot alter a long-standing interpretation of what openness means in the context of Green Belts and green wedges. Such interpretation is based on the effect of development rather than the type of development being considered.

196. As I later explain, in my appraisal of the landscape character and visual amenity consideration, the development would be readily visible from outside the site. The presence of the proposed structures and apparatus on the ground would materially reduce the sense of openness that is a particular feature of the Levels landscape in this area. These features would be viewed in the context of hedgerows and other vegetation that define field boundaries; this would reduce their impact but does not alter my view that the present openness that the site exhibits would be materially reduced.

197. The solar arrays would generally follow the contours of the land and would sit above grassland and would be mostly enclosed by hedgerows and other vegetation. It would retain an appearance that is more commonly associated with a countryside setting rather than an urban one. It would therefore not contribute to the coalescence of settlements or significantly erode the rural character of the area, or otherwise undermine the stated purposes of the green wedge.

198. As there would be no conflict with the purposes of the designation the substantial weight that such harmful impact would carry does not apply. Nonetheless the scheme's harmful effect on openness means that it constitutes inappropriate development, and would be in conflict with LDP policy SP7. PPW carries a presumption against inappropriate development and advises that, to maintain green wedge openness, development must be strictly controlled. In light of the protective provisions of local and national policy I afford this harm significant weight.

199. Given the harm that I have identified to the green wedge, I shall now consider whether very exceptional circumstances exist to justify the grant of planning permission on the basis that other considerations clearly outweigh the harm to the green wedge.

200. The benefits of the scheme, most notably those arising from the renewable energy that would be generated, is discussed later in this appraisal. For the reasons I set out in that section, the scale of the contribution and the associated benefits in relation to responding to the climate change emergency carry considerable weight.

201. The applicant has demonstrated the substantive obstacles to securing an available and suitable site for a solar farm of this scale, and the financial considerations that indicate that smaller developments may not be viable propositions[44]. The evidence indicates an absence of suitable alternative sites that lie outside the green wedge.

202. In the absence of suitable alternative sites I find that the scale of the benefits of this nationally significant development clearly outweigh the identified harm to the green wedge, such that very exceptional circumstances exist that would justify permitting this inappropriate development in the green wedge.

Landscape Character and Visual Amenity

203. The application site falls with the Wentlooge SLA as designated in the LDP. PPW recognises the value of all landscapes for their distinctive character and seeks to protect their special qualities and ensure that the opportunities they provide, including for wellbeing, tourism and renewable energy are taken into account.

204. The ES includes a landscape and visual impact assessment (LVIA) that has been prepared in accordance with GLVIA guidance on methodology[45]. It contains Zone of Theoretical Visibility (ZTV) maps which identify areas from where the development could be seen on the basis of a topographical, bare-earth analysis, and includes the parts of those areas where other large development projects would also be theoretically visible. These maps have informed the choice of representative viewpoints from where a series of photomontages depicting the appearance of the scheme have been prepared. I have noted the professional criticisms of aspects of the assessment and the comments of others.

205. The Council and others have expressed concern that other elements of the scheme such as the telecommunications tower and, in particular, the storage containers have not been specifically assessed in the LVIA. The more vertical features such as the tower would be slender structures located among the solar arrays. In this context they would be minor elements that would not materially alter the effect of the solar arrays on the character of the landscape or its visual impact. Likewise, in the context of arrays that would be some 2.7m high the presence of a row of 3.5m high battery containers would not materially alter the impact of the scheme on the area's character or appearance. It is evident that whilst not always specifically identified in some sections of the LVIA, there are many explicit references to the units and other elements, including the grid yard.

206. I am satisfied that any deficiencies in the LVIA do not undermine its robustness as a tool to assist the decision maker. In any event, whilst my assessment of the scheme is informed by the LVIA I have not relied on it. It has informed my appraisal of this main consideration alongside other representations as has my visit to the site, its surroundings and the partly constructed Llanwern solar park that has many broad similarities in terms of scale, design and landscape setting[46]. In my assessment I have borne in mind all of the components of the proposed scheme.

207. The LVIA has assessed the construction as well as the operational phase of the development. Whilst the construction phase, at certain times, would have a greater

[44] Site Selection Sequential Test, March 2020
[45] Guidelines for Landscape and Visual Impact Assessment 3rd Edition, 2013 (GLVIA3)
[46] My visit to the Llanwern Solar Park indicates that those panels were less elevated above the ground than is proposed in this case

impact that during its operation, as it is likely to be relatively short-lived, I have focussed mainly on the operational period of the project.

Landscape Character

208. The application site and environs are typical of the distinctive landscape of the Wentlooge Levels. The low lying and near flat topography and the network of drainage ditches and adjacent waterside vegetation, notably reeds, and hedgerows that frame fields and roads combine to create an open, expansive rural landscape. Generally, buildings sit comfortably within their setting, and comprise mainly isolated residential, commercial or agricultural in use. Several churches and older villages serve as landmarks that contribute positively to the composition. There are a variety of other uses including golf courses and a caravan park. There are features that detract from the quality, including some commercial operations and, most notably, the 2 rows of pylons and the Swansea to London mainline railway.

209. The LANDMAP evaluation of the aspect areas within which the site is located is 'high' in relation to the geological landscape and the visual and sensory layers (both scenic quality and character) and 'outstanding' for landscape habitats, historic landscape and cultural landscape. The historic landscape and visual and sensory layers of most nearby aspect areas are evaluated as 'high' with some 'outstanding'. In relation to the historic landscape character, whilst I have taken into account its contribution to the character and visual amenity of the landscape in this main consideration, its value as a historic asset is a matter covered under my assessment of the main consideration of Historic Landscape that follows.

210. The scheme would retain the site's distinctive field pattern, the open expanse of primarily pastoral land, the distinctive pattern of reens and ditches, and its flat low lying landform which are all identified as distinctive landscape characteristics in the Gwent Levels Landscape Character Assessment in 2017. It would also retain the landscape's key qualities as identified in the same assessment.

211. The development would be visible, particularly from close quarters but would be seen in the context of the present field patterns that would continue to be framed by hedgerows and reeds that typify the landscape. Once constructed the development would involve very little activity that would disrupt the tranquillity of the agrarian landscape. The relatively low level and horizontal emphasis of the arrays means that they would be seen to follow the existing topography. The use of stockproof type fencing would have an appearance consistent with the primarily agricultural character of the area, albeit at a height that is taller than is generally used. Thus, whilst the presence of the development in the surrounding landscape would be clearly noticeable, it would not undermine its character. Any impact would reduce significantly with a relatively modest increase in distance from the site.

Visual Amenity

212. The development has sought to avoid or mitigate potential landscape impacts. The photovoltaic panels would be seen within the existing field pattern and enclosing vegetation. Existing field boundaries would be utilised to minimise the need to create new accessways and breaches of field boundaries. The battery storage units would be painted green to sit within the landscape. The application initially indicated that some additional landscaping could be undertaken to further screen parts of the development. It has subsequently been accepted that the scope for such screening is limited given the importance of ensuring that any additional landscape planting is

consistent with the present nature of vegetation which contributes to the open landscape.

213. The proposed battery containers would be painted green and located within a narrow, elongated field such that they would be relatively close to boundary hedgerows to the north and south. Although their utilitarian design would not be aesthetically pleasing, they would be some distance from public vantage points, particularly those points that would offer views of the full row of 160 units. The proximity of the hedgerows to these rows would offer significant screening that would soften their impact, without being so close at to jeopardise the health of the vegetation.

214. From close quarters the topography of the area means that receptors would only see relatively small elements of the development from most vantage points. Vegetation and the panels themselves would generally screen views of other panels that would be at a similar height. More elevated vantage points are provided from the first-floor openings of some of the nearest dwellings and also from the railway bridges that are close to the two northern corners of the site. The impact from the first-floor views, by receptors that are sensitive to such effects, would only offer a slightly more expansive viewpoint and given their separation distance would not result in an unacceptable impact on residents.

215. The views available from the railway bridges offer vantage points that provide the most extensive views over the site. Most of the structures that would be visible would be seen as pockets of development enclosed and partly obscured by field boundaries. The closest fields to Hawse Lane would offer relatively close-up views of the solar arrays from a short section of Hawse Lane as it drops down from the top of the bridge. As the elevation reduces the extent of the development that would be visible also reduces but the arrays in the roadside fields would remain in clear view albeit somewhat softened by reeds and other roadside vegetation.

216. Most receptors that use the railway bridges would be travelling in cars and would be moving fairly quickly while drivers in particular would have their attention focused ahead. Such receptors are not regarded as sensitive to landscape impact, and the view they would gain would be short-lived. However, as many local residents have explained and I observed during my visit, the roads are also used recreationally by walkers, cyclists and horse riders. Given the purpose of their journey and the slower speed at which they pass through the landscape they would be more sensitive to the visual impact of the development. Whilst recreational users on these sections of the local road network would be aware of the presence of the development, such views would be mainly of small parts of the development at any one time. They would be seen in the context of the road, and at times rail, traffic and in the presence of the electricity pylons. During peak construction times the visual and noise disturbance would significantly reduce the enjoyment of such routes, but thereafter the limited visibility of the development seen in a landscaped context, would not significantly affect the receptors ability to enjoy the tranquillity and rural character of the area and, in so doing, to benefit their health and well-being.

217. The All Wales Coastal Path which at its closest is some 400m from the site is identified in the LDP as an Important Recreational Route. In this area the path is elevated above natural ground levels as it follows the sea defence wall. The LVIA includes an assessment from several viewpoints along the path. Whilst some objectors have queried the assessment of the impact on users of the path, my visit revealed that intervening vegetation provides an effective screen along most of the nearby section of path. The most notable exception is that identified in the LVIA which includes

viewpoint 4. From this section parts of the development would be visible. However, because receptors would be at a similar height to the site only elements of the foremost arrays would be likely to be seen. The intervening distance would mean that the impact would not be intrusive or discordant.

218. Another important recreational route nearby is the National Cycle Route 88 a part of which follows Ty Mawr Lane to the north of the site. I observed use of this route by several cyclists and pedestrians. As viewpoint 2 shows, the separation distance combined with the slightly elevated intervening railway line and vegetation screening means that the development would not be readily visible.

219. There are no public rights of way that traverse the site but there are several that run nearby within the same low-lying landscape, including one that runs parallel with, and to the west of, Broadway. The extent of intervening vegetation means that any views of the development from any such route would have no more than a modest visual impact.

220. Views of the development from other sections of highway or by users of the railway line would be short lived and would be sufficiently mitigated by the screening effects of vegetation, such that the impacts would be modest.

221. The Council has expressed concerns that there are no plans to replace the hedgerows and trees that would be lost in the work to make the Lapwing Compensation Land a more suitable habitat. At the hearing the Council accepted that an expectation of replacement planting as set out in its SPG was a County wide one and that, in the context of the particular character of the Wentlooge Levels, landscaping works that were consistent with promoting habitat improvement did not give rise to the normal replacement measures.

222. PPW[47] advises that developers should, wherever possible, consider how to avoid, or otherwise minimise, adverse impacts through careful consideration of location, scale, design and other measures. The applicant explains that one of the measures deployed to minimise the visibility of the solar arrays and associated equipment from the nearest public vantage points is to avoid using the fields adjacent to the public highways that bound much of the site. This general approach to the layout has not been closely followed in relation to Hawse Lane where some of the fields that are closest to the road would contain solar panels. However, when the scheme is considered in its entirety, I am satisfied that it is generally compliant with this policy advice.

223. In terms of cumulative impacts, whilst I note the concerns raised by objectors to the incremental impact of several large solar arrays on the Levels, for reasons I have already explained the main effects of this scheme are on its immediate surroundings. Any viewpoints that are sufficiently distant to take in this site and other large solar farms would provide panoramic views that would take in significantly more prominent developments including large settlements. Within these vistas the solar arrays would generally not be readily noticeable. I am satisfied that there is sufficient separation distance between this scheme and all the other projects assessed, including non-solar developments, to ensure that there would be no unacceptable cumulative effects on landscape character or visual amenity.

[47] Paragraph 5.9.21

224. For the above reasons I find that the character and visual amenity of the landscape would not be significantly affected. The proposal would not have an unacceptable adverse impact on the surrounding landscape and thus aligns with criterion 1 of Future Wales policy 18. The scheme would not conflict with the protective provisions of policy CE10 of the LDP which is that renewable energy development which affect the Gwent Levels should not cause significant adverse effects.

225. The scheme is broadly in accordance with LDP policy SP5 as it is an appropriate one for the countryside and respects landscape character and is appropriate in scale and design. As its design shows a clear appreciation of the special features of the SLA, and includes measures to protect and enhance those features, it aligns with LDP policy SP8. In line with LDP policy GP5 it would not lead to an unacceptable impact on landscape quality and, as it would not be detrimental to the character or appearance of the surrounding area, it would accord with LDP policy GP2.

Historic Landscape

226. The Gwent Levels has been subject to human activity for at least 6000 years, with land reclamation recorded since the Roman period. PPW confirms that historic landscapes and archaeological remains can constitute historic assets, and explains that the planning system must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. Among the specific objectives in this regard is to conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy, and to protect areas on the register of historic landscapes in Wales.

227. In response to identified deficiencies in the applicant's initial assessment of potential impact on heritage matters additional information was provided in the October bundle including a Desk Based Assessment (DBA)[48].

Designated Historic Assets

228. The site lies with The Gwent Levels Historic Landscape of Outstanding Historic Interest in Wales (LOHI). The area comprises discrete and extensive areas of alluvial wetlands and intertidal mudflats and represents a 'hand-crafted' landscape having been recurrently inundated and reclaimed from the sea since the Roman period. The areas have distinctive patterns of settlement, enclosure and drainage systems belonging to successive periods of use. The LOHI consists of 21 character areas which reflect locally distinctive features. The site lies within 2 of these: Western St Brides (HLCA 16) - 'simpler landscape, laid out within a framework of elements surviving from the Roman landscape'; and Maerdy (HLCA 21) - 'Regular landscape of medieval/post-medieval date in low-lying back-fen'. It lies adjacent to the Llanbedr (HLCA 17).

229. The Western St Brides HLCA has suffered from modern disturbance of its landscape character through agricultural practices and the construction of a golf course and fishing lakes. The proposed solar farm lies on the western side of the area which is described as the least well-preserved part of the HLCA. The Maerdy HLCA has been impacted in recent times by agricultural practices and the railway line severing this part from the remainder of the HLCA.

[48] Doc A3

230. The effect of the proposal on the registered Historic Landscape is the subject of an Assessment of the Significance of Impact of Development on Historic Landscape of Historic Interest in Wales 2 (ASIDOHL). The assessment acknowledges the 40-year lifespan of the scheme and the proposed retention of the main landscape character elements of the site. The more significant direct impacts identified are from the excavation of cable runs and elements of the infrastructure, although these would form a very small percentage of the whole development. Any possible impact on archaeological remains would affect features that are largely not visible and thus make a low contribution to the character of the HLCAs. It is the upstanding historic character remnants (drainage features, footbridges, hedgerow pattern etc) that make the most significant contribution to the landscape value.

231. The greatest impact is on Maerdy HLCA where considerable direct physical and indirect impacts have been identified which result in a severe impact on the overall significance of the HLCA. The overall significance of the impact on 3 other HLCAs, including Western St Brides and Llanbedr, are assessed as moderate with 3 others assessed as slight. Cadw agrees with the findings of the ASIDOHL. The ES describes an overall magnitude of direct impact as moderate and indirect impact as slight. However, these are derived from calculating the average score taking into account each of the HLCAs that would be affected which means that those HLCAs least affected reduce the overall impact score. At the hearing Cadw confirmed that it is the impact on individual HLCAs that provide the clearer understanding of impact.

232. In its initial response to the application Cadw provided a list of the designated historic assets within 3km of the site. The applicant's heritage DBA assessed the impact on assets within a 4km study area, including scheduled monuments, listed buildings, conservation areas and a Registered Historic Park and Garden.

233. There are no designated assets that would be directly affected by the scheme. Recognising the importance of setting to the way that historic assets are understood, experienced and appreciated the applicant has assessed whether there would be any effects on the setting of any assets within the study area, which included 8 scheduled ancient monuments and 50 listed buildings of which 4 are Grade I and 6 Grade II*. The approach taken is consistent with TAN24: The Historic Environment and the related guidance produced by Cadw.

234. Based on the Zone of Theoretical Visibility map the assessment concludes that the scheme is not capable of impacting on the setting of most designated assets in the study area. The assessment considers 3 listed buildings and 4 scheduled monuments in more detail. It concludes that there would be an effect on the setting of 2 assets: the Pen-y-Lan Camp Iron Age enclosure, a scheduled monument; and, one listed building, the Grade II Gelli-ber Farmhouse, that have inter-visibility which could cause potential harm to their significance. The former is situated on a hilltop some 2.9km to the northwest of the site. Whilst the development would be visible it would be seen in an extensive view which includes many more prominent, modern, man-made features. Gelli-ber Farmhouse is within 1.3km of the site and at a similar elevation to the site. The extent of any visibility would thus be limited and seen in the context of the railway line and the pylons.

235. At hearing 1 both Cadw and the applicant's specialist confirmed that, whilst there was some limited effect on the setting of these 2 assets their historical significance would not be harmed, and thus the potential mitigation measures that the applicant had previously mooted, would not be necessary. Cadw has confirmed that it concurs with

the applicant's assessors that there would be no significant impact on any of the designated assets. Informed by my site visit, I agree.

Archaeology

236. The site is designated in the LDP as an Archaeological Sensitive Area. The Gwent Levels has a proven, possibly quite vast, potential for extensive, well-preserved, buried, waterlogged, archaeological and palaeo-environmental deposits surviving from earlier landscapes[49]. This applies to the site as it does to much of the Levels.

237. In response to the concerns raised by the Glamorgan-Gwent Archaeological Trust[50] the applicant provided additional information in its DBA[51]. This was informed by site visits and consulting available records, including from previous excavations, and other sources.

238. Lidar data shows the clear remains of the drainage features that would be expected in the area. Its marshy nature means that it is unlikely to have historically been used for occupation. There is the potential that a former Roman road (Wheel Lane) diagonally crosses the site, and there is the possibility of a few other features of interest within the site including a medieval enclosure. The paleo-environmental remains are of local to regional importance while any features of Iron Age, Roman and medieval date would be of regional importance.

239. The scheme would give rise to relatively modest levels of ground disturbance and proposes archaeological mitigation measures which would include controlling the nature and location of excavations and a watching brief targeted at areas of excavation for cable trenches, as has been used on the Llanwern solar farm. The watching brief could also address palaeo-environmental remains providing an understanding of the various layers of underlying deposits. Taking into account the need for the development and the importance of the potential archaeological resource, this opportunity to preserve by record architectural features is consistent with PPW[52] and TAN24.

240. The excavation works and the driving of screws into the ground to secure the panels, to a depth of between 1 and 1.5m[53], is unlikely to impact on ground water levels but there is a possibility of localised oxygenating of the underlying levels that could disturb anaerobic conditions and therefore the preservation of waterlogged remains within them. As GGAT points out the pincushion effect into these deposits would extend further than the piles themselves and has the potential for significant long-term damage. However, in the context of the extensive Wentlooge Levels the impact would be small.

241. The conditions would enable the means of construction to be agreed so that direct impacts would be minimised. The watching brief give rise to the potential that any excavation that impacts on artefacts or other features would provide valuable archaeological information. The recommended conditions would also require a baseline topographical survey to be undertaken, which would inform the protection of the historically significant ground profile of the ridge and furrow drainage system.

[49] Register of Landscapes, Parks and Gardens of Outstanding Historic Interest in Wales, 1998
[50] GGAT consultation response dated 28 July 2020
[51] Doc A3
[52] Para 6.1.25, PPW
[53] Doc A17

242. To conclude on this main consideration I am satisfied that an archaeological assessment has been undertaken in compliance with LDP Policy CE6, and that it demonstrates that, with suitable mitigation secured by the recommended conditions, the impact on the archaeology of the site is acceptable.

243. As the scheme would not protect, conserve or enhance the Gwent Levels Landscape of Outstanding Historic Interest it is in conflict with LDP Policies SP9 and CE4 and is also in conflict with PPW which seeks to protect registered historic landscapes[54]. Whilst the main impacts would be reversible, it would exist for 40 years. This is the equivalent of 2 generations, a significant period during which an appreciation of the outstanding historic quality of the landscape would be affected. It is thus a significant harmful impact albeit that in relation to the Gwent Levels the extent of that harm is relatively localised.

244. As the scheme would not have a materially detrimental impact on any other designated historic asset, save for its impact on the LOHI it would otherwise align with LDP Policy SP9 which seeks that proposed development conserve, enhance and manage recognised historic sites.

Ecology

245. PPW identifies the planning system's key role in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms would be in place to both protect against loss and to secure enhancement. Addressing the consequences of climate change should be a central part of any measures to conserve biodiversity and the resilience of ecosystems. It identifies the importance of supporting biodiversity, ensuring the protection of statutorily designated sites and protected and priority species, and to secure the enhancement of, and improvements to, ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks[55]. Policy 9 of Future Wales identifies the importance of enhancing biodiversity and the resilience of ecosystems.

Designated Sites

246. The vast majority of the site is undeveloped but is in active agricultural use. The whole of the site lies within the Gwent Levels St Brides SSSI and, to its west, it adjoins the Rumney and Peterstone SSSI within which the Lapwing Compensation Land lies. The Wildlife and Countryside Act, as amended by the Countryside and Rights of Way Act 2000, places a duty on all public bodies (including local planning authorities) to take reasonable steps to further the conservation and enhancement of the features by reason of which a SSSI is of special interest. Whilst statutory designation of a site does not necessarily prohibit development, it should be refused where there would be adverse impacts on the features for which a site has been designated[56]. There is a presumption against development likely to damage a SSSI[57].

247. The SSSIs citation states that the Gwent Levels are rich in plant species and communities, many of which are rare, and that the aquatic invertebrate fauna is very diverse with many nationally rare or notable species being present.

[54] Para 6.1.20, PPW
[55] Para 6.4.3, PPW
[56] Para 6.4.14, PPW
[57] Para 6.4.17, PPW

248. The solar arrays and other apparatus would be sited on the grassland areas of the site. Whilst the nature of the grassland varies across the site it is generally species poor which is a consequence of farming activities, particularly grazing. These grassland areas do not contain listed features of the SSSIs. In contrast, the vegetation within drainage ditches and adjacent areas that bound the fields is species rich. This reen and ditch habitat is one of the special features of the SSSIs and provides a habitat for 2 of its special features: insects and other invertebrates; and the shrill carder bee. Other habitats that contribute to the special wildlife interest of the area include green lanes, hedgerows and flower-rich ditch banks which are important for a wide range of species.

249. The scheme has been designed to minimise direct impact on these reen and ditch areas. Proposed trackways seek to utilise existing crossing points that link the fields but where new crossings would be required for vehicles or for cables they would be controlled to ensure that the functioning of the drainage network is not affected and that any impact on the habitat it provides is minimised.

250. The layout of the proposed solar arrays allows for buffer zones of 12.5m for the reens and 7m for the ditches and field drains. These areas would effectively extend the valuable reen and ditch habitat and would be subject to enhancement measures and long-term management. These measures include removing sections of hedgerows to allow more light to penetrate and thereby improve the water environment. Following work to open up the reens the scheme would secure a 7-year reen management programme which would maintain their structure and improve the habitat for qualifying aquatic invertebrates. Hedgerows to be removed would be only on the south side of the watercourses where there would be existing hedgerows that would be retained on the other side of the reen or ditch. Such works would include mitigation measures to avoid any impact on species, including dormice and nesting birds.

251. The proposed selective removal of vegetation and de-silting of the watercourses is part of good management practice, which benefits the functioning of the drainage system as well as the aquatic environment. I am mindful that there are already plans to secure improvements to the drainage network on part of the site and that the Living Levels project is actively promoting and supporting such initiatives. Nonetheless the extent of the improvements that could be secured through the scheme, in terms of its physical extent and 40-year time scale, far exceeds that which is likely to otherwise be realised.

252. The enhancement of the reens and ditches forms part of a suite of proposed ecological improvements that would be secured by the LEMP which would control the development for the duration of the project. Concerns have been raised over detailed aspects of the submitted LEMP but it provides sufficient information to demonstrate its potential to be refined to effectively serve its intended purpose. Its precise content would be for the developer to address when seeking its approval by the Council, in consultation with NRW and other specialist advisers, prior to any development commencing. One issue to be agreed would be the detailed measures to enhance the watercourse environment such that it provides shallow margins for aquatic invertebrates and the provision of steep sided banks for water vole. The means of ensuring the suitable poaching of water margins would also need to be agreed. The LEMP would provide a means of ensuring that a range of objectives would be met, including maintaining the favourable status of the notified features of the SSSI and enhancing connectivity within and across the site.

253. The FCA describes the benefits to water quality that would arise from the cessation of more intensive agricultural activities which can give rise to exposed soil leading to silt-borne surface water run-off entering the drainage system. A reduction in the use of pesticides and fertilizers would also benefit water quality. NRW confirmed at the hearing that that it does not share concerns of others over the potential for the scheme to give rise to plastic and metal pollution, and I have no reason to disagree. The scheme would allow soil structure to improve and grassland cover to be maintained to the benefit of rainwater management.

254. Whilst noting the surface water benefits that would arise during the operational phase of the development, the construction and de-commissioning phases would result in activities that could result in accelerated surface water run-off with the potential for silt and pollutants to enter the drainage network. This would not only harm the special features of the SSSIs but also has the potential to impact on the Severn Estuary SAC and SPA. This is recognised by the applicant, and I am satisfied that through the adoption of good practice techniques to prevent contaminated water entering watercourses this risk can be effectively controlled. This would be secured through the recommended condition to require a CEMP.

255. In response to the application NRW commissioned a specialist ecohydrological impact assessment[58] of the scheme. It has focussed on the SSSI interest features which have water-related environmental supporting conditions. These are the plant and invertebrate species and assemblages which are associated with the reens and ditches. Subject to adequate controls over the development no significant hydrological impacts are identified including in terms of the water quality, land drainage or run-off rates. The findings are consistent with those of the applicant's specialist[59]. A water monitoring requirement would be secured as part of the LEMP.

256. Local residents are concerned that the siting of battery storage containers would lead to extensive soil compaction. The applicant has confirmed that they would be sited on a frame supported by legs such that any soil compaction would be minimal. A porous surface would facilitate drainage. Such details can be secured by condition.

257. The works proposed on the Lapwing Compensation Land to make the area suitable for overwintering and nesting lapwing involves removal of sections of hedgerows, including trees to create a more open environment. This would also provide an opportunity to improve the habitat for the shrill carder bee and to return other features of the SSSI (reen and ditch habitats, aquatic invertebrates and other invertebrates) to a 'favourable condition'.

258. Thus, I consider that the scheme's design, supplemented by detailed controls over its construction and future maintenance and management that would be secured by means of the recommended conditions, would ensure the improvement of the habitat of the affected SSSIs and their special interest plant species and invertebrates.

259. Within some 500m of the site lies the Severn Estuary SPA and Ramsar site and the Severn Estuary SAC is 2km or so distant. The 'qualifying interest features' of the SPA are detailed within the 'Regulation 33 Advice' published by CCW and Natural England in 2009. These are noted to comprise a range of bird species within three 'supporting habitats': intertidal mudflats and sandflats, Saltmarsh and hard substrate habitats. For the SAC the habitats types and species listed include an overarching "estuaries"

[58] Doc IP9
[59] Doc A8

feature within which subtidal sandbanks, intertidal mudflats and sandflats, Atlantic salt meadows and reefs and 3 species of migratory fish are defined as both features in their own right and as sub-features of the estuary feature. The qualifying interest features of the Severn Estuary Ramsar Site overlap with those of the Severn Estuary SPA and the SAC in order to facilitate the development of integrated objectives across the designations.

260. For reasons explained in relation to the Habitats Regulations procedure below I am satisfied that, provided that the suggested conditions are imposed, the scheme would not harm any of these internationally important sites.

261. Within 3km of the site there are 6 non-statutory sites designated for their nature conservation value, a Gwent Wildlife Trust Reserve and 5 SINCs. They have been included in the assessment, but no significant effects identified.

Protected Species

262. Surveys undertaken on and around the site have identified the presence of protected and priority species. In some instances, where presence has not been confirmed but the potential for presence has been identified, such presence has been assumed[60]. The identified species include badgers, otters, bats, water vole, grass snake, common frog and toad, great crested newt, western European hedgehog, weasel, European eel, brown-banded and shrill carder bee.

263. The SSSIs of St Brides and of Rumney and Peterstone have not been designated for their ornithological interest. In the context of the Severn Estuary SPA, the Ramsar Site and SSSI, the site supports populations of European importance of Bewick' Swan and several migratory species and supports populations of national importance.

264. Adopting the precautionary principle, the site has been considered as of local importance for lapwing and skylark breeding. Other breeding birds likely to use the site would be associated with the hedgerows and drainage network. The site is also considered of local importance for Cetti's Warbler, Peregrine Falcon and Barn owl.

265. The site provides a suboptimal habitat for the majority of water birds associated with the SPA and Ramsar site and observations of qualifying species were in very low numbers, and relatively low numbers of assemblage species, other than for lapwing where significant numbers in winter were recorded. In response to the concerns of the RSPB over the timing of the breeding bird surveys in relation to lapwing the applicant has explained the extent of the surveys and the methodology used[61] to demonstrate a robust approach.

266. The LEMP proposes a mitigation strategy to avoid, minimise and compensate for biodiversity loss and ensure a net gain for biodiversity. NRW has confirmed that it is satisfied with the information provided by the applicant in support of the application as supplemented by additional information, subject to the imposition of recommended conditions.

267. The siting of the solar arrays on the grassland raises particular concern in terms of the potential to impact on birds, most notably lapwing, and certain invertebrates, particularly the shrill carder bee that feed and nest on grassland. Whilst the extent to

[60] Chapter 11 of ES, and associated Appendices
[61] Doc A2

which the fields are grazed means that their value as such a habitat is limited the potential impact has required particular consideration.

268. The shrill carder bee is a notified feature of both St Brides and the Rumney and Peterstone SSSIs and there are other aquatic and terrestrial invertebrates cited and recorded such that the invertebrate assemblage is of national importance. The local shrill carder bee population is also of national importance. It forages and nests on open, flower rich grassland. The grasslands on which the panels would be sited is currently not a valuable habitat, however there is concern that the scheme could cause damaging fragmentation of habitat.

269. Area C, which is the land around the ponds, which falls within the application but is not linked to the project, provides a species rich grassland suitable for the shrill carder bee which would not be affected by the scheme. The project proposes a wildflower meadow along the western edge of the site. In response to NRW concerns the applicant has provided additional information in the form of a Shrill Carder Bee Mitigation and Enhancements Strategy[62]. NRW has confirmed that it is satisfied that there are measures that could be secured by condition to ensure that there would be sufficient enhancement of the site's habitat, including connectivity routes and the provision of wildflower belts on the periphery of fields, to avoid any negative impact. The same benefits can be expected to the brown-banded carder bee that is also present and is also a priority species listed under Section 7 of the Environment (Wales) Act, 2016.

270. The scheme would result in the loss of some 39ha of open fields that would be suitable for foraging by wintering lapwing. This is resource is of county significance despite the availability of numerous other fields in the locality. Over 2 years of winter surveys the highest recorded lapwing presence was 300 with the second highest at 170. To compensate for this loss the project proposes that hedgerows and trees would be removed, and grassland suitably managed to create an open area suitable for lapwing within the 22.1ha of off-site compensatory land. That would be secured through condition on land that the applicant has confirmed is within its control. An objector questions the suitability of the land because the overhead electricity lines provide a perch for potential predators. However, there is a similar situation on the site itself. NRW considers the mitigation measure to be acceptable, and I agree. The concerns expressed by the RSPB are focussed on the need for additional detail to inform an effective management plan which can be secured through the recommended conditions.

271. In response to concerns that invertebrates may lay their eggs on the solar panels mistaking them for a body of water, the applicant has demonstrated that the key invertebrate species that are on site do not include species, such as mayflies, that lay eggs on open water surfaces. Moreover, the aluminium frames of the panels would be likely to avoid this risk. Whilst concern has been raised at the danger of birds striking the panels there is no compelling evidence to suggest that would pose a significant risk to local populations[63].

272. The removal of sections of hedgerows within the application site and the Lapwing Compensation Land would result in the loss of habitat suitable for dormouse commuting/foraging. In response to a concern raised by NRW[64] the applicant

[62] Doc A21
[63] ES, para 12.9.8
[64] NRW letter dated 7 December 2020

commissioned a Dormouse Mitigation Strategy[65] for this compensation land which supplements the Ecological Impact Assessment[66]. The internal hedgerows within this land are suboptimal for dormice and it is proposed that peripheral hedgerows would be enhanced to improve connectivity across the land. A dormice survey of the application site revealed low numbers, but the survey did not extend to the compensation land and, whilst their presence is considered unlikely, the precautionary principle has been adopted and presence assumed. The strategy describes the approach that would be undertaken to carrying out and thereafter monitoring the works. NRW has confirmed that the approach taken is satisfactory. I agree, noting that if dormice are present the developer would require a European Protected Species (EPS) licence from NRW before proceeding, which provides effective protection. This would also be the case in the event that any other EPS was found during the course of the works.

273. The scheme incorporates elements designed to minimise impacts on features of nature conservation value, for instance minimising new tracks and avoiding reens and utilising existing watercourse crossing points. The spaces to be provided between and underneath the solar panels would permit grasses to grow and support low-intensity sheep grazing.

274. As the method of construction would require careful control to minimise any adverse ecological impacts the role of a CEMP and a LEMP, which would be secured by conditions, are particularly important. They would effectively identify periods when certain works cannot take place, for instance the removal of hedgerows during the bird nesting season, as well as identifying details that would need to be agreed before any works can commence.

275. In addition to the ecological benefits that I have already identified, including those arising from the enhancement, maintenance and management of the drains, reens and grasslands, the scheme would also provide the means of eradicating the 13 non-native invasive species that have been identified on the site and which have a negative impact on biodiversity. These are enhancements that would benefit the land- based and aquatic environments of the SSSIs and much of the species that depend upon these habitats. Their timely delivery would be secured through the recommended conditions.

276. For reasons set out in Annex B, Appropriate Assessment, I have found that the scheme would not affect the integrity of the sites that form part of the National Sites Network. For the same reasons I am also satisfied that the integrity of the Ramsar site would not be affected. Thus, the scheme aligns with criterion 3 of policy 18 of Future Wales.

277. For reasons explained above I consider that the scheme would cause no unacceptable impacts on national statutory designated sites for nature conservation (and the features for which they have been designated), or protected habitats and species, thereby satisfying criterion 4 of Future Wales policy 18 and LDP policy GP5. The measures beneficial to biodiversity that have been incorporated within the scheme and those that would be secured through the recommended conditions are significant, as is the extent to which conditions would avoid or mitigate any potential harmful impacts. Accordingly, and mindful of the Section 6 duty[67] I consider that, in line with

[65] Doc A13
[66] Doc A6
[67] Section 6 of The Environment (Wales) Act 2016 imposes an enhanced biodiversity

criterion 5 of policy 18, the proposal includes biodiversity enhancement measures to provide a net ecological benefit.

278. Several objectors raise concerns over the cumulative ecological impact of the scheme with other projects, including other large solar farms that have been developed or are in the pipeline within the SSSIs of the Gwent Levels. However, given my findings on the positive impact of this proposal on the SSSIs and the distance separating it from any other solar farm, I consider that there would be no harmful cumulative effects. Some objectors suggest a need for a moratorium on further solar farms of the Gwent Levels but, as this is a matter for policy makers, it is outside the scope of this report.

279. The importance of controlling the development through conditions to my finding on the scheme's acceptability on this main consideration will be clear from the foregoing. Objectors have questioned the efficacy of such conditions and their long-term enforceability by the Council because of limited resources. I shall deal with the enforceability in the section of my report on conditions. With regard to the former concern, I am satisfied that the outstanding matters to be agreed prior to the discharge of certain conditions are ones of detail that would be considered within a framework which has been sufficiently established to demonstrate that conditions would be capable of safeguarding ecological interests. The Council has confirmed that in discharging such conditions it would be advised by its own ecologist and NRW and any other specialist bodies that may be appropriate. The applicant accepts that the scheme would not be able to proceed until such time as details sufficient to satisfy the Council have been provided.

Habitat Regulations Assessment

280. Regulation 63 of the Conservation of Habitats and Species Regulations 2017, as amended, imposes a requirement to consider the potential effects of a proposed development on the National Site Network, in this case the Severn Estuary SAC and SPA.

281. The application was accompanied by a Shadow Habitat Regulations Assessment (sHRA) which has undergone several iterations as a result of advice received, particularly from NRW. Contrary to the view expressed at hearing 2 the applicant has subsequently confirmed that it agrees with NRW that, as some likely significant effects can only be avoided through mitigation measures, it is necessary for the decision maker to undertake an Appropriate Assessment (AA).

282. At Annex B I have set out an AA for the Welsh Ministers. It is based on the sHRA, the advice of NRW including in its role as the statutory nature conservation body, and the comments received by other parties in response to the application. The AA concludes that the scheme, either alone or in combination with other projects, would not have an adverse effect on the integrity of the SAC or the SPA.

Flooding

283. The flat, low-lying site and surrounding area is land reclaimed from the sea which is protected from tidal flooding by man-made sea defences. It is therefore classed as zone C1 on the Development Advice Maps of TAN 15: Development and Flood Risk.

284. PPW, at para 6.6.22, advises that planning authorities should adopt a precautionary approach of positive avoidance of development in areas at risk of flooding from the

and resilience of ecosystems duty, and paras 6.4.5-6.4.9 of PPW expands on what is required

sea or from rivers. Surface water flooding will affect choice of location and the layout and design of schemes and these factors should be considered at an early stage in formulating development proposals.

285. TAN 15 provides more detail including, at paragraph 6.2, that only development that is not highly vulnerable should be permitted within zones C1 and C2 and only if it is justified in that location. Development will only be justified if it can be demonstrated that:

    i. its location in zone C is necessary to assist, or be part of, a local authority regeneration initiative or a local authority strategy required to sustain an existing settlement; or

    ii. its location in zone C is necessary to contribute to key employment objectives supported by the local authority, and other key partners, to sustain an existing settlement or region; and,

    iii. it concurs with the aims of PPW and meets the definition of previously developed land; and,

    iv. the potential consequences of a flooding event for the particular type of development have been considered, and in terms of the criteria contained in sections 5 and 7 and appendix 1 found to be acceptable.

286. There is no dispute that the scheme does not satisfy any of the first three of the above justification tests. However, at paragraph 5.3 the TAN explains that some uses should be treated as exceptions to the general rule in relation to the vulnerability of uses to flooding. These include boatyards, marinas, essential works required at mooring basins, and development associated with canals. They are not subject to the first part of the justification test (as set out in i to iii above) but are subject to the acceptability of consequences part of the test (iv).

287. In the Llanwern solar farm decision (application ref: 3150137) the Cabinet Secretary for Energy, Planning and Rural Affairs accepted the Inspector's finding that the solar scheme under consideration fell within this exception. As the cited site-specific considerations in that case – the availability and proximity to a grid connection, and the high number of hours of sunshine – apply here, I consider that there are robust reasons for locating the development within this zone as an exception to the first 3 justification tests. The Llanwern decision also established the Cabinet Secretary's view that, in this context, solar farms should not be regarded as 'power stations' or as highly vulnerable development, and there is no reason not to follow that approach.

288. In response to the fourth of the TAN15 justification tests, the application has been accompanied by a Flood Consequences Assessment which has been supplemented by an addendum[68]. The assessment includes modelling data which predicts the increase in sea level over the lifetime of the project. To withstand any significant flooding incident the scheme proposes to elevate all the solar panels, battery storage units and other apparatus above the predicted sea water flood level. As the uplift would be achieved by the use of supporting legs, the site's storage capacity of flood water or its flow across the site would not be materially affected. Inundation speeds from a breach of sea defences would not be rapid and would not represent an unacceptable risk to site workers.

[68] Doc A8

289. Local residents attest to incidents of flooding in the area, and aerial photographs have been provided showing flood waters in December 2020[69]. It is evident that this flooding is caused by surface water when, during prolonged periods of wet weather, the capacity of the drainage system is exceeded and localised pooling of water occurs. This is an issue unrelated to the risk of sea defence flooding. Although it can cause problems to local residents, property owners and highway users it would not occur to a depth similar to that which has been modelled in the FCA in the event that the sea defence is breached. Such localised flooding is of course a more likely occurrence and may restrict construction activities for short periods. There are measures proposed to ensure that such incidents would not impact on the operation of the solar farm.

290. I am satisfied that the proposal would not exacerbate localised flooding. The solar panels would be installed with expansion joints which would allow water to drain through these gaps. As the water would fall on land which would be grassed and lightly grazed run-off rates can be expected to be lower than is presently the case. The clearing of vegetation and silt from the reens and ditches, some of which are in significant need of such work, would also improve the drainage system.

291. For the foregoing reasons I conclude that the scheme is consistent with flood risk policy set out in PPW and TAN15. It follows that it is also consistent with LDP policy SP3. As the scheme has been designed to withstand the predicted climate change effects on flooding, and demonstrates that the risk and consequences of flooding could be acceptably managed, it complies with LDP policy GP1.

Traffic and Highway Safety

292. The only proposed access to the site for construction traffic is on to Broadway on the western boundary of the site. The application as submitted identified 2 routes to the site from the M4 motorway for HGVs. The main route involves approaching the site from the west, utilising the B4239 road from Lamby Way on the eastern outskirts of Cardiff. The second route, which was identified as necessary only for abnormal loads, was proposed via Marshfield to the north of the site. During hearing 3 the applicant accepted that the requirement to accommodate abnormal vehicles was a legacy of a previous iteration of the project which had included wind turbines. It was confirmed that the application scheme does not require the transportation of abnormal loads, and therefore all HGV would use the western route.

293. The clarification of the HGV route means that the draft Construction Traffic Management Plan would need to be revised. In agreeing a Traffic Management Plan (TMP) the Council would have the opportunity to pursue the detailed matters that cause it concern, for instance undertaking a road condition analysis pre- and post-construction so that any damage to the highway that may be caused can be identified.

294. The timing of the construction work would require careful planning to align with various constraints. Whilst such considerations and the need to avoid periods when the site is particularly wet, may restrict on-site operations, the applicant is confident that such considerations would have limited impact on the transportation plan. That plan identifies a period of 12 weeks with the greatest volume of traffic expected in weeks 8 and 9 when 23 daily HGV movements are estimated, which equate to 3 movements per hour. It is accepted that this period might need to be extended, but in doing so the daily volume of traffic would reduce.

[69] Doc IP16

295. During hearing 3 the applicant confirmed that the traffic movement figures did not include the transportation of 160 battery containers. These could be undertaken concurrently with the transportation of the panels or afterwards. This would be a detail to be agreed and incorporated in the TMP required by condition.

296. There would inevitably be some disruption to local traffic during this period. Nonetheless the use of appropriate traffic management regimes, as is commonplace with schemes of this nature, would minimise any difficulties. The affected road network is not heavily trafficked and whilst there would be a degree of inconvenience to users, this would be relatively short lived. Concerns are expressed regarding the proximity of deep drainage ditches to the carriageway and the associated serious accidents that have happened. However, the presence of additional HGVs on these roads, which are wide enough to allow vehicles to pass, would not jeopardise the safety of highway users nor would it exceed the capacity of the road network. The access for construction traffic would meet the appropriate standards in relation to visibility splays based on the measured speed of traffic[70] and on-site parking would be a requirement secured by condition. It would thus accord with LDP policy GP4.

Benefits of the Scheme

297. The scheme is estimated to produce sufficient energy to power up to 32,525 homes[71] over its operational lifespan and to displace some 53,750 tonnes of CO_2 a year and 2,150,000 tonnes over the life of the scheme[72]. This represents a substantial contribution to the production of energy from a renewable resource and to the reduction in greenhouse gas emissions. Such a contribution is significant in the context of the Welsh Government targets and its commitment to address the climate emergency.

298. The battery storage facility provided by the proposed container units would ensure that the supply of energy generated by the panels can be controlled to reduce the miss-match between peak demand and supply. The benefits of an increased use of energy storage to provide a balance in this respect is recognised in PPW.

299. Future Wales policy 17 confirms Welsh Government's strong support to the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs. It explains that in determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the need to meet Wales' international commitments and Welsh Government's target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency. Whilst some objectors question the value of the scheme's contribution to the nation's renewable energy production there is no certainty in their suggestion that targets would be met without the development of the site.

Other Considerations

300. In addition to the above main considerations, numerous other concerns have been raised, the main ones are addressed below.

[70] Doc A2
[71] Doc A17
[72] These figures are set out in the Planning Statement. The applicant has subsequently revised down the estimate of the electricity generated from an output sufficient to power 37,500 homes to 32,525 homes. It follows that the CO_2 figures should be adjusted by a similar proportion.

Site location, selection and alternatives

301. The application site has been chosen because of a combination of reasons[73] including the high number of sunshine hours; that the agricultural land is not classified as 'best and most versatile'; its owners are willing to release land for the proposed development; and, the availability of a sufficiently large site to allow the economies of scale which would make a scheme viable. The essential attribute of the site, and the one which ties it to the immediate area, is its proximity to 132 kV power lines with the capacity to accept the electricity which would be generated.

302. In accordance with LDP policy CE10 the site search process first considered the availability of previously developed land but as those identified as available were advertised for commercial use they were deemed to be economically unviable. The physical capacity constraints of available rooftops means that they are not a viable alternative to the scale of the development proposed.

303. The land has been shown not to be the best and most versatile land and is thus outside the protective provisions of PPW in relation to agricultural land.

304. The site lies in an area classed as countryside in the LDP and where new development is strictly controlled. As the proposal is one which is appropriate in the countryside, and would respect in scale and design the landscape character and biodiversity of the area, it would comply with LDP Policy SP5.

305. In the context of LDP policy CE9 I consider that the generation of a significant amount of renewable energy would be a considerable benefit and could be described as an exceptional need. Although in a C1 flood zone the proposed development would not be at risk itself nor exacerbate risks from erosion, flooding or land instability. As the application has established that the proposed development would be required in this coastal location to meet an exceptional need which cannot reasonably be accommodated elsewhere it would be consistent with policy CE9.

306. The 'Renewable and Low Carbon Energy Assessment' was a study into the potential for low carbon energy within the areas of Newport and Torfaen councils. It was not intended to be used to assess individual planning applications for stand-alone renewable energy generating systems and thus carries little weight in the consideration of this case.

307. As there are no over-riding environmental or amenity considerations the proposed solar farm can be considered favourably, consistent with LDP Policy CE10. This policy also states that large scale proposals may be more appropriately located outside defined settlement boundaries if no appropriate brownfield sites exist, criteria which are both met in this instance.

Glint and Glare

308. As Chapter 14 of the ES makes clear the intensity of reflection from panels is relatively low given that they are designed to absorb light, and the reflection would be experienced at the same time as direct sunlight. It concluded that, as there would be no significant impact, there was no requirement for mitigation. Both the original and revised Glint and Glare (G&G) studies identify only a modest potential impact on nearby residents. The original study does not take into account the screening effect of existing vegetation and identifies a moderate impact. It suggests in one passage

[73] Applicant's Site Selection Sequential Test.

that consideration should be given to the potential for additional screening and, in another, that mitigation should be implemented. However, Appendix F of the same document explains that only in circumstances where solar reflection would last for more than 60 minutes a day for more than 3 months should mitigation be implemented.

309. The revised Study takes into account the presence of existing screening but, I agree with objectors, that the continued presence of some of that vegetation cannot be relied upon especially given the likelihood that drainage management routines may remove vegetation that presently provide some screening. Both versions identify 5 dwellings that would experience some reflected light from the panels. It would occur only when weather conditions permit and would be relatively short lived, potentially lasting up to 15 minutes. The revised study estimates this to be 10 minutes because of the screening effect of vegetation. The effect of reflected light, which cannot be mitigated in this instance, is likely to be readily visible to residents, particularly from first floor openings. However, it would only be seen during bright clear days and would be short lived. Such an effect would not give rise to unacceptable living conditions.

310. Drivers would not be directly facing the reflected light and any views towards it would be towards the sun. I have no reason to disagree with the assessment of the impact as low in relation to the 3 public highways that surround the site.

311. The presence of hoods[74] would protect the visibility of railway signal lights and for reasons explained in the study, any reflected light experienced by drivers would not affect their ability to perform their duties safely. Network Rail has been notified of the scheme and has offered no objections.

312. There is no persuasive evidence to suggest that the safety of any aircraft, including a helicopter that may regularly cross the site, would be compromised. Notwithstanding the deficiencies identified by objectors of the applicant's assessment, I am satisfied that whilst some receptors would be exposed to the effect of reflected light, any such effect would not undermine safety nor would it unacceptably affect local residents.

Residential Amenity

313. In addition to the potential effects of reflected light and visual impact on the living conditions of local residents which I have already considered, concerns have been raised in relation to noise and disturbance. The noise assessment establishes that there would be no material noise impact during the operational phase. There would be some disturbance during the construction phase but the proposed CEMP provides a mechanism for avoiding any unacceptable impacts, including in terms of noise, dust, light pollution and flooding, thereby complying with LDP policies GP2 and GP7. There is no evidence that the scheme would lead to any other impacts on the health of local residents while concerns over devaluation of property is not material to a planning decision.

314. The applicant explains that the developer would be obliged to ensure the safe installation of all apparatus to satisfy insurance requirements. There is no evidence to suggest that the scheme would lead to increased crime in the locality whilst on site security would be a matter for the developer. There is no evidence that any effects

[74] Applicant's photographs of hoods

on local businesses is such that it would lead to a harmful impact on the local economy.

The Living Levels Landscape Partnership

315. The Living Levels Partnership Area extends over the Gwent Levels. Its broad aims include: to restore, enhance and celebrate the natural heritage of the Levels; and to improve connectivity of the landscape to enhance community and visitor experiences and develop the Gwent Levels as a destination. For reasons already set out I have found that the landscape, ecology and historic features of the area would not be harmed. It follows that the proposed development would not be contrary to any of those objectives or that it would be detrimental to the initiative as a whole.

Community benefit

316. Several objectors are critical that the scheme would not benefit the local community. Future Wales policy 17 seeks that proposals describe the benefits the scheme would bring in terms of social, economic, environmental and cultural improvements to local communities. The applicant has explained[75], with reference to the experience gained of a nearby solar farm, how the project would provide a range of employment opportunities as well as wider opportunities for spin-off benefits.

317. The applicant has offered Wentlooge Community Council a financial contribution towards local community projects which it explains would be secured via a legal agreement in parallel to but outside the planning process. There is no reference of any offer being made to the Marshfield Community Council whose administrative boundary lies close to the application site.

318. The Government targets for renewable energy includes one gigawatt of renewable energy capacity to be locally owned by 2030 and for new renewable energy projects to have at least an element of local ownership from 2020[76]. PPW[77] explains that local benefits can be justified as mitigation of development impacts through the planning process, noting that developers may offer benefits not directly related to the planning process. In this case the applicant has explained why a community ownership scheme is not a practical option but rather is proposing a community benefit fund. As there is no suggestion that the contribution would be required to mitigate any impact of the scheme on the community no obligation seeking to secure such a contribution has been sought given that it would not meet the tests that section 106 planning obligations should meet[78].

Temporary

319. The applicant explains that current economic considerations are such that the project requires a 40-year operational lifespan to be financially viable. In line with PPW[79] conditions would be imposed to control the decommissioning phase of the project to ensure that the land was restored to an agreed condition. Whilst the impact of most of the work on the site would be reversible some impacts, such as on localised soil layers and archaeological remains, would not be temporary effects. The effects on the ecology of the area that would be secured through enhancement measures and

[75] Doc A12
[76] Page 96 of Future Wales
[77] Para 5.9.26
[78] Welsh Office Circular 13/97: Planning Obligations
[79] Para 5.9.30, PPW

future management can be expected to leave a positive legacy. Concerns have been expressed that the development would not prove to be temporary, or that it would be replaced by other development. Planning permission would be required to realise either scenario and any such application would be determined against the development plan policies and other circumstances prevailing at that time.

Sustainability, placemaking and well-being

320. Policy 17 of Future Wales includes an expectation that proposals should describe the net benefits it would bring in terms of social, economic, environmental and cultural improvements to local communities. These are set out in the application, supplemented by Doc A15. As the scheme would provide on-site transmission of electricity to the grid it aligns well with the aim set out in policy 17 of both minimising the visual impact on local communities of grid infrastructure and reducing the barriers to the implementation of new grid infrastructure.

321. In reaching my recommendation I have taken into account the duty to improve the economic, social, environmental and cultural well-being of Wales, in accordance with the sustainable development principle, under section 3 of the Well-being of Future Generations (Wales) Act 2015. The applicant has assessed[80] the scheme against the 7 well-being goals of the Act. Taking these and the ways of working set out at section 5 of the WBFG Act into account, I consider that my overall conclusions are in accordance with the sustainable development principle through its contribution towards one or more of the Welsh Ministers' well-being objectives set out as required by section 8 of the WBFG Act.

322. Concerns are expressed over the harmful impacts on the world's resource of the production of the panels and the potential harm on carbon sequestration of the construction work. However, the scheme has considered the use of materials and there is no persuasive evidence to demonstrate that such effects or the impact on the site would negate the scheme's considerable contribution to reduce CO_2 emissions.

323. Taking into account the applicant's assessment of the scheme against the 5 national sustainable placemaking objectives, as set out in Figure 5 of PPW, I consider that the scheme performs well against these measures.

324. Policy 18 of Future Wales is of particular relevance in the determination of any DNS application for renewable energy developments. All save one of its 11 criteria have already been considered under the main or other considerations above, including where appropriate, in respect of any cumulative impacts with existing and consented renewable energy schemes. The remaining criterion, which relates to operations of defence facilities and operations, is not relevant to this case.

Conditions

325. The Council's revised suggested list of conditions[81] formed the basis of discussion at hearing 3. The applicant subsequently provided a list of suggested conditions agreed with the Council, NRW and GGAT and which, subject to minor refinements, are set in the list of recommended conditions in Annex A. They meet the tests set out in Circular 16/14: The Use of Planning Conditions for Development Management and are all necessary, mostly to ensure that the development avoids, or where that is not

[80] Doc A15
[81] Doc A23

possible, mitigates as far as is reasonable, the potentially harmful effects of the scheme. Those effects and the scope to mitigate are for the most part identified in the ES and other documentary evidence or were otherwise discussed at the hearings.

326. The standard approved plans condition has been amended. To ensure that the scheme can provide a secure supply of electricity to the grid, thereby maximising the renewable energy benefits of the project, it is reasonable to provide the option to the developer of installing a second grid connection within the application site. The applicant has explained[82] that it is very likely that the second grid connection would be required but considers that this situation may change as a result of technical investigations and commercial decisions prior to construction.

327. The potential impacts of this second grid connection has been fully assessed by the applicant as part of the October 2020 additional information[83]. Thus, the second grid connection is included in the list of approved plans and is subject to a requirement that the developer confirms with the Council which grid connection option it is implementing prior to commencing work.

328. To ensure that the site is properly restored at the end of its 40-year lifetime the approval and implementation of decommissioning works is sought, with a requirement that such works are undertaken earlier should the solar farm permanently cease to operate prematurely. The approval and implementation of a CEMP and a LEMP are required. These would control the construction work and thereafter the site's management. A Traffic Management Plan is also to be agreed and would control HGV movements during construction and a road condition survey is to be agreed before development commences. The battery storage units, telecommunication tower, CCTV and transformer units, grid connection hub and the position of tracks and reen crossings, and surface water management are to conform to details that are required to agreed. Tree felling is controlled and there shall be no external lighting of the site. A programme of archaeological work shall have been secured before work starts. The reasons for imposing each of the recommended conditions are summarised in the Annex and, in most cases, have already been described in this appraisal.

329. As the noise evidence does not indicate that any disturbance would occur and there is no reason to believe that any part of the land is contaminated, the Council accepted that its originally suggested conditions controlling these matters are not necessary. It also accepted that the requirements of other conditions it had suggested are covered within the scope of the conditions that are recommended. I have considered those other matters which representors have suggested should be covered by condition but, as they would not meet the Circular tests, they have not been recommended.

330. Concerns have been expressed over the extent to which detailed matters are to be addressed by the mechanism for discharging conditions. The applicant confirmed that much of that detail would be a matter for a prospective developer, who has not yet been identified, to provide. Whilst these conditions are crucially important in avoiding potentially significant harms, I am satisfied that the details sought would not alter the scheme in such a way as would prejudice the interests of any party. The matters to be addressed are for the most part detailed and technical in nature and as such fall within the specialism of those that would be consulted by the Council to ensure that they are acceptable.

[82] Doc A17
[83] Doc A2

331. Some objectors have questioned whether the Council would have the resources to adequately monitor compliance with the conditions, especially those that would have effect for the lifetime of the permission. As the conditions in question set out clearly what is required and are enforceable, I consider it reasonable to expect that the Council would undertake its duties effectively in seeking to discharge the conditions and thereafter to monitor compliance.

Planning Balance and Overall Conclusion

332. The scheme would give rise to harm to the character of the LOHI. The greatest impact would be to the Maerdy HLCA. Taking into account the relatively localised nature of the impact and that it would be largely reversible, but also mindful that it would be experienced by residents and visitors for a considerable period of time, I afford this harm moderate weight.

333. There would also be harm to the green wedge by reason of its conflict with local and national policy that affords protection against inappropriate development. This harm would be time limited albeit for a significant period and its effect would not undermine any of the purposes of green wedge designation. Against this context I have found that the renewable energy benefits constitute very exceptional circumstances such that the scheme is green wedge policy compliant.

334. The site lies within a national statutory nature conservation designation and close to international designations, and is within local landscape, archaeological and coastal designations, and in C1 flood risk zone. I have found that the scheme's impact in relation to these designations would be acceptable in all respects, subject to the controls that would be required by the recommended planning conditions. The conditions would secure enhancements to important ecological features and would ensure that none of the other matters raised in objection to the proposal weigh appreciably against the scheme.

335. None of my findings in relation to the foregoing matters are materially altered by the inclusion of the proposed battery container units and the secondary grid connection within the project, noting that the former is the subject of a separate consent application and the latter is dealt with by the recommended conditions.

336. The main benefit arising from the scheme would be its contribution to the production of renewable energy and consequential reduction in CO_2 emissions. The on-site storage of power generated from the panels provides benefits in terms controlling the rate of flow to the grid, enabling the peaks and flows of production to be evened out so as to align better with consumption. The scheme would also provide local economic and employment benefits.

337. I afford these benefits considerable weight in the light of the support for such contributions in policies 17 and 18 of Future Wales which sets out Welsh Government's approach to promoting the increased production of renewable energy in a way that seeks to strike an appropriate balance with the protection of other relevant interests. As Future Wales is the most recently adopted part of the development plan and contains the most directly relevant policy to renewable energy projects of national significance, and given that the conflicts that I have identified with the LDP are relatively minor, I conclude that the proposal complies with the development plan.

Recommendations

338. That planning permission be granted for both the main application and the secondary consent application, subject to the conditions attached at Annex A.

Hywel Wyn Jones

INSPECTOR

ANNEX A – Schedule of Recommended Conditions for both Applications

1) The development shall begin not later than five years from the date of this decision.

   Reason: To conform with the requirements of Section 91 of the Town and Country Planning Act 1990.

2) Subject to the requirements of other conditions attached to this permission the proposal shall be carried out in accordance with the following plans:

   - Drawing 429574/01E Site Location Plan
   - Drawing 429574/02F Site Layout Plan OR 429574/02G pursuant to the requirements of Condition 3 of this planning permission
   - Drawing 429574/04D Field Numbering Plan
   - Drawing 1045592/07 Typical Details – Sheet 1
   - Drawing 1045592/08 Typical Details – Sheet 2
   - Drawing 429574/09 transformer station

   Reason: to comply with Paragraph 4.16 of Welsh Government Circular 016/2014 (Conditions).

3) The development will be built in accordance with either Plan 429574/02F or 429574/02G. The plan selected for implementation will be confirmed in writing with the Local Planning Authority prior to the commencement of the proposed development.

   Reason: To facilitate the effective distribution of electricity from the site to the national grid and for the avoidance of doubt as to the option that is implemented.

4) Prior to their installation details of materials, colour, position, foundations, supporting structures, finished levels and elevations of the battery storage units, grid connection hub/s, telecommunication tower, CCTV and transformer units shall be submitted to and approved in writing by the Local Planning Authority. The finished levels shall be in accord with the recommendations of the Flood Consequences Assessment v2, dated 20 March 2020. The storage units and equipment shall be finished in accordance with the approved details.

Reason: to reduce the risk of flooding to the development, protect visual amenity, the special and historic landscape character and to limit ground intrusion in the interests of archaeology, in accordance with policies SP4, SP5, SP7, SP8, SP9, GP5, GP6, CE4 and CE6 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

5) The permission hereby granted shall expire 40 years from the date when electrical power is first exported ('first export date') from the solar farm to the electricity grid network, excluding electricity exported during initial testing and commissioning. Written confirmation of the first export date shall be provided to the Local Planning Authority no later than one calendar month after the event.

Reason: the proposed scheme has a 40 year lifespan and its temporary nature, in part, justifies its visual impact on the special and historic landscape character, in accordance with policies SP5, SP7, SP8, SP9, GP5, CE4 and CE6 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

6) No development shall commence until a Construction and Environmental Management Plan has been submitted to and approved in writing by the Local Planning Authority. The Construction and Environmental Management Plan shall set out details of all on-site construction works; post-construction reinstatement; drainage; mitigation; and other restoration, together with details of their timetabling. It shall include details of, and measures to secure:

a) the phasing of construction works;

b) the formation and position of the temporary construction compounds;

c) contractor and operational on-site vehicle parking;

d) dust management and suppression;

e) cleaning of site entrance, facilities for wheel washing and cleaning the adjacent public highway;

f) pollution control, including the protection of water courses and ground water; subsoil surface water drainage; bunding and siting of fuel storage areas; sewage and foul water drainage and disposal; and emergency procedures and pollution response plans;

g) temporary site illumination during the construction period, including specification and duration of security lighting required at site compounds;

h) the methods to be adopted to reduce the effects of noise occurring during the construction period to the lowest practicable levels and in accordance with BS 5228: Noise control on construction and open sites;

i) storage of materials and disposal of surplus materials;

j) access tracks and other areas of hardstanding, including areas of temporary road matting;

k) the carrying out of foundation works, including the foundation of the solar arrays and any other structures to be installed on the site;

l) method of working cable trenches, including soil storage and back-filling; and details of cable boring methodologies below reens / ditches / other water courses and below hedges;

m)general soil storage and handling;

n) post-construction restoration/reinstatement of the working areas, including all ridge and furrow topography, cable trenches and area covered by any matting or other areas where the soil has been disturbed or compressed;

o) the sheeting of all heavy goods vehicles construction materials to, or spoil from, the site to prevent spillage or deposit of any materials on the highway;

p) details of the vehicles to be used on the site during construction activities and measures to be taken to prevent vehicle damage during periods of soil saturation;

q) details of control of surface water to prevent siltation of the reen drainage network;

r) identification of buffer strips adjacent to water courses or retained vegetation features such as hedges or trees and sites where birds are nesting;

s) means to exclude small animals from excavations;

t) the re-instatement of headland drainage pipes, where necessary, prior to or during construction;

u) cable trenches to avoid intercepting any headland drainage pipes.

The works shall proceed in full accordance with the agreed construction method statement.

Reason: to protect the interests of the rural character of the area, the integrity and safety of the highway network and to protect the amenity of residents, ecological interests and to ensure the site is appropriately restored after construction, in accordance with policies SP9, GP2, GP4, GP5 and GP7 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

7) No HGV shall access the site until details of a Traffic Management Plan (TMP) has been submitted to and approved in writing by the Local Planning Authority. The TMP shall include details of:

- Signage;
- The construction of all accesses into the site, the erection of any entrance gates and the creation and maintenance of associated visibility splays where relevant;
- Details of temporary traffic management measures, such as traffic lights;
- HGV routes and timings to avoid peak hour flows; and school drop off/pick up times;
- Means of preventing HGV traffic through the village of Marshfield.

The works shall proceed in full accordance with the agreed construction method statement.

Reason: to protect the integrity and safety of the highway network. In accordance with policy GP4 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

8) No external lighting shall be installed on site.

Reason: to protect the rural character and biodiversity interests of the site, in accordance with policies SP5, SP9, GP2, GP5, GP7 and CE4 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

9) No development shall commence until a Landscape and Environmental Management Plan (LEMP) has been submitted to and approved in writing by the Local Planning Authority. The LEMP shall set out details of the existing and proposed habitats, landscape and ecological features at the site. It will include details pertaining to the creation and management of these features and will include details relating to the following species and management plans:

   a. Dormice (referring to the hedgerow and scrub management proposals for dormice within the site and in the Lapwing Compensation Area referred to in the Dormouse Mitigation Strategy);
   b. Otters (referring to the principles set out in Otter Mitigation Strategy);
   c. Water Voles (referring to the principle set out in the Water Vole Mitigation Strategy);
   d. Lapwing Compensation Area;
   e. Management of reens and ditch habitats including scrub management along the banks;
   f. Management of buffer zones along the reens and ditches which shall include details of the implementation and maintenance of adequate buffers either side of watercourses (reens 12.5m and field ditches 7m);
   g. Shrill Carder Bee management plan, covering wildlflower grassland and habitat connectivity across the site;
   h. Cattle watering features;
   i. Management of species-rich grassland and grassland in fields with solar panels;
   j. The species to be used to plant up gaps in hedgerows and a specification of planting stock;
   k. Hedgerow removal proposals covering the following scope:
      i. Precise location of hedges to be removed
      ii. Removal methodology
      iii. Timing of removal
      iv. Mechanism to prevent disturbance to nesting birds and other fauna.
   l. Water quality monitoring plan & contingency plan:
      i. The Plan shall establish a pre-development one-year baseline and identify how monitoring shall proceed including a reporting schedule to the Council and the duration of the monitoring regime;
      ii. All monitoring reports shall have regard to the baseline assessment. In the event that significant reductions in water quality are identified through monitoring then the applicant or any successor in title shall provide a contingency plan to address the issue to the Council in writing. Any approved contingency plan and / or modified monitoring plan shall be implemented as agreed thereafter.

m. Biosecurity Risk Assessment and Management Plan to include measures to control, remove or manage Water fern, Japanese knotweed, Himalayan balsam both during construction and operation.

The information to include scaled maps and plans to show the feature's position; condition to achieve; planting specifications and schedules (where these will apply).

The LEMP shall include details of short and long-term management and monitoring of the site's ecological features to ensure that the plan(s) is effective in achieving its intended objectives which will be clearly stated in respect of each habitat/species as appropriate. It shall include details of potential contingency measures which shall be taken in the event that the monitoring identifies a failure to achieve the stated objectives. In this regard, the LEMP shall confirm details pertaining to:

a) Details of the scheduling and timings of activities;

b) Wildlife licensing requirements;

c) Details of the measures that will be undertaken should any landscape or environmental features die, be removed, or become seriously damaged or diseased;

d) Details of the remedial action that will be undertaken, in agreement with the LPA, in the event that long-term monitoring of the landscape, environmental and ecological features of the site reveals that these are declining against the established condition beyond year 5 of the development;

e) Details of management and maintenance responsibilities;

f) Details of timescales, length of the plan, provision for periodic reporting the effectiveness of the plan to the LPA, the method to review and update plans (informed by monitoring).

The LEMP must be carried out in accordance with the approved details set out in the document or any other iterations approved by the LPA in the event that the proposed monitoring data suggests that specific changes are required.

Reason: To ensure that the agreed ecological and environmental mitigation, compensation and enhancement is implemented and managed long-term, including for European Protected Species, Gwent Levels: St. Brides SSSI and Section 7 habitats and species, and in the interests of the special landscape character, in accordance with policies SP5, SP7, SP8, SP9 and GP5 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

10) No trees shall be removed other than identified in the Arboricultural Impact Assessment (Savills, March 2020) and approved Landscape and Ecological Management Plan, unless subsequent surveying reveals a change in on-site conditions, in which case, the survey shall be submitted to and approved in writing by the Local Planning Authority prior to the felling of any additional trees. No tree shall be removed until it has been confirmed it does not contain nesting birds or a bat roost.

Reason: to protect the ecological interests, protected species and the landscape character of the area. In accordance with policies SP5, SP7, SP8, SP9 and GP5 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

11) No development, to include demolition, shall take place until the implementation of a programme of archaeological work has been secured in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the Local Planning Authority. Thereafter, the programme of work will be fully carried out in accordance with the requirements and standards of the written scheme.

Reason: To identify and record any features of archaeological interest discovered during the works, in order to mitigate the impact of the works on the archaeological resource within an Archaeologically Sensitive Area, in accordance with policies SP9 and CE6 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

12) No development shall commence until a road condition survey has been submitted to and approved in writing by the Local Planning Authority. The survey shall identify any locations where the highway may be substandard; and jointly with the Council's City Services set out a timetable for monitoring and/or repairs. The monitoring and/or repairs shall be carried out in accordance with the approved timetable.

Reason: To protect the integrity and safety of the highway network, in accordance with policy GP4 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

13) No tracks or reen crossings shall be constructed on the site until details of their locations and construction methods have been provided in writing to the Local Planning Authority. Following the Local Planning Authority's written agreement any tracks shall be constructed fully in accordance with the agreed details.

Reason: to ensure any tracks and reen crossings are constructed in a fully reversible way and to protect the ecological interests, protected species and the landscape character of the area, in accordance with policies SP5, SP7, SP8, SP9 and GP5 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

14) No later than 12 months before the expiry of this permission, a decommissioning and site restoration scheme shall be submitted for the written approval of the Local Planning Authority. The scheme shall make provision for the removal of the solar panels and all other associated equipment and paraphernalia and the subsequent restoration of the site. The scheme shall include details of:

- the extent of equipment and foundation removal and the site restoration to be carried out;
- the management and timing of any works;
- a traffic management plan to address likely traffic impact issues during the decommissioning period;
- an environmental management plan to include details of measures to be taken during the decommissioning period to protect wildlife, habitats and tree features on the site;
- identification of access routes;
- location of material laydown areas;
- full details of the removal of the solar arrays, associated buildings and plant, any trackways and sub-surface cabling and all associated works of ground restoration including trench backfilling;

- full details of all works to restore the land to allow for agricultural production following the removal of structures from the site;
- a programme of implementation.

The approved scheme will reference a baseline topographical survey to be completed prior to construction. The decommissioning shall be implemented within 6 months of the expiry of this permission and then proceed fully in accordance with the agreed details in accordance with the decommissioning programme.

Reason: to ensure the site is fully restored and to maintain the rural appearance of the area, in accordance with policies SP5, SP7, SP8, SP9 and GP5 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

15) If the solar farm hereby permitted fails to produce electricity for supply to the grid for a continuous period of 6 months, a scheme shall be submitted to the Local Planning Authority for its written approval within 3 months of the end of that 6 month period for the repair or removal of the solar farm.

Where repairs or replacements of more than 1800 panels in a 90 day period are to be undertaken, the scheme shall include a proposed programme of remedial or replacement works to be agreed in writing with the LPA. Where removal of the solar farm is required the scheme shall include the same details required under the decommissioning condition of this permission. The relevant scheme shall thereafter be implemented in accordance with the approved details and timetable.

Reason: To ensure that the replacement of components is appropriately controlled and to ensure the solar farm beneficially generates electricity or is otherwise removed to the benefit of the character and appearance of the area, in accordance with policies SP5, SP7, SP8, SP9 and GP5 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

16) No development shall commence until a surface water management scheme has been submitted to and approved in writing by the Local Planning Authority. Surface water drainage shall be disposed of in accordance with the approved details.

Reason: To prevent increased surface water run-off and the potential for localised flooding, in accordance with SP3 of the Newport Local Development Plan 2011-2026 (adopted January 2015).

ANNEX B – Appropriate Assessment

Preliminary Matters

1. The purpose of this Annex is to report on the impacts of the scheme on the Severn Estuary Special Protection Area (SPA) and the Severn Estuary Special Area of Conservation (SAC). It takes the form of an Appropriate Assessment (AA) for consideration by the Welsh Ministers in their role as the competent authority and has been prepared in accordance with the requirements of Regulation 63 of the Conservation of Habitats and Species Regulations 2017, as amended. In light of the requirements of Regulation 63(3) in carrying out my assessment I have had regard to the comments of Natural Resources Wales (NRW) in its letters dated 21 August 2020 and 7 December 2020 and its specific advice set out in its latest letter of 29 January 2021.

2. The application was accompanied by a shadow Habitats Regulations Assessment (sHRA) which has subsequently been revised. The latest iteration is dated January 2021 and referenced 0475-sHRA-MW.

3. The sHRA does not explicitly refer to the jointly agreed conservation objectives for the cross-border Severn Estuary European Marine Site (EMS). The objectives are fully set out in section 4 of the Severn Estuary SAC, SPA and Ramsar Site: Regulation 33 Advice from CCW and Natural England, June 2009 document. As NRW confirms, this omission of the full objectives does not have implications on the applicant's assessment or findings. My assessment has had regard to the conservation objectives as set out in the Severn Estuary / Môr Hafren EMS, which sets out the conservation objectives in greater detail and with specific reference to conditions that are not included in the sHRA.

Background

4. The site lies in proximity to 2 sites that form part of the National Sites Network – the Severn Estuary SPA and the Severn Estuary SAC. The sHRA describes both as lying within 500m of the site, although it is evident from the submitted drawings maps[84] that the SAC is some 2km distant. The designated sites are connected to the site by the reen network that drains from the site into the sea.

Likely Significant Effect

5. The drainage network that connects the site to the protected areas gives rise to the potential for siltation/pollution to reach both these areas during construction and decommissioning which also gives rise to the potential effect on the European eel in the freshwater habitat. A change in land management has the potential to affect qualifying features of the Severn Estuary SPA. The final potential effect that has been examined is the possible change in species distribution found to be functionally linked to the SPA. These effects arise from the project alone and in-combination with other projects.

6. The sHRA assesses the risk of significant effect to the SPA as low in terms of silt and dust contaminants entering the air and reen system and indirectly into the estuary during construction. It also identifies a risk from a change in land management from the present sheep and cattle grazing to future mowing and/or sheep grazing which

[84] Appendix 11.1. of ES and Appendix 1 to sHRA

could result in the loss of foraging areas for some qualifying species at high tide. Disturbance during construction work and a reduction in winter foraging has the potential to change SPA species distributions.

7. In relation to the SAC a risk of significant effect is identified in relation to the impacts of development, where there is a low risk of silt, dust or chemical pollution contaminants entering the air and reen system and indirectly into the estuary during construction and decommissioning only. This may affect European eel while in freshwater habitats of reens and ditches within the application site, as well as qualifying habitats within the estuary. Other risks identified are of water pollution with a potential for minor silt or fuel pollution or herbicides via the reen network feeding into estuary impacting SAC qualifying features including European eel.

8. NRW agrees with the sHRA's screening test of likely significant effects as set out above. It also considers that there is a risk (in-combination) from the change in land management and loss of habitat (of potentially supporting land to the SPA) with other relevant projects.

9. The sHRA identifies the potential that the SPA's assemblage feature could be impacted solely on the presence of >1% of the assemblage's feature being represented by lapwing. In terms of potential cumulative impact, the sHRA explains that it was not possible to fully assess the in-combination effects with the Rush Wall Solar Farm scheme in the absence of an ES. It acknowledges that as it would result in the change in the use of a further 100 ha of coastal grazing marsh on the Gwent Levels it may affect qualifying or assemblage species of the Severn Estuary protected sites.

10. Given that there is not complete information to provide a thorough assessment an adverse effect cannot be ruled out in relation to the loss of habitat to numbers of wintering lapwing, as part of the assemblage. I concur with the advice of NRW that in such circumstances the precautionary principle should be applied, and an adverse effect presumed. I will therefore take these considerations forward to Appropriate Assessment. In doing so, and as advised by NRW I have had regard to the jointly agreed conservation objectives for the cross-border Severn Estuary European Marine Site. The objectives are fully set out in section 4 of the Severn Estuary SAC, SPA and Ramsar Site: Regulation 33 Advice from CCW and Natural England, June 2009 document.

Appropriate Assessment

11. Taking into account all of the identified likely significant effects together with the proposed mitigation measures, including the design of the proposed layout and the planning conditions that have been recommended, I find that the scheme would cause no adverse effect on any internationally protected sites. These mitigation measures include the provision of buffer zones to watercourses, the implementation of a water quality monitoring programme, a Construction and Environmental Management Plan, a Landscape Environment Management Plan and a decommissioning and restoration scheme. Any potential adverse effects in relation to the loss of habitat on the numbers of wintering lapwing can be acceptably mitigated by the implementation and management of the proposed Lapwing Compensation Land.

12. The above findings align with the advice of NRW. Other parties disagree. The Council is concerned that there is insufficient information to assess the impact on local overwintering lapwing population. Others share such concerns and also question the efficacy of the suggested conditions and have concerns over their implementation and enforcement.

13. At the hearing the applicant explained that the requirements contained in the suggested conditions, such as pollution control measures, were standard practice in schemes of this nature. Specialist contractors were accustomed to carrying out their work in a responsible manner to avoid unacceptable impacts on the sensitive environment of the site and the wider area.

14. The Council confirmed at the hearing that it had relevant experience of discharging similar conditions in relation to a comparable solar farm scheme presently under construction in its area. It also confirmed that when seeking to agree the additional details sought by the conditions it would call on specialist advice, including NRW and its own specialist officers when necessary. I consider that the suite of measures proposed to mitigate any harmful effect on the SAC and SPA can be relied upon to be effective. The Council would be in a position to secure the additional information it seeks, to ensure that harmful effects are avoided. It is reasonable to assume that the conditions' requirements will be complied with and monitored effectively, particularly given the potentially serious environmental consequences of not doing so in these circumstances.

15. I have taken into account all the available evidence, including the concerns raised by those who oppose the scheme, and I have adopted the precautionary principle in carrying out my assessment. I conclude that it is beyond reasonable scientific doubt that the scheme, either alone or in combination with other projects, would not have an adverse effect on the integrity of the 2 sites that form part of the National Sites Network, namely the Severn Estuary SPA and the Severn Estuary SAC. This conclusion is predicated on securing the identified mitigation measures through the imposition of the recommended planning conditions.

Recommendation

16. For the reasons given above, and having had regard to all other matters raised, I recommend that this report be accepted as an Appropriate Assessment which complies with the requirements of Regulation 63 of the Conservation of Habitats and Species Regulations 2017, as amended.

Hywel Wyn Jones

INSPECTOR

ANNEX C: APPEARANCES

Hearing 1: Character and appearance of the area

FOR THE APPLICANT:

Peter Grubb BSc(Hons) MSc MRTPI	Director, Savills
Nick Beddoe BA(Hons) MSc MRTPI	Savills
Lee Morris BSc(Hons) MA CMLI	WYG / Tetratech
Dr Paula Jones BA MA PhD	Heritage Collective UK
James Meek BA(Hons) MCIA	Heritage Collective UK

OTHER PARTICIPANTS:

Gail Parkhouse BSc(Hons) MSc	Senior Planning Officer, Newport City Council
Anton Falaleev BSc MSc	Landscape Architect, Newport City Council
Neil Maylan	Cadw
Judith Doyle BA MBA MCIfA	Glamorgan Gwent-Archaeological Trust
Rob Dunning	Glamorgan Gwent-Archaeological Trust
Robert Hepworth	CPRW
Cllr Brian Miles	Wentlooge Community Council
Cllr Linda Southworth-Stevens	Marshfield Community Council
Dr Catherine Linstrum	FoGL
Dr Diana Callaghan	FoGL

Hearing 2: Ecology

FOR THE APPLICANT:

Peter Grubb BSc(Hons) MSc MRTPI	Director, Savills
Nick Beddoe BA(Hons) MSc MRTPI	Savills
Jon Garner BSc MCIEEM	GE Consulting
Kerri Watson BSc MCIEEM	GE Consulting
David Boyce BSc(Hons)	Invertebrate Specialist

OTHER PARTICIPANTS:

Gail Parkhouse BSc(Hons) MSc	Senior Planning Officer, Newport City Council
Anton Falaleev BSc MSc	Landscape Architect, Newport City Council

Sali Palmer BSc(Hons) MSc MCIEEM ALGE	Ecology Officer, Newport City Council
James Davies	Senior Adviser, NRW
Dr Kerry Murton	Conservation Officer, NRW
Tamarind Falk	Environment (Water) Officer, NRW
Mike Webb BSc MSc MRTPI	Gwent Wildlife Trust
Dr Stephanie Tyler	Gwent Ornithological Society
Cllr Brian Miles	Wentlooge Community Council
Cllr Linda Southworth-Stevens	Marshfield Community Council
Dr Catherine Linstrum	FoGL
Dr Diana Callaghan	FoGL

Hearing 3: Flooding, highway safety and transportation, and conditions

FOR THE APPLICANT:

Peter Grubb BSc(Hons) MSc MRTPI	Director, Savills
Nick Beddoe BA(Hons) MSc MRTPI	Savills
Clive Onions BSc MICE FICE FCIWEM	Hydrologist
Tim Bright BSc MSc	Vectos
David Boyce BSc(Hons)	Invertebrate Specialist

OTHER PARTICIPANTS:

Gail Parkhouse BSc(Hons) MSc	Senior Planning Officer, Newport City Council
Anna Griffiths MBA BEng(Hons)	Senior Traffic Transport & Development Officer, Newport City Council
Anton Falaleev BSc MSc	Landscape Architect, Newport City Council
James Davies	Senior Advisor, NRW
Sandra Wells	Senior Species Officer, NRW
Cllr Brian Miles	Wentlooge Community Council
Cllr Linda Southworth-Stevens	Marshfield Community Council
Dr Catherine Linstrum	FoGL
Dr Diana Callaghan	FoGL

ANNEX D: DOCUMENTS

Documents submitted by applicant after application submission

A1 Addendum to Consultation Report

A2 Response to formal request for additional information under Regulation 15(2) of the DNS (Wales) Regulations, including Appendices A to F

A3 Desk Based Heritage Assessment and Figures to replace the Heritage Statement previously submitted as Appendix 9.1 of ES

A4 Revised ES Chapter 9 (Heritage and Archaeology)

A5 Outline Construction and Environmental Management Plan

A6 Ecological Impact Assessment of the Lapwing Compensation Land

A7 Revised Shadow HRA

A8 Technical Note (V3.) to be read as an Addendum to the submitted Flood Consequences Assessment (Appendix 13.1 of the ES)

A9 Addendum to the LVIA

A10 Alternative Site layout Plan – Drawing No 429574/02G

A11 Revised sHRA October 2020

A12 NDF statement letter

A13 Ecological Compensation Land, Dormouse Mitigation Strategy, December 2020

A14 Hearing Statement

A15 Statement on Well-being and Future Generations (Wales) Act 2015

A16 Revised sHRAs, Dec 2020 and Jan 2021

A17 Statement of Clarifications, including transformer station details

A18 Comment on red line boundary

A19 Photographs of railway signal lights

A20 Shrill Carder Bee note

A21 Shrill Carder Bee Mitigation and Enhancements Strategy, February 2021 and associated email exchange with NRW

A22 Revised Glint and Glare Assessment

A23 Proposed conditions as agreed with the Council, NRW and GGAT

A24 Applicant's comments on February 2021 changes to national planning policy

Note: Docs A2-A11 above comprise 'October 2020 Bundle' of Additional Information

Docs A12-A16 submitted after the 'bundle' and prior to hearings

Docs A17-A24 submitted during or post-hearings

Documents submitted by interested parties after initial application consultation and publicity period

IP1 Council's extracts of LDP policies and SPG documents

Responses to Applicant's October 2020 Bundle:

IP2 GGAT

IP3 The Coal Authority

IP4 Local Residents

IP5 Cadw

IP6 Amity Planning Consultants on behalf of local resident

IP7 CPRW

IP8 FoGL

IP9 NRW

IP10 Gwent Wildlife Trust

IP11 RSPB Cymru

IP12 Wentlooge CC

Hearing Statements:

IP13 Council's hearing statements – Landscaping, Ecology and Conditions

IP14 Gwent Wildlife Trust

IP15 FoGL hearing statement

IP16 FoGL Additional Statement on Flooding and attachments

Interested Parties' Documents – presented during or post-hearings

IP17 NRW Appropriate Assessment Advice

IP18 FoGL response to transformer station

IP19 FoGL response to Glint and Glare Assessment

IP20 Wentlooge CC response to Glint and Glare Assessment

IP21 CPRW's comments on February 2021 changes to national planning policy

IP22 FoGL's comments on February 2021 changes to national planning policy

IP23 Gwent Wildlife Trust's comments on February 2021 changes to national planning policy

IP24 Wentlooge CC's comments on February 2021 changes to national planning policy