

Assessment of Impacts on Agricultural Land

DOC 07

Development of National Significance

Alaw Môn Solar Farm

Land west of the B5112, 415m south of Llyn Alaw, 500m east of Llantrisant and 1.5km west of Llannerch-y-Medd, Anglesey

March 2024





**ALAW MÔN SOLAR FARM,
LAND AT LLANTRISANT,
ANGLESEY**

**ASSESSMENT OF IMPACTS
ON AGRICULTURAL LAND**

March 2024

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1 INTRODUCTION

Background to this Report

- 1.1 Alaw Môn Solar Farm is a Development of National Significance (DNS) application to the Welsh Ministers (Planning and Environment Decisions Wales “PEDW”) for the proposed installation of a solar farm with a generating capacity of up to 160 megawatts (MW) and energy storage facility with associated infrastructure.
- 1.2 The development proposes solar panels within a wider site of approximately 300 ha of mostly agricultural land at Llantrisant. This land is currently mostly farmed. Solar panels will be developed across approximately 269 ha, of which 253 ha is agricultural land, within the site area.
- 1.3 A detailed Agricultural Land Classification (ALC) survey has been carried out. The ALC survey identifies that the site comprises a mixture of land of Grade 2, Subgrades 3a and 3b and Grade 4, in a fairly complex pattern across the site. Land of Grades 1, 2 and 3a in the ALC is defined in Planning Policy Wales (edition 12, 2024) as the “best and most versatile” agricultural land (BMV). Planning policy provides a degree of protection against the loss of BMV land, as it is considered to be a national resource.
- 1.4 Future Wales: the National Plan 2040 (2021) sets out a positive approach to development of renewable energy. The National Plan sets out development management criteria for DNS applications, with no explicit reference to land quality beyond requiring “**the sustainable use of resources**”.
- 1.5 Planning Policy Wales (ed 12, 2024) requires considerable weight to be given to protecting BMV land from development because of its special importance.
- 1.6 The Minister for Climate Change wrote to Chief Planning Officers on 1st March 2022 (**Appendix KCC1**) and reminded them of policy in Future Wales, PPW and TAN 6. Her letter stated:

“Should solar PV array applications on BMV application land come before the Department for Climate Change, the Department will object to the loss of BMV agricultural land unless other significant material considerations outweigh the need to protect such land in accordance with Welsh Government policy and guidance outlined above”.

- 1.7 PPWe12 (2024) paragraph 3.59 requires BMV land to be protected from development because of its special importance, and it should only be developed if there is an overriding need for the development.
- 1.8 The Soil Policy and Agricultural Land Use Planning Unit of the Welsh Government commented on the pre-application consultation for this project on 13th December 2023. Their response raised, inter alia, that the construction draft proposal:
- (i) failed to give considerable weight to protecting BMV because it involved the loss of 159 ha of BMV, but recognising that over 48% of Anglesey is predicted BMV;
 - (ii) concluded that use of the land was not temporary, there was the risk of a repowering application, and the advice in TAN 6 that return to agriculture from “soft” uses was seldom practical had not been heeded;
 - (iii) the Welsh Minister has refused a solar farm on BMV grounds, reference decision DNS/3247619.

Matters Addressed in This Report

- 1.9 The world is undergoing a number of significant challenges at present, due mainly to man’s influence. These challenges include the following, which are all potentially competing for land:
- (i) climate change driving an urgent need to reduce carbon emissions including by providing renewable energy, as a tool to help tackle climate change;
 - (ii) the need to reduce intensity of agricultural use to enhance biodiversity and to reduce the effects of chemical run-off into watercourses and aquifers;
 - (iii) the need to feed an increasing population and at a time when global supplies are being affected by conflicts;
 - (iv) the need to secure alternative sources of energy to oil and gas to reduce use of, and reliance upon, not only fossil fuels but also the uncertainties of reliance upon supplies from other nations.
- 1.10 Land use policy, and the use of agricultural land, could play a role in meeting all of these challenges.
- 1.11 This report considers the planning policy and the need to protect soils and agricultural land resources. In the context of the letter from the Minister for Climate Change regarding the loss of BMV resource, this report focuses initially on the effect of the proposed development on the soils and land quality. This report needs to be read alongside the Planning Statement which sets out the overriding need for the development.

- 1.12 In particular this report considers whether or not the BMV resource will be adversely affected: whether it will be downgraded by the proposals or irreversibly developed, such that the resource will be “lost”.
- 1.13 This report concludes that BMV land will not be lost, and nor will it be downgraded. Good practice to ensure this is outlined. Good working practices are important if soil is not to be adversely affected. It is extremely unlikely that an ALC grading would drop even if there was poor management. The resource is resilient and will not be lost. Further, the site is currently grazed by sheep and that use will continue in parallel with energy generation. Only a small area (c 1.5 ha) of poorer quality land will be permanently affected.
- 1.14 On the basis that the BMV resource is not lost, then the report considers the extent to which it can be used across the Site. The report considers the solar farm proposals and the effects on food production of the proposed development. It concludes that the effects are limited. There will be a small drop in production of sheep meat.
- 1.15 Land of Grade 2 quality is defined as land with minor limitations where a wide range of agricultural and horticultural crops can usually be grown. Land of Subgrade 3a can usually grow a high yield of a narrow range of arable crops, or a moderate yield of a wide range of arable crops. This report examines the extent to which the land within the Site can be used in this way. The report concludes that the land is grassland, suited to being grazed, has physical limitations which prevent arable use, and is therefore likely to remain as grassland.
- 1.16 The ALC methodology considers the soils at the point of sampling. The density of sampling is one auger point per hectare. The ALC system does not take into account the wider agricultural considerations of access to machinery, farm size and structure, distribution of pattern relative to field boundaries, field size and shape etc. Hence, for example, it is possible to grade an area of say 1 – 2 ha as Grade 2 within an area of otherwise Subgrade 3b. The ALC system does not take into account the likelihood of the area of Grade 2 being capable of exploitation for its inherent quality or versatility to grow horticultural crops, for example. That practical analysis is considered in this report. It is concluded that the area is, was, and is likely to remain grazing land.

Structure of the Report

- 1.17 The report is structured as follows:
- (i) **section 2** sets out planning policy and guidance in respect of the use of BMV agricultural land for agricultural use, and policy on renewable energy (solar) development;

- (ii) **section 3** describes the proposals, how the panels will be inserted and removed, and the effects of these activities on soil structure and agricultural land quality. The section considers the extent to which soils might be disturbed and whether the land quality might be affected, such that areas of BMV quality might be downgraded;
- (iii) **section 4** describes the operational phase;
- (iv) **section 5** outlines the training and management plans proposed;
- (v) **section 6** examines the implications for the BMV resource from construction and decommissioning;
- (vi) **section 7** reviews the position across Anglesey in terms of agricultural land quality. This section reviews the land quality of the site and the pattern of distribution of the ALC grades;
- (vii) **section 8** considers the potential use of land within the site and considers the fields containing BMV on a field-by-field basis. The intention of section 5 is to determine the extent to which it is, or is not, possible in practice, with modern agricultural machinery, to grow crops other than grass on this land;
- (viii) **section 9** considers the agricultural use of the proposed development for the duration of the scheme and the effects of this on the farm businesses, food production and overall farm economics;
- (ix) **section 10** reviews the key considerations;
- (x) **section 11** sets out a response to the WG pre-application consultation, addressing the points made against recent appeal or DNS decisions;
- (xi) and the report ends in **section 12** with a summary and conclusions.

2 PLANNING POLICY AND GUIDANCE

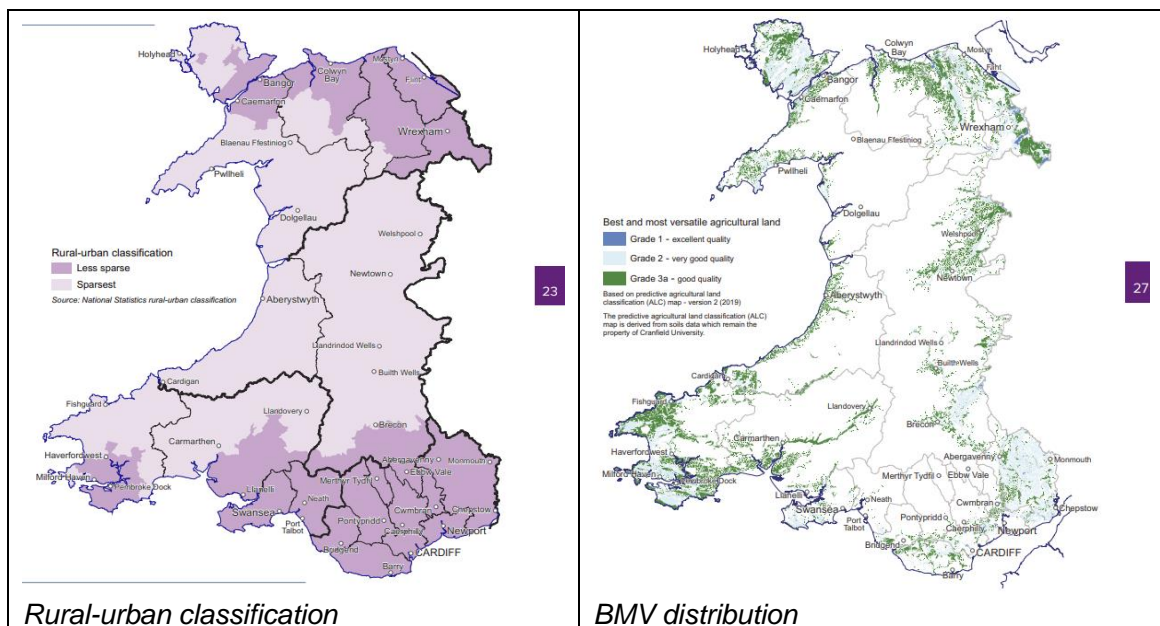
2.1 This section considers, in particular:

- Future Wales: The National Plan 2040 (2021) and its related documents;
- Planning Policy Wales, Edition 12 (2024) (PPWE12);
- Technical Advice Note 6 (2010) (TAN 6);
- the Welsh Government’s Guidance Note (v2) (2021) on ALC and related documents and plans;
- the letter to Chief Planning Officers from the Minister for Climate Change (1st March 2022).

Future Wales: The National Plan 2040 (2021)

2.2 Future Wales recognises that productive land is a vital resource. The map on page 27 shows where the BMV agricultural land is predicted to be located. The distribution of BMVAL has a broad correlation with the “less sparse” population density areas map on page 23. The two maps are shown below.

Insert 1: Extracts from Future Wales



2.3 The “Future Wales Frequently Asked Questions” document confirms that Future Wales should be read as a whole and that individual policies should not be considered in isolation.

2.4 Future Wales does not contain a policy on agricultural land. In the section on rural areas, on page 70 (final paragraph) reference is made to the crucial role rural areas play in helping decarbonise Wales by providing suitable environments for different forms of

renewable energy. Policies 17 and 18 set out Future Wales' approach to renewable energy and its relationship with rural areas.

- 2.5 Policy 17 identifies that large-scale solar will not be permitted in National Parks or Areas of Outstanding Natural Beauty. Those areas are mapped on page 31 of Future Wales. There is no mention of BMV agricultural land in the policy.
- 2.6 Nor is BMV mentioned in Policy 18 on Developments of National Significance (DNS). Policy 18 notes that DNS development will be permitted subject to 11 criteria. These are, in brief:
- (1) no unacceptable landscape impact;
 - (2) no unacceptable visual impacts on nearby communities;
 - (3) no adverse effects on designated sites;
 - (4) no unacceptable effects on national nature conservation sites or protected species;
 - (5) the proposal includes biodiversity enhancement;
 - (6) no unacceptable impacts on protected built heritage assets;
 - (7) no unacceptable impacts such as shadow flicker, noise etc;
 - (8) no unacceptable impacts on defence facilities;
 - (9) no unacceptable impacts on the transport network;
 - (10) sustainable use of resources needed for or generated by the development;
 - (11) there are acceptable provisions relating to the decommissioning of the development.
- 2.7 Future Wales should be considered along with Planning Policy Wales, and accordingly BMV policy remains a relevant consideration. However Future Wales describes policy 18 as **“a decision-making framework for renewable and low carbon technologies”** (page 96). As noted, BMV agricultural land is not mentioned in this decision-making framework.
- 2.8 It also notes that **“the Welsh Government wishes to see as much renewable electricity generated and consumed as locally as possible”** (page 99). As shown in the comparison of BMV distribution and population density at Insert 1 above, the most populous areas are also those with the greatest proportion of BMVAL.

Planning Policy Wales (2024)

- 2.9 Planning Policy Wales (Edition 12, 2024) (PPW) defines the “Best and Most Versatile Agricultural Land” in paragraph 3.58 as land in Grades 1, 2 and 3a of the Agricultural Land Classification (MAFF, 1988). This, it advises, is a finite resource which should be conserved for the future.
- 2.10 This is not a block on development of such land, but it is made clear that **“considerable weight should be given to protecting such land from development because of its**

special importance". The advice in paragraph 3.59 continues by noting that such land "should only be developed if there is an overriding need for the development, and either previously developed land or land in lower grades is unavailable, or available lower grade land has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs the agricultural considerations".

- 2.11 The last sentence of 3.59 states: "if land in grades 1, 2 or 3a does need to be developed and there is a choice between sites of different grades, development should be directed to land of the lowest grade".
- 2.12 Paragraph 1.9 stresses that PPW should be read as a whole. It is explained that the word "should" reflects Welsh Government's expectations of an efficient and effective planning system. Aspects of policy and their application to a particular development proposal could occur in several parts of the document.
- 2.13 Paragraph 5.9.10 identifies that local planning authorities should ensure development plan policies are supportive of renewable and low carbon energy development in all parts of Wales, and set out clearly the relevant local criteria against which proposals will be evaluated.
- 2.14 That the benefits of low carbon energy is of "**paramount importance**" is set out in 5.7.7.
- 2.15 Accordingly the policy on protecting BMV agricultural land is one of the many considerations within PPW, which must be read as a whole.

TAN 6 (2010)

- 2.16 Technical Advice Note 6 "Planning for Sustainable Rural Communities" sets out further advice in section 6. TAN 6 is now 14 years old. Large scale solar installations were not being developed in 2010, therefore the guidance in TAN 6 was not drafted aimed at development such as this one. In that context TAN 6 advises that "**once agricultural land is developed, even for "soft" uses such as golf courses, its return to agriculture as best and most versatile agricultural land is seldom practicable**" (paragraph 6.2.2).
- 2.17 Paragraphs 6.2.6 to 6.2.9 advise on other relevant considerations, notably:
- effects of severance and fragmentation on farm structure;
 - effects on buildings and fixed infrastructure;
 - impacts on irrigation, where practised;
 - wider effects, such as field underdrainage.

- 2.18 Annex B sets out the procedural requirements for consultation with the Welsh Government for development which **“would involve the loss of 20 hectares or more of Grades 1, 2 or 3a agricultural land, or a loss which is less than 20 ha but is likely to lead to further losses amounting cumulatively to 20 ha or more”** (paragraph B2).

WG Guidance Notes

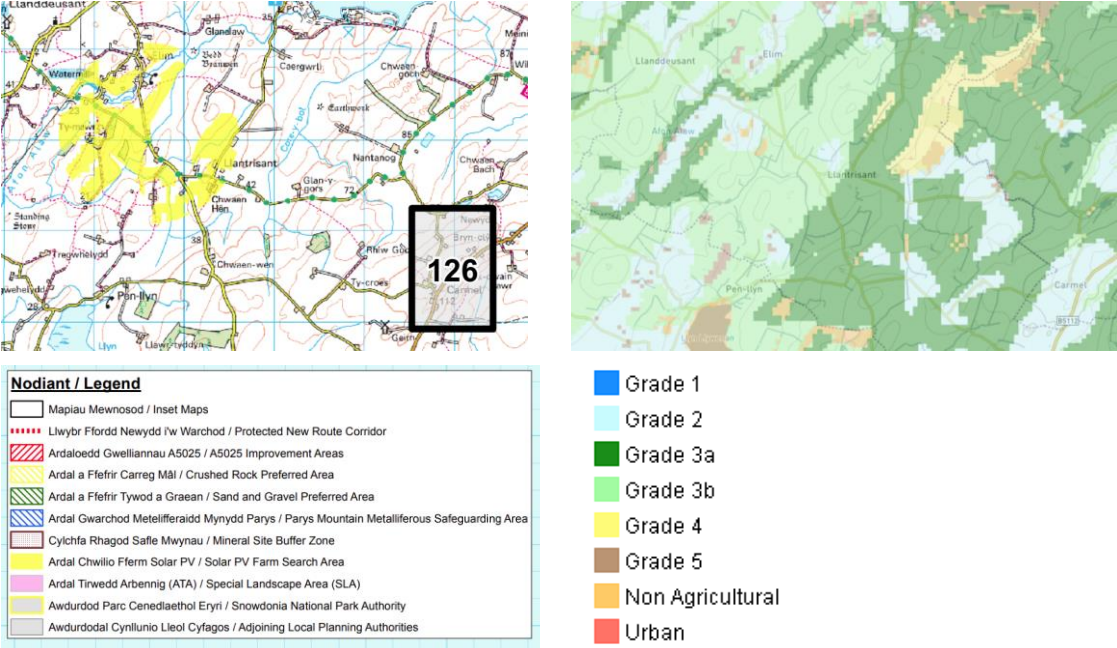
- 2.19 The Welsh Government has produced a predictive ALC map and it is accompanied by a number of documents including a Guidance Note (version 2.1, May 2021). This refers to the predictive map and when field survey is required, which is where land is shown as potentially of Grades 1, 2 and 3a.
- 2.20 The **“ALC: Frequently Asked Questions”** (May 2021) document explains that **“normal agricultural management will rarely, if ever, affect the ALC grading of land”**. The ALC is based on long-term physical and chemical limitations, and current or historic agricultural management does not affect grade. **“ALC grade could potentially only be improved by very major and expensive interventions, well beyond the scope of normal agricultural works.”** The document is reproduced at **Appendix KCC2**.
- 2.21 It is noted that **“it is extremely unlikely that an ALC grading would drop because of neglect or poor agricultural management”**. This shows that, because the ALC is based on the potential of land and the soil resource interacting with other variables, there is a considerable degree of resilience to activity that would not affect ALC grade.

Local Policy

- 2.22 The Anglesey and Gwynedd Joint Local Development Plan (2017) similarly seeks to balance the different issues. Strategic Policy PS5 “Sustainable Development” seeks to alleviate the causes of climate change and adapt to those impacts that are unavoidable in criterion 1, cross referring to policy PS6. Criterion 7 of PS6 refers to the need to protect “soil quality”. Policy PS6 criterion 6 seeks to safeguard the best and most versatile agricultural land.
- 2.23 Policy PS7 “Renewable Energy Technology” supports renewable energy installations provided that the impacts are acceptable, particularly regarding landscape impact. No specific reference is made to agricultural land. Policy PS19 “Conserving and Where Appropriate Enhancing the Natural Environment” makes no reference to agricultural land.
- 2.24 Policy ADN2: “PV Solar Energy” refers to potential solar areas shown on the Proposals Maps. There is no reference to BMV agricultural land in the policy or its explanatory text.

2.25 The Proposals Map shows the Solar PV Farm Search Area to include land to the west of Llantrisant. As can be seen comparing an extract from the Proposals map with an extract from the Predictive ALC map below, the search area includes land of Grades 2, 3a and 3b.

Inserts 2 and 3: Extracts from Proposals Map and Predictive ALC



2.26 The Draft Review Report Consultation Document (November 2021) notes that in the Welsh Government’s Draft NDF (2019) there were draft priority areas for solar, but these were dropped following publication of Future Wales (2021), as explained in paragraph 3.35. It is noted that existing policies will need to be updated to reflect changes at national level.

Minister’s Letter

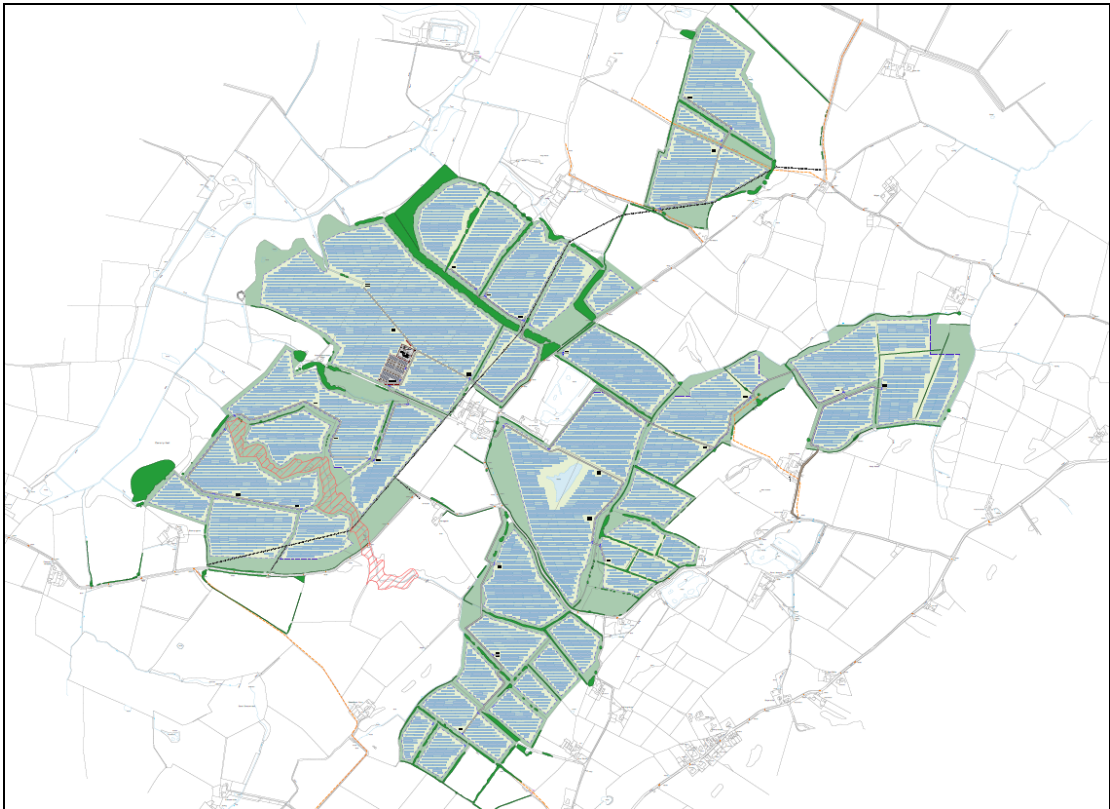
2.27 The Minister for Climate Change wrote to Chief Planning Officers on 1st March 2022, as noted earlier. Her letter is set out at **Appendix KCC1**. She refers to the policies set out above, and emphasises that her department would object to the loss of BMV resources.

3 CONSTRUCTION METHODOLOGY

The Proposals

- 3.1 It is proposed to install solar panels over approximately 258 ha of the site. The following plan shows the proposed layout and panels. There is, as can be seen, an energy storage compound (of about 1.5 ha) proposed in the centre of the site.

Insert 4: Proposed Layout of the Site



Installation

- 3.2 The proposal involves the following key stages:
- (i) pre-entry condition surveys, Construction Environment Management Plans and Soil Management Plans, and related training of key staff;
 - (ii) early construction of some access tracks, construction compounds and preparatory works;
 - (iii) entry to insert the legs to the panels, which will involve multiple teams installing the legs, followed by the panels;
 - (iv) in parallel and following the installation of the panels the site will be cabled to connect the panels. This will involve excavations of narrow trenches and reinstatement once cables are inserted;
 - (v) construction of the fixed infrastructure and inverters etc;
 - (vi) security fencing of the site, installation of security features and CCTV;

- (vii) connection of the site to the National Grid, involving off-site cabling along verges to the public highway;
- (viii) commissioning and activation of the site.

3.3 This report focuses on both the construction and operational phases, where these involve access across or around the agricultural land, and sets out principles for decommissioning.

CEMP and Soil Management Plan

3.4 The solar farm can be installed, and dismantled, without damage to soils. It can be installed and dismantled without affecting agricultural land quality except for any areas of fixed infrastructure (in this case the central compound of approximately 1.5 ha). The success in not damaging soils or soil structure, however, depends upon following good practice.

3.5 A Framework Soil Management Plan (SMP) by Askew Land and Soil has been prepared. A detailed SMP is expected to be required by condition. The Framework SMP demonstrates how the development can avoid damaging soils, and directs the construction of different parts of the site to suitable times of year.

Construction Methodology

3.6 Panels are installed rapidly. The process involves marking out the grid on the grass and laying out the steel stanchions. This stage is non-intrusive. It does involve machinery carrying the legs, however, and should take place when soils are suitably dry.

3.7 Typically the machinery used is an agricultural loadall or, as per the example below, a smaller loadall in this case with tracks to spread the weight.

Insert 5: Loadall Delivering Legs



3.8 A team then arrives to knock the stanchions / legs in. From operations we have observed it takes a little over a minute per pole to knock the pole into the ground and move the machine to the next pole¹. This operation is shown in the photograph below. This was inserting legs into a clay soil.

Insert 6: Inserting a Stanchion



3.9 Typically there will be two or more teams working simultaneously.

Insert 7: Team Installing Panels



¹ This observation was made on clay soils at the Purton Solar Farm, Wiltshire, in 2015. Ground conditions will inevitably affect installation speed.

3.10 The impact on the land and soils from installing legs is illustrated below.

Insert 8: Legs Installed (this at Bentham Farm, Purton, Summer 2015)



Insert 9: Legs being Installed (this at Tiln Farm, Retford, January 2023)



3.11 Whilst leg design varies, they are all lightweight with limited cross-sectional area. An example of legs is shown below, and a close-up of one into the ground, illustrating the minimal disturbance to soil that will result.

Inserts 10 and 11: Examples of Array Legs



3.12 Once the panel legs have been installed, the lightweight framework is carried out. This usually arrives on a tractor-towed trailer, and the framework is lifted off by hand. It is

bolted together by hand. No heavy or damaging machinery is required and there is no physical disturbance to the soils, as shown below.

Insert 12: Bolted-on Framework



- 3.13 The next stage is to bolt-on the individual PV array panels. These, too, are lightweight. They are brought out by tractor and trailer, and lifted off the trailer by hand and bolted to the framework. The following photograph shows how the process has resulted in no physical disturbance to the land.

Insert 13: Following the Bolting-on of the Panels



- 3.14 Therefore across the majority of the Site, where the Development involves only the installation of strings of solar PV arrays, there is minimal ground disturbance and limited vehicular trafficking. That trafficking is by vehicles no larger than normal agricultural machinery and mostly machinery that is considerably smaller.
- 3.15 There are occasions when the weather results in suboptimal conditions. The Framework Soil Management Plan sets out how soils should be handled and when work should cease, and a Construction Phase Soil Management Plan will be produced and operated.
- 3.16 Soil is a fairly resilient material and topsoil disturbance rarely affects the land quality. Land quality can be affected if there is deep compaction that cannot be rectified by normal agricultural machinery, as this may affect the drainage and hence wetness. Surface

damage – often caused in wet harvests or when cutting maize on arable land for example – rarely alters the land grade.

- 3.17 The following series of photographs shows an installation that took place in Sussex in 2015. At the time the Government had announced that the grant funding was being cut for sites not operational by April, and as a result winter installation works were common. The panels were installed in winter, on a site with clayey soils and when ground conditions were generally poor. The soil was, however, easily restored following installation, as shown. The inclusion of this photograph is not to endorse working with wet soils, but to demonstrate their resilience to being restored without loss of function or quality.

Insert 14: Panels Installed in Poorer Conditions



Insert 15: Same Area Prepared for Seeding



3.18 The area recovered well and is shown below 7 years later. There was no evidence of any compaction or deterioration in land quality.

Insert 16: The Same Area 7 Years Later (a different row but the same site)



3.19 The panels are connected by cables that run along the underside of the panels, usually along the upper edge and out of range of sheep. No trenching is required except at the end of the row (or string). Typically around the end of each row a cable is buried, connecting each row to a circular circuit. Hence a short length usually runs from each row to the main circuit. This may run around the outside, or down the centre between rows.

3.20 The cabling along the length of the panels is hung underneath the panels and then, at the end of a row, it goes underground, as shown below.

Inserts 17 and 18: Cabling along Panels



3.21 The construction of trenches to bury cables within the Site will involve digging out the soil to a suitable depth to bury cables. This would be a similar process to that involved in installing a new waterpipe around a farm. An open trench, with subsoil to one side and topsoil to the other, is shown below when the trench is open and subsequently when the

trench has been restored. This results in no long-term disturbance to the soil profile and does not affect the ALC grade.

Inserts 19 and 20: Example of Cabling Being Installed



3.22 The process can look as though it is damaging to soils, but the trench is narrow and is the only area affected. This is illustrated in the following photograph.

Insert 21: Cable Trenching, Central Row



3.23 The machine operator will be able to distinguish topsoil from subsoil from any shale, and place these in separate piles on excavation for return into the original order once the cable is laid. The following photograph shows the colour difference between topsoil and subsoil, and was taken during archaeological investigation at the Site.

Insert 22: Topsoil and Subsoil



- 3.24 These areas recover quickly and well. The following photograph shows cables going into the ground. The transformer to which the cables connect can be seen, but there is no evidence of any damage to soil or difference in growth above the cable route.

Insert 23: Example of Land Above Buried Cables, Monmouthshire



- 3.25 There will be modest areas where construction compounds need to be created. These will result in a construction-phase disturbance to soils, but the areas will be capable of full restoration, and to the same ALC grade.
- 3.26 Construction compounds are built by stripping topsoil and storing that in a bund on the edge of the site. A matting is then laid down, and stone imported and levelled, as shown below.

Insert 24: Newly-laid Construction Compound (Elsham-Lincoln Pipeline)



3.27 The matting prevents the stone from mixing with the subsoil, as shown below.

Insert 25: Matting



3.28 Topsoil will need to be stored in a bund, as shown below. If soils are still wet when moved, the bund should be no higher than 1m, but otherwise temporary bunds can be up to 3m in height. Advice on this is set out in the FSMP and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.

Insert 26: Example Topsoil Storage Bund



- 3.29 Tracks will need to be constructed around the Site. These are usually constructed at the outset. The construction process will involve removing the topsoil, which will be stored near to the track from where the soil was removed, in low, managed bunds so that the soil can be replaced on decommissioning. These areas will be fully restorable to comparable ALC grade, and are not therefore permanently sealed over or downgraded.
- 3.30 There will be inverters and storage containers as part of the Development. These will normally stand on a stone base, which is stripped beforehand in the same way as the tracks, and which will be fully restored on decommissioning.
- 3.31 The placing of the inverters/containers is not significantly disruptive to soil. They normally involve only a small foundation point for the framework, plus a modest area of stone to control vegetation growth and for the operators. An example is shown below.

Insert 27: Typical Inverter Containers



3.32 A substation and battery energy storage system ('BESS') area is proposed near the centre of the Site. This is proposed on land classified as Subgrade 3b.

3.33 The BESS occupies an area of approximately 1.5 ha in total. The individual battery container units will not require deep foundations. They will stand within an area where the vegetation has been removed, as noted. An example is shown below. The BESS is located on land of Subgrade 3b quality, and therefore poorer quality land. Whilst the BESS will be removed, earthworks associated with levelling this area will remain. This is considered to be a permanent loss, therefore.

Insert 28: Example of a Large BESS



3.34 The underground cable connecting the Development to the National Grid Substation at Wylfa will be within the adopted highway of local roads (within the road or roadside verges) and will not affect agricultural land.

4 OPERATIONAL PHASE

Ongoing Management and Land Use

- 4.1 The area under and around solar panels is, and will remain, grassland. It is currently partly mown for silage and partly grazed and topped, but mostly grazed by sheep. The grassland will, once the panels have been installed, be mostly grazed with occasional topping to maintain grass quality and prevent weeds and scrub growth.
- 4.2 The following three photographs of solar panels show sheep grazing around and under the solar panels.

Insert 29 - 31: Sheep Grazing (North of Caernarfon, Monmouthshire, Shropshire)



- 4.3 The management of the farming operations around and under the panels will remain the responsibility of the farmers under the direction of the solar farm operator. Some will

likely choose to allow the sheep to graze for long periods, others might move larger numbers of sheep into an area of panels for a shorter period of weeks so that they graze it down tightly. Such paddock rotations or ranging is a typical variation of ordinary farm management anyway, irrespective of whether there are panels there.

Operational Management

- 4.4 There will be no increased effect on agricultural land quality during the operational phase.
- 4.5 During the operating period there will be no requirement for large or heavy machinery to access the land. Management and maintenance machinery will generally be small and light. Usually the panels will be cleaned annually. This is normally undertaken in spring or early summer, when ground conditions are suitable, because this is the best period to clean panels so that they maximise their solar intake.
- 4.6 Typically, machinery such as the following is used, which is no heavier than a small tractor.

Insert 32: Cleaning of Solar Arrays



- 4.7 There may occasionally be small rutting caused by agricultural vehicles (e.g. quad bikes) or vans used by engineers. Typical light impacts are illustrated below. These will normally be levelled by grazing sheep, but if there are deeper ruts they could be repaired by a lightweight roller in the spring.

Insert 33: Ruts Caused by Vehicles



- 4.8 There may be occasional need for works of repair which might disturb soils. These will be infrequent. If possible any works requiring soils to be moved should be timed for the summer period, following the guidance in the FSMP. Any trenching, whether carried out in ideal conditions or not, looks unsightly initially, but rapidly recovers and is indistinguishable once grass cover has returned. These effects will be of negligible magnitude.

Insert 34: Trench During Wet Period



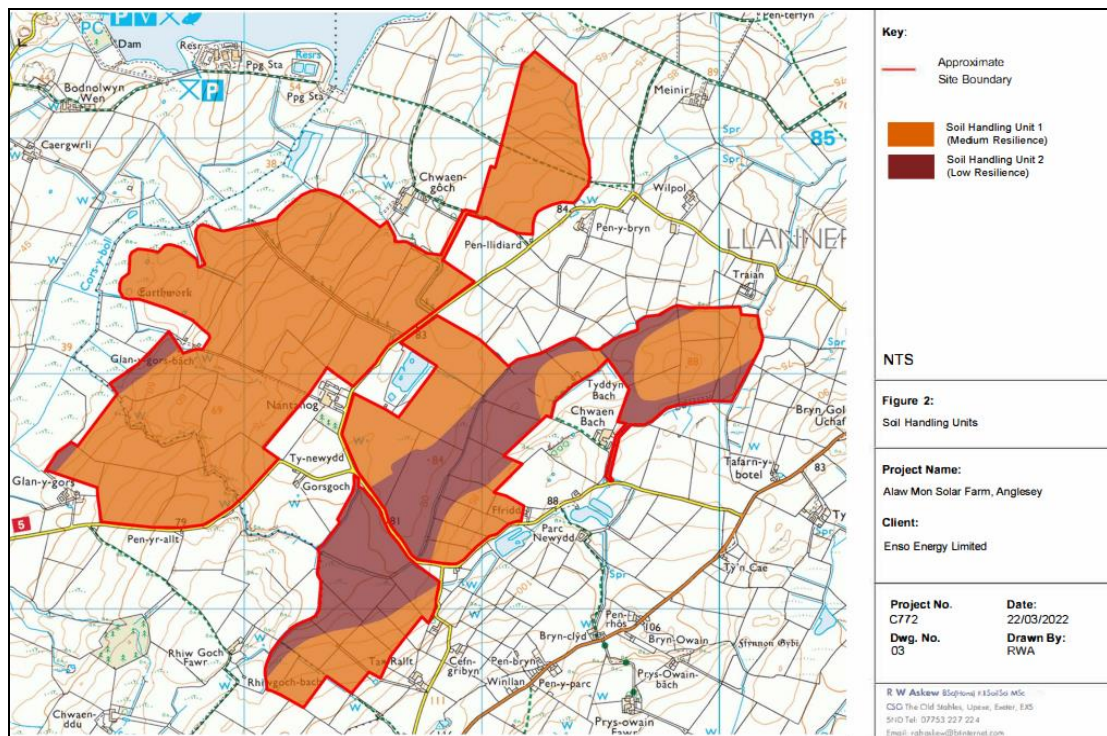
- 4.9 Therefore, there are no physical works required during the operational phase which will adversely affect soils or agricultural land quality.

5 TRAINING AND MANAGEMENT PLANS

Construction and Decommissioning Method Statements

- 5.1 In the knowledge of the soil type and, in particular, its wetness status in places, and its ALC grade distribution, the Applicants have commissioned a Framework Soil Management Plan from Askew Land and Soil. Prior to decommissioning, and to be governed by condition, there will need to be a similar plan for decommissioning works.
- 5.2 The objective is to prevent short term damage to the soils. Long-term damage is very unlikely. Places like Glastonbury Festival recover remarkably well and are farmed again. Harvesting of late crops such as maize can often create ruts which are readily recovered by normal agricultural management.
- 5.3 The objective of the Framework SMP is to ensure that works are done when the soils are suitably dry. The document includes a plan showing the resilience of areas to handling, which is reproduced below. Most of the site is of medium resilience, with a central area (corresponding with land of Subgrade 3b) of low resilience.

Insert 35: Soil Resilience Plan from the Framework Soil Management Plan



- 5.4 Inevitably rain will change soil conditions at times during construction. If tyre marks from vehicles make marks deeper than those shown below, the soil advisor will be called out to confirm whether work can continue, or whether there are areas within the site that need to

be avoided until they dry. This is not likely to result in a delay of more than 48 hours, although that will depend upon the rainfall experienced.

Insert 36: An Indication Works Should be Suspended Temporarily



5.5 It is proposed that final soil management plans will be secured by means of an appropriately worded condition attached to any planning permission granted. These will address the timing and methodology of installing the panels, and subsequently decommissioning. It is recognised that the latter might need to be varied in the future, as technologies advance.

5.6 The key purpose of the installation Framework Soil Management Plan is to set out a construction methodology that recognises that the soil structure should be treated carefully to ensure that it is not harmed. The construction of the panels themselves will not harm the soil, but it is the timing of works that needs to be managed to minimise compaction, as the opportunities for relieving compaction once the panels have been inserted are limited.

5.7 There will be training at the outset about how to determine when soils are too wet to be moved. This will include simple tests such as rolling soil into a ball or sausage, and assessing whether it holds its shape or breaks. If it holds its shape, the soil is potentially too wet to be moved. An example in an arable field is shown below.

Inserts 37 and 38: Example of Soil That Is Too Wet





- 5.8 The Site is all down to long-established either permanent or long-ley grassland. Therefore the surface will need to be monitored carefully to assess the depth of ruts.
- 5.9 As noted in the “ALC: Frequently Asked Questions” document, **“normal agricultural management will rarely, if ever, affect the ALC grading of land”**. Provided that operations follow typical farming practice, therefore, land quality will not be affected. The guidance note continues: **“it is extremely unlikely that an ALC grading would drop because of neglect or poor agricultural management”**.
- 5.10 The Welsh Government’s 2020/2021 Soil Policy Evidence Programme report “The impact of solar photovoltaic (PV) sites on agricultural soils and land quality” (March 2023) concludes that the greatest risk comes from deep soil compaction. As noted in the Executive Summary, **“good soil handling conditions may mitigate the threats to soil and land. Appropriate planning with a quality soil resource and management plan is essential at the planning application stage”**.
- 5.11 By following the FSMP, the soil under and around the panels should experience no adverse impacts. Consequently there will be no adverse impact on the land quality, which will remain as currently graded.
- 5.12 At the time of decommissioning it will be equally important to ensure that the works are timed so as to avoid affecting land quality. Any impacts would be localised, caused by vehicular activity when soil conditions are not suitable. A Decommissioning Soil Management Plan will be prepared which will set out the requirements and timing to ensure that the land is not adversely affected at that stage.

6 THE IMPLICATIONS FOR THE BMV RESOURCE

- 6.1 The insertion of metal legs will not affect the soil structure and it will not affect agricultural land quality as graded under the ALC. Therefore for the majority of the site area, there is no potential for an adverse effect on the ALC resource, irrespective of ALC grade.
- 6.2 There is the potential for localised damage to soil structure from machinery, if this is used on the land when soils are wet. The risk of damage is not dissimilar to the damage if farmers were to cross the land in tractors when wet, and can normally be rectified easily with minor cultivation (eg harrowing). However, such short-term damage can be avoided by following good practice. Damage from machinery might affect soil structure but it will not affect ALC grading.
- 6.3 If there is any localised problem, the type of machinery involved in restoration is shown below. This shows farming and horticultural versions.

Inserts 39 - 42: Type of Machinery Involved



- 6.4 If there are any areas where there has been localised damage to the soils due to vehicle passage, for example, a low wet area within a field which despite best efforts could not be avoided, this should be made good and reseeded at the end of the installation stage.

This is not uncommon: most farmers will have times when they have to travel around the farm in a tractor in conditions where the tyres make deep impacts. This can happen during harvest time, for example, especially of late crops or in very wet harvest seasons. Whilst this is avoided so far as possible, it occurs and the effects are made good when conditions are suitable.

6.5 The ground surface should be generally levelled prior to any seeding or reseeded.

6.6 Examples of areas that have been cultivated following the installation of panels, are shown below. These are the main vehicle trafficking routes. As can be seen, the area under and mostly between the panels, is not damaged.

Inserts 43 and 44: Localised Repairs



6.7 The only part of the installation and decommissioning phases where soil is physically disturbed is for the trenching operations. Installing water pipes, field drains etc is an established farming practice and can be done without affecting agricultural use or land grade. By following good practice and putting soils back in the same profile order as they were at the start, then there will be no loss of land and no effect on the ALC grade.

6.8 Even if (and this will not happen if good practice is followed) the trenching was done poorly and the soil profile was altered, the extent of the damage would be over a width of

about 0.3m. ALC surveys record one sample point every 100m, so a thin strip of disturbed soils would not be recorded and would not alter the ALC grade of the wider field.

6.9 The only permanent-loss areas are the earthworks for the fixed infrastructure, in this case about 1.5 ha.

6.10 As set out in the ES, the land affected by tracks, inverters and the substation is, by ALC grade, shown below.

Table 1: Area in ha Used for Tracks, Inverters and Substation

ALC Grade	Area in ha (rounded nearest 0.1ha)		
	Tracks	Inverters/Containers	Substation and BESS
2	0.3	0	0
3a	1.4	0.1	0
3b	1.0	0.1	1.5
4	0	0	0
Total	2.7	0.2	1.5

6.11 The BMV land affected by infrastructure is for the tracks principally. Tracks around fields are common, and do not generally limit the use of the wider field for farming operations. Consequently, whilst the tracks will be removed and restored on decommissioning, the installation of tracks on farms is not limiting on the wider land, and in many cases is permitted development under the General Permitted Development Order, subject to prior approval as to siting. This is not, in practical terms, a significant impact or loss

Impact of Operational Phase

6.12 The use of the land under and around the panels will be for grassland, mostly grazed. The use of permanent grassland for grazing will not affect ALC grade.

6.13 The reduced intensity of grazing that is expected will not affect the ALC grade. The Welsh Government's ALC: Frequently Asked Questions confirms that the current or historic agricultural management, or intensity of use, does not affect the ALC. It is also confirmed that it is extremely unlikely that ALC grade would drop because of neglect or poor management.

Decommissioning

6.14 Given the length of time before decommissioning it is likely that the ALC methodology will have been amended by then. Further, unless we are successful as a world, climate change may have altered the seasons and rainfall patterns. Therefore this guidance is

prefaced with a requirement for a suitably qualified soil scientist to revisit the site prior to decommissioning, and to update the guidance and timing.

6.15 The objective is to remove panels and restore all fixed infrastructure areas to return the land to the same ALC grade and condition as it was when the construction phase commenced. A qualified soil scientist should advise prior to decommissioning time. The effects of climate change in 40 years time may mean that these dates, applicable in 2024, are no longer applicable.

6.16 Once the panels have been unbolted and removed, the framework will then be a series of legs, as shown below.

Inserts 45 and 46: The Framework



6.17 These will be removed by low-ground pressure machines, in a reverse operation to the installation. These machines will provide a pneumatic tug-tug-tug vertically upwards. This will break the seal between soil and leg, and once that surface tension is released the leg will come out easily.

6.18 The legs will be loaded onto trailers and removed.

6.19 There will be no significant damage to the soils, and no significant compaction.

6.20 Cables buried less than 1 metre deep will be removed. This is likely to need a trench to be dug. This will be done is done mostly with either a mini digger or a trenching machine. Cabling will mostly be at depths of 0.8m where soil depth permits, although the CCTV trenching around the periphery could be shallower.

6.21 Once the trench has been backfilled it can be left for cultivation with the rest of the field post removal of panels.

6.22 Switchgear, such as that shown below, will need to be removed.

Insert 47: Switchgear



6.23 Low ground pressure vehicles, and cranes, will be needed to lift the decommissioned units onto trailers, and removed from site.

6.24 Any concrete bases will need to be broken up. This will most likely involve breaking with a pneumatic drill to crack the concrete, after which it can be dug up and loaded onto trailers and removed.

6.25 The ground beneath the base may then benefit from being subsoiled, to break any compaction. This can be done by standard tractor-mounted equipment, such as the following examples.

Inserts 48 and 49: Example of Tractor Mounted Equipment



6.26 The tracks will be the last fixed infrastructure removed. The tracks will have been used for vehicle travel during the decommissioning stage. The tracks will also be used for removal of material from the tracks themselves, which will be removed from the furthest point first.

- 6.27 The stone will be removed and any matting removal. The base will then be loosened by subsoiler or deep tine cultivators, depending on specific advice given by the soil expert at the time following and analysis of soil compaction and condition.
- 6.28 Topsoil from the storage bunds will then be returned and spread to the depth removed (typically 10-15cm). The area will then be cultivated, probably in combination with the whole of each field.
- 6.29 Fences and gates will be removed in the summer months, after the panels have been removed. This will involve a tractor and trailer. The CCTV cabling is shallow buried and will probably pull out without the need for trenching, but if required trenches will be dug, as described above, and replaced in order once the cables have been removed.
- 6.30 The fields will then be handed back to the farmers.

7 AGRICULTURAL LAND QUALITY OF ANGLESEY AND THE APPLICATION SITE

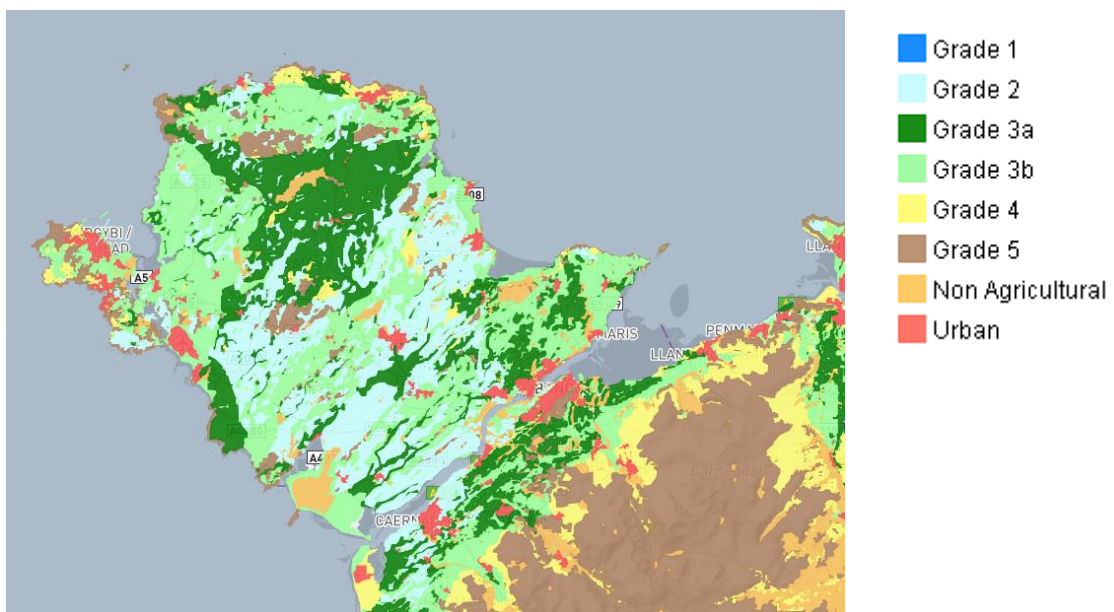
Agricultural Land Quality System

- 7.1 The Agricultural Land Classification (ALC) system divides agricultural land into grades and subgrades based on the long-term physical limitations of land for agricultural use. Key factors include climate, site and soil, and the important interactions between them. This is described in the Welsh Government's Frequently Asked Questions (May 2021). This document includes a description of the grades and is reproduced in **Appendix KCC2**.

ALC Grades Across Anglesey

- 7.2 Across Wales the ALC grade has been predicted. The results are shown the Predictive ALC Map 2 (2020). The whole of Anglesey is shown below.

Insert 50: Predictive ALC Anglesey



- 7.3 The predictive map shows that the area is generally a mixture of Grades 2, 3a and 3b, with small areas of Grades 4 and 5, non-agricultural and urban land.

7.4 For the Isle of Anglesey, the predictive proportion of ALC grades is as follows. This shows that 53.2% of agricultural land across Anglesey is predicted to be of BMV quality. In terms of Future Wales 2040's objective of generating and consuming renewable energy locally (see section 2 above) this must limit opportunities.

Table 2: Proportion of Land Grades Across Anglesey

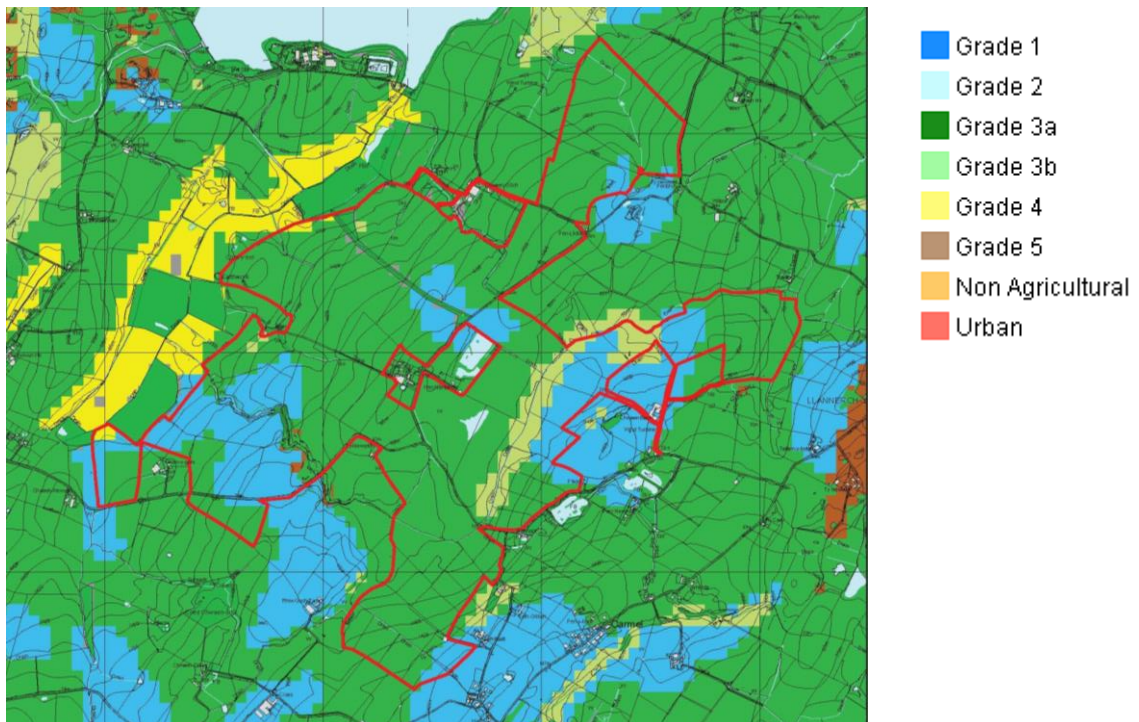
ALC Grade	Description	Area (ha)	Proportion all land (%)	Proportion of agricultural land (%) (65,088 ha)
1	Excellent	0	0.0	0.0
2	Very Good	18,478	26.0	28.4
3a	Good	16,137	22.7	24.8
3b	Moderate	22,317	31.4	34.3
4	Poor	2,240	3.1	3.4
5	Very Poor	5,916	8.3	9.1
NA	Non-agricultural	3,708	5.2	-
U	Urban	2,388	3.4	-
Total		71,184	100.1 ⁽¹⁾	100.0

⁽¹⁾ This is a true representation of the published statistic, presumably due to rounding.

Predicted ALC Grades of the Proposed Site

7.5 The predictive map shows the proposed site as a mixture of mostly Subgrade 3a with areas of Grade 2, as shown below.

Insert 51: Predictive ALC



Detailed ALC Grade

7.6 Under the Welsh Government’s Guidance Note, detailed ALC is required for the site. A detailed ALC has been carried out by Askew Land and Soil Ltd for the site.

7.7 The distribution of the grades across the wider ALC survey area is shown below, with the ALC grading and proportion set out in the table that follows.

Insert 52: ALC Distribution

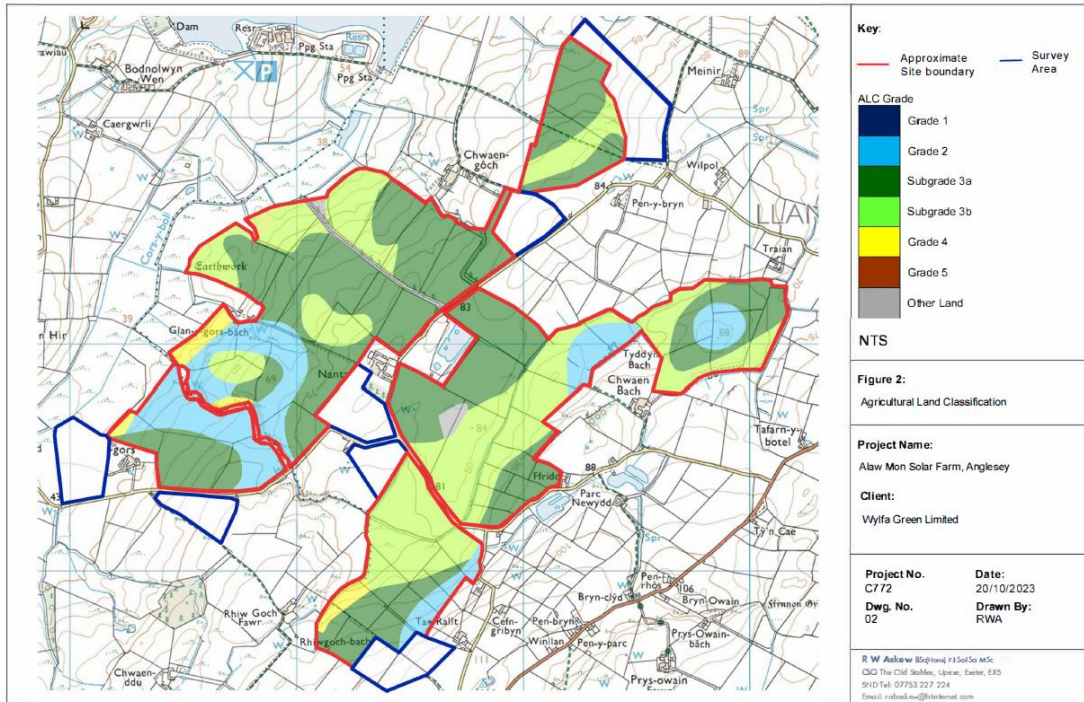


Table 3: ALC Grades

ALC Grade/Sensitivity of Receptor	Total (Ha)	Total (% of the Site)
Grade 1 (Excellent) – Very High Sensitivity	0	0
Grade 2 (Very Good) – Very High Sensitivity	39	13
Subgrade 3a (Good) – High Sensitivity	147.1	49.1
Subgrade 3b (Moderate) – Medium Sensitivity	99	33
Grade 4 (Poor) – Low Sensitivity	7.5	2.5
Grade 5 (Very Poor) low Sensitivity	0	0
Other Land / Disturbed Land	7.2	2.4
Total	299.8	100

- 7.8 Not all of the area covered by the ALC is proposed for the installation of solar arrays. The areas to be included for solar panels are estimated as follows.

Table 4: ALC Grades in Panel Areas

ALC Grade/Sensitivity of Receptor	Total (Ha)	Total (% of the Site)
Grade 1 (Excellent) – Very High Sensitivity	0	0
Grade 2 (Very Good) – Very High Sensitivity	36.7	14.1
Subgrade 3a (Good) – High Sensitivity	122.3	47.0
Subgrade 3b (Moderate) – Medium Sensitivity	87.5	33.7
Grade 4 (Poor) – Low Sensitivity	6.5	2.5
Grade 5 (Very Poor) low Sensitivity	0	0
Other Land / Disturbed Land	7.2	2.7
Total	260.2	100

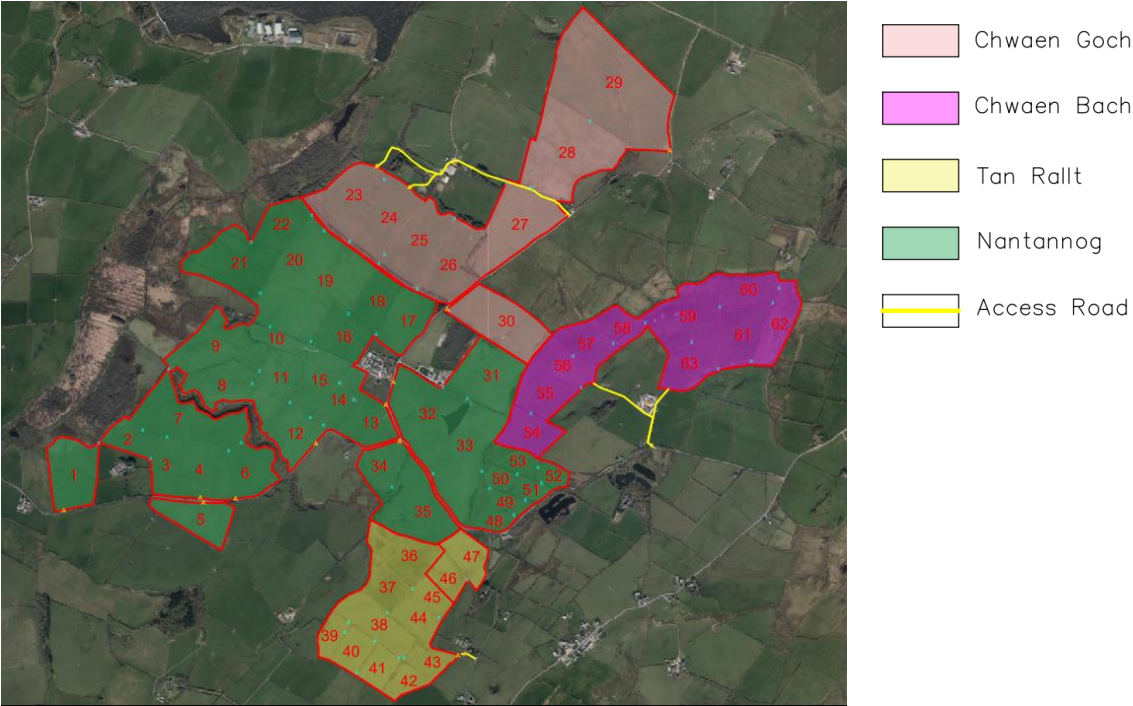
Fixed Equipment

- 7.9 An area of approximately 1.5 ha, on Subgrade 3b land, is proposed for the battery storage to the west of Nantannog farm buildings.
- 7.10 The land otherwise affected amounts to 1.8 ha of BMV (0.3 ha Grade 2, 1.5 ha Subgrade 3a) and 1.1 ha of Subgrade 3b, as set out earlier.

8 THE AREAS INVOLVED AND THEIR FARMING AND AGRICULTURAL POTENTIAL

- 8.1 This section considers the areas involved and how they are managed agriculturally.
- 8.2 The analysis is made on a farm-by-farm basis. For each farm the analysis provides:
 - (i) a summary of the farming operations and enterprises;
 - (ii) an analysis of the land use and agricultural flexibility of the land involved;
 - (iii) comments about the practical agricultural implications of the proposals.
- 8.3 An analysis of the economic implications of the proposed development and future farming activity, including any benefits that will accrue, is set out in section 9.
- 8.4 The four farms are shown on the plan below.

Insert 53: Farms Involved



Nantannog

- 8.5 Nantannog is a grassland farm that has been let to other farmers for grazing and making silage for the last 22 years. The holding was a dairy farm until 1965 and has been a livestock farm since.
- 8.6 The farm extends to 197 ha, much of which is proposed for solar panels, and extends into the marshland to the west beyond the site boundary.

8.7 The dwelling was last lived in about 16 years ago and is showing signs of neglect. The traditional buildings to the rear are in need of repair, although some are now derelict. The modern buildings are in need of some repair.

Inserts 54 - 56: Nantannog Farmyard



8.8 The current owner took over the farm from his father in 1991. Whilst he can remember some ploughing of the land when he was a child, none of the land has been ploughed or reseeded since 1991, and consequently all is permanent pasture.

8.9 Photographs of some of the fields are shown below. These reference the field numbers above, but the location and direction of the photographs are shown below on the ALC plan.

Insert 57: Location of Nantannog Photographs

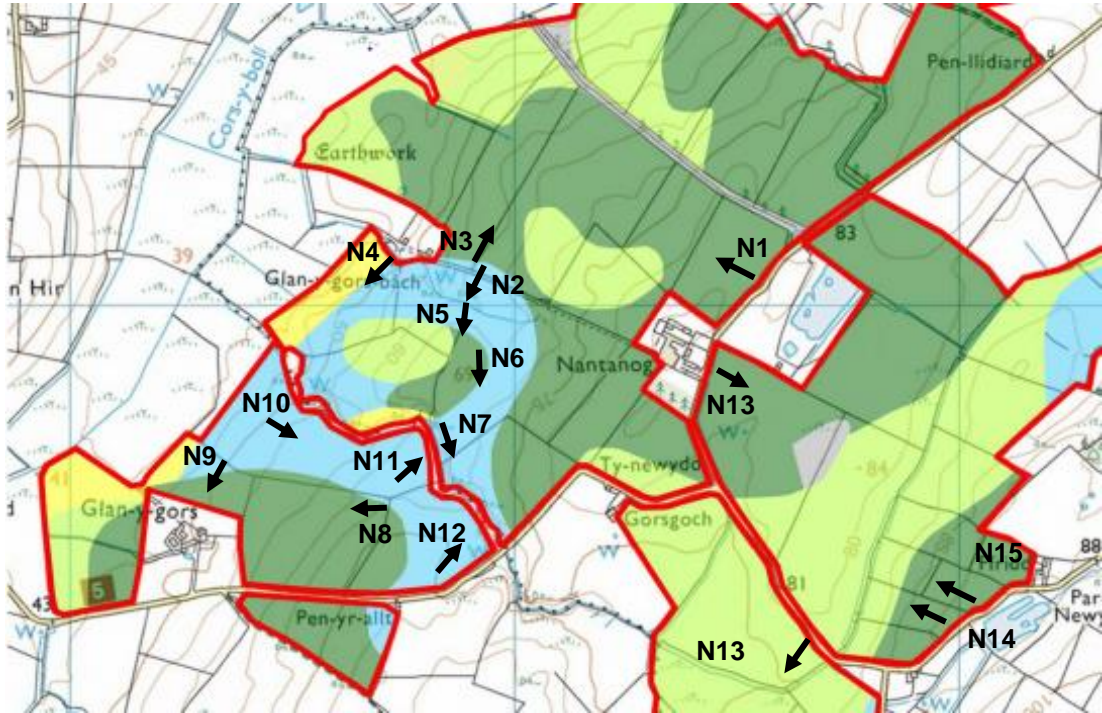


Photo N1: NW over fields 17 – 19. The land here is mostly Subgrade 3a.



Photo N2: SW towards fields 11 and 15, with Grade 2 in the foreground and Subgrades 3a and 3b towards the southern end of the field.



Photo N3: N over fields 19 and 20, mostly Subgrade 3a.



Photo N4: S over field 9, with Grade 2 and Grade 4.



Photo N5: South over a mixture of Grades 2, 3a and 3b.



Photo N6: S over Grades 3a and 2.



Photo N7: Stones at the surface, Grade 2.



Photo N8: W over field 4, Subgrade 3a.



Photo N9: S over field 2, Grades 2 and 3a.



Photos N10: E over Grade 2 land in field 7. The stone was very close to the surface here, as shown.





Photo N11: There is an area of exposed rock within the Grade 2 land.



Photo N12: Marshy area in field 6, plotted as Grade 2.



Photo N13: SE over Subgrade 3a towards the flooded area.



Photo N14: W over field 49 (subgrade 3a)



Photo N15: W over field 50 and 51 (beyond hedge) (subgrade 3a)



Photo N16 SW over subgrade 3b land



- 8.10 It can be seen in the photographs above that whilst the fields are large, and are mostly divided by wire fences, there are shallow soil areas, wet areas, prominent surface rocks, shallow buried rocks and other topographical limitations. The land is well suited to growing permanent grass and being grazed, but not to arable farming activities.
- 8.11 The farm has not been equipped for arable farming either. The buildings are not suited to arable cropping even if it was physically possible.
- 8.12 Therefore irrespective of the ALC grade, the land is not suited to other than grassland production.
- 8.13 Across Nantannog, therefore:
- (i) the land is all permanent pasture;
 - (ii) the land has been permanent pasture for at least the last 30 years;
 - (iii) the land is not well suited to being ploughed for arable use;
 - (iv) the land is mostly grazed for sheep or used for silage;
 - (v) the use for grazing of sheep can continue once the panels have been installed.
- 8.14 The impact on the farm, which is let to others, is thus limited. It will no longer be possible to make silage from the land, but otherwise grazing by sheep can continue.

Chwaen Goch

- 8.15 Chwaen Goch is a family run mixed livestock farm of 152 ha, which rents a further 144 ha in three parcels. The farmyard lies just north of the proposed solar farm site.

- 8.16 The farm keeps a breeding herd of suckler cows and a breeding flock of sheep. Cattle are in-wintered and the farm usually tries to grow about 15 – 20 ha of cereals mainly for the straw. The cereals are grown on other rented land and not on the area within the site.
- 8.17 Parts of the site have been ploughed and reseeded periodically, particularly fields 23 and 29, both of which are graded Subgrade 3b. Field 29 is not proposed for solar panels and hence future reseeded is not affected.
- 8.18 Photographs of some of the fields are shown below.

Insert 58: Location of Chwaen Goch Photographs

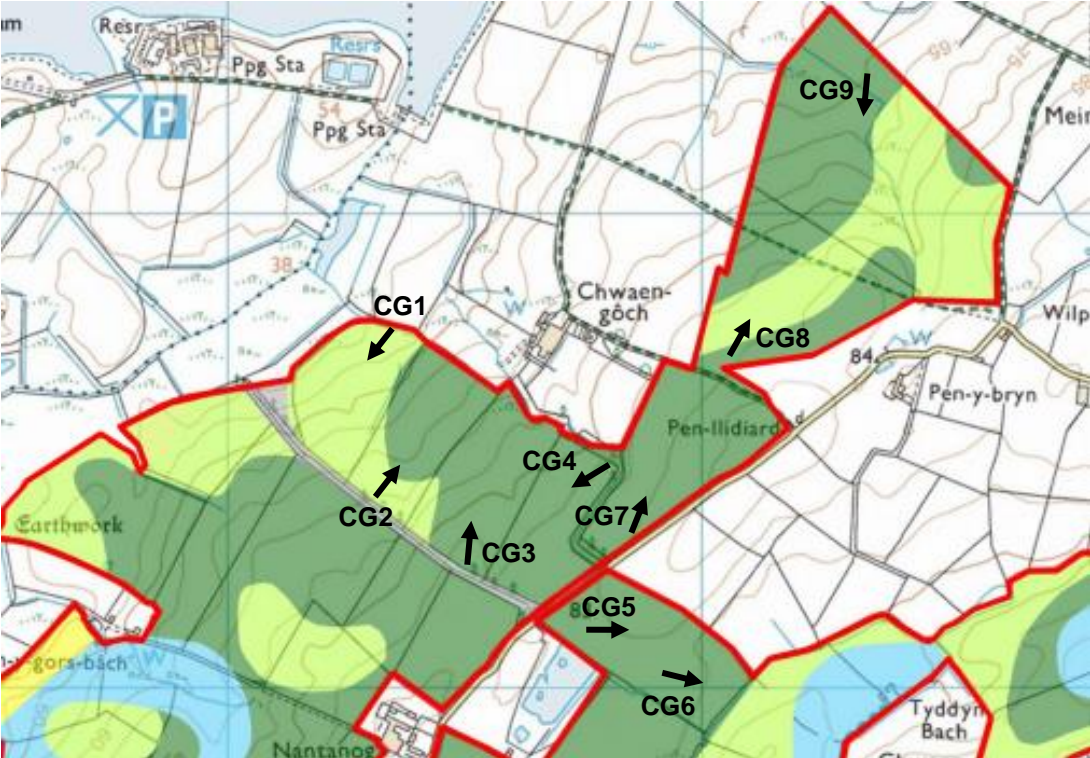


Photo CG1: SW over field 23 of Subgrade 3b, which is periodically ploughed and reseeded.



Photo GC2: NE over field 24 of Subgrade 3b and 3a, with a significant central hollow.



Photo CG3: N over field 25, Subgrade 3a.



Photo CG4: SW from the small quarry, included in the Subgrade 3a area, in the corner of field 26.



Photo CG5: Archaeological trench exposing shale close to the surface in field 30.



Photo CG6: Wet area at the east end of field 30



Photo CG7: Subgrade 3a and trench in field 27.



Photo CG8: Looking over Subgrade 3a and 3b land in field 28.



Photo CG9: S over field 29, with the watercourse being the site boundary in terms of proposed panels.



8.19 The quarry in the corner of field 26 exposes the soil profile. The shallow soil over shale rock is visible in the profile.

Insert 59: Quarry Face in Field 26



8.20 There is a ridge with large stones or rock at or just below surface level, which would prevent mechanical operations.

Inserts 60 and 61: Rocks in Field 26



8.21 The farm is used for grassland production, mostly grazed with some silage. There is an extensive area of land not within the site, and the effect of the proposed development will be reduced stocking, but no significant change to farming practices.

8.22 Overall the effect will be:

- (i) a likely reduction in the numbers of cattle kept on the holding;
- (ii) sheep numbers are expected to remain broadly similar;
- (iii) silage production will continue on areas not within the site;
- (iv) the management of sheep will continue to be undertaken by existing staff and a number of good dogs.

8.23 Overall the land is not suited to arable production and grassland uses will be able to continue with limited change.

Tan Rallt

8.24 Tan Rallt is a small farm of 36 ha. It is farmed by graziers and is managed under agri-environmental rules. There are no cattle on the land over winter and sheep are not grazed on the land until after January.

8.25 The farm was a small dairy farm until about 20 years ago and the buildings and dwelling are in need of investment.

Inserts 62 and 63: Buildings at Tan Rallt



8.26 The fields benefit from a number of old shale drains, as can be seen in some of the archaeological trenches.

Inserts 64 and 65: Shale Drains at Tan Rallt



8.27 Photos of the holding are shown below.

Insert 66: Location of Tan Rallt Photographs

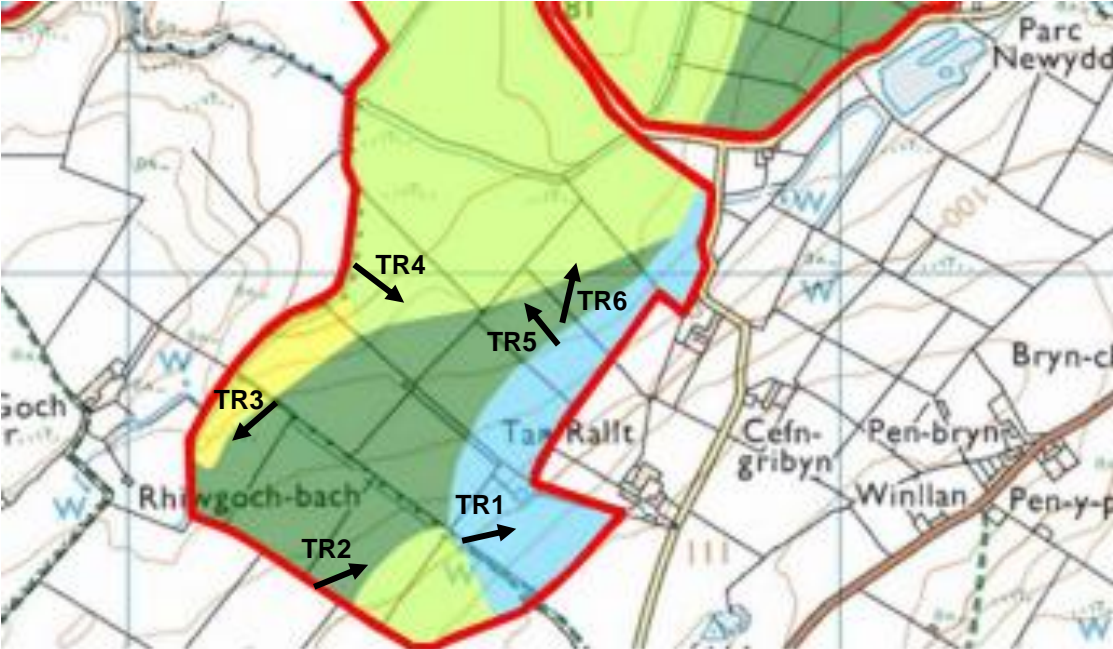


Photo TR1: NE across field 43, Grade 2.



Photo TR2: NE across field 41, Grades 3a and 3b.



Photo TR3: SW across field 39, Subgrade 3a and Grade 4



Photo TR4: SE over fields 37 and 44, Subgrade 3b through to Grade 2.



Photo TR5: Fields 45 and 36, mostly Subgrade 3b.



Photo TR6: N towards fields 46 and 47, mostly Subgrade 3b.



8.28 The farm is a grassland farm, with variable soils and land quality. It has not been ploughed for many years. Some of the land is shallow over slate and suffers from drought stress in the summer. The land has been let for the last 12 or more years. It is not suited to arable production and has no arable crop buildings.

- 8.29 Overall the effect will be:
- (i) a limited reduction in the livestock kept. Cattle can graze the land not within the site and sheep can continue to graze the site and other land;
 - (ii) overall a limited change in agricultural circumstances.

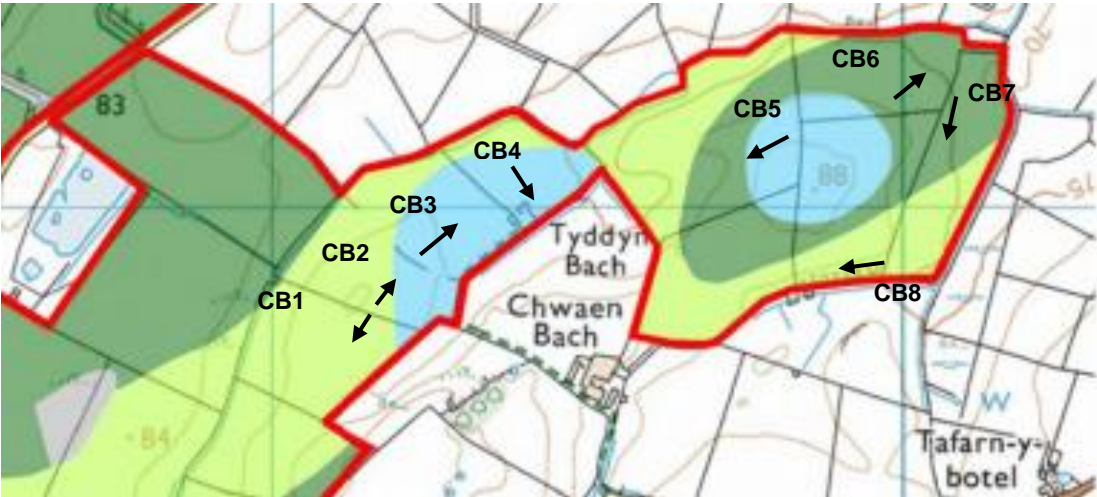
Chwaen Bach

8.30 Chwaen Bach is a grassland holding of 78 ha and which rents a further 16 ha. The farm runs a breeding flock of sheep of 600 – 650 ewes. These are lambed indoors, and the lambs are mostly finished off grass each autumn. Some of the land is ploughed and reseeded, but this is usually the subgrade 3b land, in practice.

8.31 The land is not heavily fertilised, and yields of silage are fairly low. There have been problems with worm resistance and the farmers consider they need to reduce stocking intensity in any event.

8.32 Photographs of the farm are shown below.

Insert 67: Location of Chwaen Bach Photos



CB1: SW over field 55 (subgrade 3b)



CB2: NE over fields 56 and 57 (Grade 2 and subgrade 3b)



CB3: NE over field 57 (Grade 2)



CB4: Rock outcrop in field 57 (Grade 2)



CB5: Rocks at surface in field 59



CB6: Over subgrade 3a in field 60



CB7: Wet subgrade 3a in field 62



CB8: Subgrade 3 in field 61 (on right)



8.33 It can be seen that most fields suffer from limitations. Field 55 is the only field which is of one ALC grade (in that case 3b) and is one of the most useful on the farm as a result.

8.34 In respect of Chwaen Bach, therefore:

- (i) the land is mostly permanent pasture, but some reseeding takes place;
- (ii) the farm is an all-grassland sheep farm;
- (iii) the land will remain an all grassland sheep farm.

Analysis

8.35 In practice the site is a mostly permanent pasture area, with small areas occasionally reseeded. The great majority of land has not been cultivated even for reseeding, in the last generation of farmers.

- 8.36 None of the land is used for arable cropping or vegetables. None of the farms are equipped, machinery or buildings-wise, for anything other than sheep and (in the case of one farm) cattle.
- 8.37 Most fields have physical limitations.
- 8.38 The farming practice is the production of sheep meat from breeding flocks of sheep. This will be able to continue with the panels in place.
- 8.39 In practice, therefore, the only agricultural practice changes will be the potential reduction in the stocking density of sheep across the site. There will be no change in the type of farming, the type of animal grazing, and the general operation and management for the farms involved, therefore.

9 FARMING AROUND THE PANELS AND THE PRODUCTION AND ECONOMIC IMPLICATIONS

- 9.1 There will be no big change in farming enterprises or activities as a result of the installation of panels. The land is now grazed, periodically mown, and mostly produces sheep.
- 9.2 The opportunity to produce silage or haylage within the panel areas will be limited or, in most cases, prohibited, but the farms will all be able to produce their winter forage on areas outside the panel areas. Therefore the only effects will be on reduced numbers of sheep produced from a less intensive stocking rate.
- 9.3 This section of the report seeks to quantify that in terms of productivity and economic activity.

Productivity

- 9.4 As a crude measure and in order to attempt an economic analysis, we assess the effect on overall production from 250 hectares of agricultural land assuming that stocking drops from about 8 ewes per hectare to about 5 ewes per hectare. Using the figures from the John Nix Pocketbook for Farm Management (2024, 54th edition) (2023), with the figures produced in **Appendix KCC3**, the impact on production is estimated below.

Table 5: Estimated Impact on Production

Item	Stocking density ewes/ha	
	5	8
Ewes / ha	5	8
Lambs sold/ewe put to ram	1.5	1.5
Lambs reared per hectare	7.5	12
Wool/ewe	2kg	2kg
Wool production / ha	10kg	16kg
Lamb sales at 40kg weight/ha	300kg	480kg
Kill out %	75%	75%
Meat produced kg/ha	225kg	360kg

- 9.5 Therefore the reduced production as a result of the installation of solar panels over 250 ha is as follows:
- reduced number of lambs produced per year 1,125 head²;
 - reduced wool production 1,500kg (1.5 tonnes)³;
 - reduced production of lamb meat 33,750kg⁴

² 4.5/ha x 250

³ 6kg/ha x 250

⁴ 135kg/ha x 250

Economic Implications

- 9.6 There are very many variables that affect the economic performance of sheep farming: lambing percentage, mortality, fertility rate, stocking rate, carcass kill-out percentage, local and world prices, weather, disease, ram fertility, and management decisions. Assuming that all of those are unchanged, and that the only variable is the stocking rate of ewes per hectare used for the productivity assessment, the economic effect can be estimated.
- 9.7 Taking the figures from the John Nix Pocketbook (**Appendix KCC3**), the comparison is shown below. This assumes that the lamb sales per ewe are similar, and that it is only the stocking rate that varies.
- 9.8 The Gross Margin £/ewe is estimated at £55/ewe (average) after forage costs. On that basis:
- 5 ewes/ha equals a Gross Margin of £275/ha;
 - 8 ewes/ha equals a Gross Margin of £440/ha.
- 9.9 This represents an economic reduction from sheep production of £165/ha.
- 9.10 Over the 250 ha of panels that would be a drop of £41,250.
- 9.11 In all cases, and for each farm, the reduced Gross Margin will be exceeded by the income from the rental panels.

10 KEY CONSIDERATIONS

10.1 This section considers the key considerations in the following order:

- (1) is this useable BMV land in practice?
- (2) does policy seek to protect BMV land as a resource or for its use?
- (3) will the BMV land be lost in this case by construction or decommissioning?
- (4) will reduced grazing intensity during the life of the project affect the ALC grade or land capability?
- (5) are the economic implications from reduced intensity agriculture significant or contrary to policy?
- (6) taking account of the Blackberry Lane decision, can a different conclusion be reached in this case?

Is the BMV Land Capable of Full Use?

10.2 The pattern of BMV distribution is complex across the site, with most fields involving a mix of BMV and non-BMV land. In practice this makes it very difficult or impossible to utilise the better quality land differently to the rest of the field. There may be drier areas within the fields where sheep will stand in wetter periods, but their use for any particularly different or more versatile agricultural use, when the pattern is so mixed, is not possible. The use of whole fields is mostly dictated by the poorest land in the field.

Policy Review

10.3 Future Wales 2040 (2021) sets out policy on developments of national significance. Policy 18 does not mention agricultural land quality in the decision-making framework list of key criteria, which suggests it is not of the highest importance for solar farms or other development.

10.4 Planning policy in PPW (2024) nevertheless seeks to protect BMV agricultural land from being lost. It is a resource which should be conserved **“as a resource for the future”** (paragraph 3.58). The policy does not provide a bar to development of BMV land but does seek to avoid such development if possible. That makes sense as it is a finite resource, albeit plentiful across Anglesey.

10.5 The policy is aimed at conserving the resource, however. It is not aimed at ensuring that BMV land is used in any particular way or at any particular intensity. It is a BMV resource protection policy, not an active farming production policy.

10.6 If the BMV resource is in fact conserved, and is not lost or downgraded, then the objective of the policy will have been met, whether the land is farmed or not.

- 10.7 It is recognised that TAN 6 refers to “soft” uses such as golf courses being often impractical to return to BMV quality. But that must be a judgement in each case. Golf courses, for example, involve earthworks to create greens, tees, hazards such as bunkers, and usually involve tree and bush planting to separate fairways. TAN 6 paragraph 6.2.2 is not saying that all soft uses involve irreversible development. Additionally TAN 6 identifies, in paragraph 2.1.2, that the planning system must respond to climate change, for example by accommodating the need for renewable energy generation.
- 10.8 A typical example of where a soft use does not affect land quality is the change of use of agricultural land to the keeping of horses. There is no alteration to the soil resource and agricultural land quality issues have never (in our experience) been considered as part of such applications.
- 10.9 Planning policy seeks to conserve the use, but not to insist on the BMVAL being used. That must be right, because as the ALC: Frequently Asked Questions (May 2021) explains, (copy reproduced at **Appendix KCC2**):
- “**the current land use does not affect the grade or longer-term agricultural potential**”;
 - “**the ALC grade describes what the land is potentially capable of, not what it is currently used for**”;
 - “**the current or historical agricultural management, or intensity of use, does not affect the ALC grade**”.
- 10.10 It is, the guide notes, “**extremely unlikely that an ALC grading would drop because of neglect or poor agricultural management**”. Therefore even if the land was poorly managed, the ALC grade would not be affected.
- 10.11 Accordingly there is only a policy harm if BMV land is “lost” or downgraded because of the installation of solar panels and its related infrastructure, or will be lost or downgraded by the decommissioning of the site. If that is not the case then a less intensive but continued agricultural use will not affect the underlying ALC grade nor will it be in conflict with policy in the PPW (2024).
- 10.12 Therefore:
- if BMVAL is conserved as a resource for the future, there is no harm to planning policy;
 - the intensity of use and agricultural management does not affect ALC grade;

- policy does not require BMVAL to be actively or intensively used. It seeks only to conserve the resource for the future.

10.13 Therefore whether there is harm to planning policy depends upon whether or not the resource is “lost” or downgraded.

Will BMVAL Be Lost or Damaged?

10.14 This application is accompanied by a Framework Soil Management Plan. This provides details such as:

- (i) the timing of works to avoid trafficking over wet land;
- (ii) the separating of the top and subsoils when laying cables, and their return in the correct order;
- (iii) the stripping of topsoil for the small number of fixed buildings and its retention in a low bund adjacent to the fixtures so that it can be used for restoration;
- (iv) the laying and removing of any stone in the gateways if needed to prevent the spread of mud onto the highway.

10.15 BMVAL will not be harmed by the construction.

10.16 The principles of decommissioning are described in section 6. The removal of the panels will not harm the BMV classification of the land.

10.17 As described earlier, the installation of the metal legs is not disruptive to the land. The legs are typically a “C” shape for rigidity, with the width of metal under a centimetre.

10.18 No soil is displaced as the legs simply push into the soil. There is no excavation and no digging involved.

10.19 So far as I am aware, no solar farms have been dismantled yet, but the removal of the legs should be a straightforward operation. As shown in the photo below, the steels have holes in them for cabling, but which can also be used to insert a hook. A mechanical bucket can then simply lift the legs back out of the soil. The small hole left will simply fill in naturally, as it does when you pull out a fence post or stake.

Insert 68: Legs



- 10.20 The cabling could be left in the ground, if deeper than 30cm (plough depth maximum) or could be dug out. Water pipes are under many fields and repairs dig down to the pipe, repair and replace the soil with no long term impact on agricultural quality, so removal of the cabling should be similarly easy.
- 10.21 Only one compound area under the inverters and switchgear is required. At the time of construction the topsoil for these areas will be scraped to the side and left in a shallow bund of under one metre in height. On removal of the concrete, which will be within the top 30cm of the soil, the stored topsoil can be pushed back into the hole. It will be advisable to loosen the subsoil with a subsoiler, prior to moving topsoil back, so long as the ground conditions permit.
- 10.22 Accordingly the development is reversible and can be decommissioned without affecting the quality of the land.
- 10.23 We have been involved in pipeline soil management, including where large gas, water etc pipes are laid under BMVAL. They restore rapidly. There is no long term loss of BMVAL.
- 10.24 Archaeological work has been carried out across the site involving trenches. There is no evidence of this work – the land has restored rapidly.
- 10.25 Archaeological work has exposed historic shale drainage systems. The soil above the trench will have been dug up and put back. As shown below, the soil has recovered perfectly.

Insert 69: A Shale Drain (the soil structure over it is indistinguishable to the rest of the trench)



10.26 Therefore if done properly there will be no loss or downgrading of BMV agricultural land.

Does Reducing Intensity of Use Affect Grading?

10.27 The Welsh Government Frequently Asked Questions (**Appendix KCC2**) is clear: intensity of use does not affect the ALC grade.

Is Reduced Intensity of Use Contrary to Policy?

10.28 The land is used for grazing sheep. The intensity of grazing will reduce, as estimated earlier. There is no obligation, incentive or mechanism to require or stipulate how many sheep a farmer stocks per hectare. Increased production from increasing grazing intensity is not Government policy.

10.29 In the Agriculture (Wales) White Paper Consultation Document (December 2020) it was noted, at 1.33, that **“there is increasing evidence that agricultural intensification has adverse impacts upon society through reductions in air and water quality, carbon emissions and reductions in farmland biodiversity”**. The Sustainable Land Management proposals, paragraph 2.50, states **“should reward farmers appropriately for the production of non-market goods (improved soils, clean air, clean water, improved biodiversity, actions to reduce global warming) at levels above those set by regulation through the management of land in a sustainable way”**.

- 10.30 Planning policy, and wider agricultural policy, does not seek to see BMV agricultural land farmed intensively or as arable land. It is there to conserve the resource. There may come a time when food supply is short and we need to reconsider the priorities for our land and conserving BMVAL ensures that it is there should it be needed.
- 10.31 The policy is not harmed if the land is not farmed intensively or for arable use.
- 10.32 By good management the soil resource will not experience any short or long-term harm. The BMV quality will not be affected. The resource will not be “lost”. Hence planning policy in the PPW is not harmed. There is detailed evidence to show this is achievable.
- 10.33 The reduced level of intensity of grazing through the life of the scheme will not affect the BMV status. It will not harm policy, which makes no requirement for land to be farmed at any level of intensity, even BMV. On the contrary, lower intensity grazing with no inorganic fertilisers, no ploughing and less grazing pressure will help meet the objectives for sustainable land management that the Government is considering.

11 RESPONSE TO PRE-APPLICATION CONSULTATION CONCERNS

- 11.1 This section addresses the comments of the Soil, Peatland and Agricultural Land Use Planning Unit, dated 13th December 2023, reproduced in **Appendix KCC4**.
- 11.2 The response raised the following key points:
- (i) considerable weight has not been given to protecting BMV agricultural land. In the Department's view the loss of 159 ha of BMV is an unacceptable adverse impact on a vital national natural resource, and Anglesey is a nationally important resource for the country's agricultural capability;
 - (ii) the Department accepts the benefits of solar but does not accept that there is an overriding need for the development of BMV agricultural land;
 - (iii) if land is damaged recreation of BMV agricultural land is not possible. The Department does not consider that the development is temporary (40 years), and it could be repowered. The land could only be used for extensive, low-level grazing at best with panels installed;
 - (iv) the Welsh Minister's decision on the Elwy Solar scheme (DNS/3247619) is relevant.
- 11.3 This section summarises the response, drawing largely on earlier sections for description, and in this section referencing recent DNS and Planning Inspector decisions from both Wales and England that address each of the points. As a result there is a bit of repetition, but this is minimised so far as possible.
- 11.4 This response addresses each of the issues in order towards the end of the response. However, it initially seeks to consider some of the technical issues and comments that have been raised, in particular:
- 1) whether BMV land is "lost", damaged or downgraded;
 - 2) whether unfettered agricultural use post decommissioning will be affected;
 - 3) whether the development is temporary;
 - 4) whether there is a high risk that there will be repowering;
 - 5) whether there is any policy requirement or initiative to require land to be farmed other than for grazing;
 - 6) what the land is actually used for;
 - 7) what the effects, in terms of agricultural production, would be.

Issue 1): is the Land "Lost"?

- 11.5 The methodology for installing solar PV arrays has been described. Of the order of 1.8 ha of Grade 2 and 3a land will be affected by tracks and infrastructure, which could be restored fully on decommissioning.

11.6 The Department's consultation response letter concludes that all 159 ha is lost and is to be considered as permanently lost to agriculture. That is not the case. As shown below, grazing can continue under the panels. Therefore the use of the land for agriculture is not lost, temporarily or permanently, except for areas affected by tracks and substations. Ongoing use, illustrated below, will be agricultural in combination with, above the grazing, energy generation.

Inserts 70 and 71: Photos from two operating solar farms are shown below.



11.7 A combined use of that type occurs with, for example, agro-forestry practices.

11.8 The handling of soils during the construction, operational and decommissioning phases has been described. The land will not be "lost". It will not be sealed. It will not be irreversibly downgraded.

11.9 This matter has been examined multiple times in the last two years by the Planning Inspectorate. The following are relevant:

- (i) in the decision on the Nationally Significant Infrastructure Project at Little Crow, Lincolnshire, which included 36.6 ha of Subgrade 3a, the Secretary of State agreed with his Inspector that the effect would be **"medium term, reversible, local in extent and of negligible significance during the operational phase with a moderate beneficial effect for the quality of soils because intensive cropping would be replaced with the growing of grass"** (para 4.50);

- (ii) in the appeal decision for the solar farm at Bramley, Hampshire (APP/H1705/W/22/3304561) the Inspector, noting that 53% of the site was of BMV, noted (para 58) **“The agricultural land would not be permanently or irreversibly lost, particularly as pasture grazing would occur between the solar panels. This would allow the land to recover from intensive use, and the soil condition and structure to improve. The use of the soils for grassland under solar panels should serve to improve soil health and biodiversity and the proposed LEMP, which could be secured by a condition attached to any grant of planning permission, includes measures to improve the biodiversity of the land under and around the panels”**.
- (iii) in the NSIP decision at Longfield Solar Farm of 26th June 2023 (EN 010118) the Secretary of State agreed with his Examining Authority that the use of 150 ha of BMV, as part of a larger site, should be ascribed **"a small amount of negative weight in the planning balance"** (para 4.59). It was concluded that about 6 ha would be lost, and the rest would be lost temporarily. There would be no jeopardising of **"the UK's food security either now or in the future"** (para 4.57);
- (iv) in the planning appeal decision on 27th June 2023 for land south of the Leeming Bar substation, the Inspector considered whether or not land was Grade 2 or subgrade 3b. In her decision (APP/G2713/W/23/3315877) the inspector noted that agricultural use could continue during the operational phase (para 20), there would likely be improvements to soil health from being rested from intensive arable use (para 21), a change from arable to grassland use is not a matter subject to planning controls (para 22), there would not be temporary or permanent loss of BMV land (para 25) and the proposals (in that case of 65 ha) would not be detrimental to the nation's food security (para 26);
- (v) in the decision on land west of Thaxted of 18th December 2023 (APP/C1570/W/23/3319421), which involved 55 ha of BMV, the Inspector was clear that the land would not be adversely affected except for areas of tracks and fixed infrastructure, and any woodland planting that is not removed at decommissioning. The Inspector noted, inter alia, that whilst careful consideration needs to be given to BMV, none of the policy or guidance prohibits its use for large scale solar farms (paragraph 96), there is no evidence that taking 55 ha out of production, if sheep grazing did not take place, would affect food security and nothing in the Food Strategy changes the position towards the use of BMV for solar (paragraph 102), the agricultural land quality of the majority of the site would not be affected (paragraph 112);

- (vi) in the Inspectors report for the DNS scheme at St Asaph (DNS/3247619) the Inspector made the following comments. I address the Minister's decision later. The Inspector stated, inter alia, that **"I am therefore satisfied that the technical details necessary to minimise the risk of damage to the soil resource and the likelihood of permanent loss of BMVAL could be delivered by the construction Method Statement, the outline and detailed Decommissioning Method Statement and the Soil Management Plan, secured by way of conditions"** (para 310). She went on to conclude **"Nevertheless, because the proposal would be temporary and the proposed mitigation would ensure that it would not degrade the quality of the land over the time it would be in place, I find that it would not result in any irreversible or permanent loss of agricultural land"** (para 314).
- (vii) in the Inspector's report for the DNS scheme at Llanfihangel-yn-Nhowyn, Anglesey (DNS/3217391) the Inspector commented that **"I have found that the BMV value would be retained and/or restored during construction, operation and when the proposal was decommissioned subject to the recommended conditions. These further two considerations are significant and weigh heavily in support of my decision on BMV"** (para 327). She went on to conclude that **"The full potential of the BMV land would therefore not be conserved during the period that the solar farm was in place. Given the small area of land which could be farmed to its full, BMV value in this case, however, this is a minor failing. It does not undermine my conclusion that the proposed development would not harm the BMV resource and, in any case, would be consistent with PPW"** (para 328);
- (viii) in the Inspector's report for the DNS scheme at Penpergwn, Monmouthshire (DNS/3252305) the Inspector concluded that **"I am satisfied that the construction and decommissioning details and practices necessary to minimise the risk of significant damage to soils, and possible permanent loss of BMVAL, could be delivered and secured by means of suitable conditions"** (para 271). He went on to conclude **"Overall, because the proposal would be temporary and conditions would ensure that it should not degrade the quality of the land over its lifetime, I am satisfied that it would not result in significant permanent or irreversible loss of BMVAL"** (para 275).
- (ix) using just one further example of many from the English equivalents at Natural England, their response to a solar site of 55 ha of BMV (Uttlesford District Council UTT/21/1833/FUL) stated that **"the proposed development would not appear to lead to the loss of over 20 ha 'best and most versatile' agricultural land (para 170 and 171 of the National Planning Policy Framework). This is because the solar panels would be secured to the ground with limited soil disturbance and**

could be removed in the future with no permanent loss of agricultural land quality likely to occur. Therefore, we consider that the proposed development is unlikely to lead to significant and irreversible long-term loss of best and most versatile agricultural land, as a resource for future generations”;

- (x) in the decision at Great Wymondley (APP/X1925/V/23/3323321) the Secretary of State agreed with his Inspector on a site of 85 ha of wholly BMV quality (Grades 2 and 3a) that BMV land would not be adversely affected (IR 12.57) and could be farmed, and that there was no policy to require land to be farmed in a particular way (IR 12.57).

11.10 On Issue 1), there is therefore widespread opinion that the land is not lost, or degraded, by the installation of solar PV arrays. Only the small areas for tracks etc are potentially affected.

11.11 In the numerous decisions referred to above, there is general agreement that only areas where there is physical disturbance, eg to create battery storage areas, tracks, etc, is there potential loss. In the Thaxted decision the Inspector also concluded that tree planting areas were unlikely to be cut down for future farming.

11.12 In the three Welsh DNS decisions, the Inspector’s concluded that there was the potential for full restoration of the areas:

- (i) in the DNS/3247619 decision at St Asaph the Inspector concluded in para 314 that **“nevertheless, because the proposal would be temporary and the proposed mitigation would ensure that it would not degrade the quality of the land over the time it would be in place, I find that it would not result in any irreversible or permanent loss of agricultural land”;**
- (ii) in the DNS/3217391 decision at Llanfihangel-yn-Nhowyn the Inspector concluded in para 322 that **“in this case, as a result of the attention given to the matter and the safeguarding conditions which would be imposed, I do not consider that the quality of the BMV land would be significantly reduced;**
- (iii) in the DNS/3252305 decision at Penpergwym the Inspector concluded at para 271 that **“taking all of these factors into account, I am satisfied that the construction and decommissioning details and practices necessary to minimise the risk of significant damage to soils, and possible permanent loss of BMVAL, could be delivered and secured by means of suitable conditions”.**

Issue 2: Is Unfettered use Possible Post-decommissioning?

11.13 All of the above decisions have identified that there is no longer term limitation as a result of the proposals. Post-decommissioning, therefore, agricultural use is unaffected.

11.14 In their consultation response WG set out an opinion that the development is not temporary. This seems to be based on the longevity of the operational phase (issue 3 below). As noted, there does not seem to be any disagreement that, post decommissioning, the land will be the same afterwards as it is before installation.

Issue 3: Whether the Development is Temporary

11.15 WG expressed the opinion that 40 years “is long-term and generational”, and reference TAN 6 and comment that return to agricultural use is seldom practical.

11.16 In respect of whether this is a temporary consent, the various Inspectors have commented as follows:

- (i) **“whilst this is a significant period of time, it is not permanent”** (Scruton, 3315877, paragraph 20);
- (ii) **“whilst 40 years represents a long-term, generational change, the development would not represent a permanent loss of the finite BMV resource”** (Thaxted, 3319421, paragraph 108);
- (iii) WGDCC raises concerns **“because of its generational loss over 40 years”** Penpergwn, (DNS/3252305 para 263), but **“because the proposal would be temporary and conditions would ensure that it should not degrade the quality of the land over its lifetime, I am satisfied that it would not result in significant permanent or irreversible loss of BMVAL”** (para 275);

11.17 WG’s consultation references TAN 6, which contains guidance from 2010 (and hence prior to solar farm applications) that return from soft uses, such as golf courses, is seldom practicable. The three DNS Inspectors have grappled with TAN 6:

- (i) at Gwernigron Farm (DNS/3247619) the Inspector stated at 313 and 314 as follows:
“staying with the matter of the temporary nature of the development, I am mindful of the guidance contained in TAN 6 which advises that restoring land to BMV quality is seldom practicable. However, I note the applicant’s contention that a reliance on TAN 6 in this regard is misplaced given that the guidance in paragraph 6.2.2 was provided at a time when, it is agreed, there was no evidence base in respect of the potential to return solar PV developments to agricultural use.
Nevertheless, because the proposal would be temporary and the proposed mitigation would ensure that it would not degrade the quality of the land over the time it would be in place, I find that it would not result in any irreversible or permanent loss of agricultural land”.

- (ii) at Llanfihangel-yn-Nhowyn (DNS/3217391) the Inspector at 323 stated as follows: **“TAN 6 states that once agricultural land is developed, even for ‘soft’ uses such as golf courses, its return to agriculture as BMV agricultural land is seldom practicable. The applicant pointed out at the hearing that the construction of golf courses involves much excavation and movement of soil to create the typical features such as bunkers and other hazards, greens, and fairways. The installation of a solar farm would not require as much disturbance of the soil, which as explained can be one of the main causes of a degradation in quality. The comparison with golf course construction is not, therefore, compelling or helpful”.**
- (iii) at Penpergwn (DNS/3252305) the Inspector commented at 274 that **“I am mindful of the guidance contained in paragraph 6.22 of TAN 6, which advises that that once agricultural land is developed, even for soft uses such as golf courses, its return to BMVAL is seldom practicable. I also note that the applicant points out that the guidance, published in 2010, was provided at a time which pre-dates the emergence of large-scale solar schemes in the countryside”.**

Issue 4: Repowering Risk

- 11.18 WG’s consultation response comments that **“there is a high risk that an application for repowering may be made”**, which adds to their conclusion that this is a “loss” of BMV.
- 11.19 The Inspector in the Thaxted case addressed this issue, raised by the Council, albeit in connection with the English NPPF. In her decision (3319421, December 2023, para 108) she stated **“The Council suggested that recent changes to the NPPF relating to future re-powering and life extension of renewable and low carbon energy developments (paragraph 155a) would make it more likely that the development would become permanent. However, I must deal with the development on the basis of what is applied for. Decisions regarding any future use of the site would be made having regard to circumstances and policies in force at that time”.**

Issue 5: Whether there is any policy initiative or requirement for land to be farmed other than grazing.

- 11.20 WG’s consultation response states that **“the land could not, if needed, be farmed to its BMV potential, due to the infrastructure installed for solar generation. The land would be limited to extensive, low-level grazing at best”**. This is stated as though this is considered to be a harm, though if that is in actual or policy terms is not clear.
- 11.21 This matter was considered in the three Welsh DNS decisions referred to:

- (i) at Gwernignon Farm (DNS/3247619) the Inspector noted at paragraph 320 this particular concern and stated **“I have had regard to WGCC’s stated position that whilst it is fully cognisant of the need to meet legally binding Net Zero targets, it also needs to ensure that Wales can adapt to changes in climate. BMVAL is needed to ensure food security. In my opinion, the reversible nature of the development means that it would align with the thrust of national planning policy to conserve BMV for the future”**;
- (ii) at Llanfihangel-yn-Nhowyn (DNS/3217391) The Inspector stated variously as follows: **“whilst PPW requires BMV to be conserved it cannot insist that such land be farmed in any particular way or at an intensity commensurate with its high value. Indeed, it need not be farmed at all. Financial incentives can be provided for using land in a specified manner, for example for rewilding, but as far as I am aware there are no other policy regimes which dictate how land must be farmed”** (para 324). In respect of flexibility to change enterprise, **“The proposed development would not permit this to take place within the DAs, either where the land was covered with panels, or where the areas of undeveloped land remaining were too small to farm effectively”** (para 325). She concluded **“Not farming the land to its full BMV potential, for example during the lifetime of the scheme, would not be contrary to planning policy. Nonetheless, the proposed development would render that option impractical. The full potential of the BMV land would therefore not be conserved during the period that the solar farm was in place. Given the small area of land which could be farmed to its full, BMV value in this case, however, this is a minor failing. It does not undermine my conclusion that the proposed development would not harm the BMV resource and, in any case, would be consistent with PPW”** (para 328).
- (iii) At Penpergwn (DNS/3252305) the Inspector concluded in paragraph 273 that **“I accept that there would be some loss of ability to use the 16.8ha of BMVAL under panel to its full potential over the lifetime of the development, which needs to be weighed in the balance”**, and concluded in 287 as follows: **“The use of some 16.8ha of BMVAL to its full potential for food production, such as the growing of arable groups, would be compromised during the 40-year lifetime of the solar farm, but mitigation measures secured by condition, should ensure that, in accord with PPW, it is conserved as a finite source for the future. I also note WGDC’s view that the proposed development complies with paragraphs 3.58 and 3.59 of PPW and I see no reason to disagree”**.

11.22 The English decisions on this point include:

- (i) at NSIP Longfield Solar Farm (EN 010118) the Inspector concluded at 4.57 that there would be no **“jeopardising of the UK’s food security either now or in the future”**;
- (ii) at Scruton Solar Farm (3315877) the Inspector concluded, after much evidence, in paragraph 26 that **“Moreover, I note that the majority of crops grown on the appeal site at present are largely used for industrial purposes rather than supplying the food chain, whereas if it were to be used for grazing of sheep it would be contributing food for human consumption. As such, I am satisfied that the proposed use of the land would not be detrimental to the nation’s food security”**;
- (iii) at Thaxted (3319421) the Inspector concluded in paragraph 102 that **“I heard no compelling evidence that taking out of production almost 55ha of BMV on the appeal site, for a 40 year duration, would have a significant negative impact on food security either on its own or cumulatively with other BMV losses, nor that it would be likely to increase imports from other countries”**.

11.23 Welsh agricultural and agri-environmental requirements do not require BMV land to be farmed, or farmed for arable use. They do not identify, so far as we are aware, that a grassland use is not farming land **“to its full potential”**.

Issue 6: What is The Land Used For?

11.24 WG’s express concern about food production. Whether that is a concern to which weight should be given or not, is predicated on the concern that the land could not be farmed to its full potential. The inference is that **“full potential”** is a reference to arable use.

11.25 None of the land within the Application Site is in arable use. It is all grazing land, and mostly grazed by sheep. As a matter of fact the farming enterprises will not change, and sheep grazing will continue.

Issue 7: What the Effects on Production Would Be?

11.26 The likelihood is that the number of sheep run across the site with the solar panels in place will be reduced. An estimated reduction is from 8 ewes/ha to 5 ewes/ha.

11.27 The Sustainable Farming Scheme **“Keeping Farmers Farming”** consultation document (14th December 2023) is of limited weight, as it is a consultation document. In the Ministerial Foreword, Lesley Griffiths MS notes that **“the urgency of the climate and nature emergency cannot be overstated”**.

11.28 The consultation does not seek to increase, or even maintain, the current level of agricultural production. The Introduction states as follows:

“Producing safe, high-quality food is vital in Wales and for Wales. However, the economic challenges we face, and the climate and nature emergency we are in the midst of cannot be tackled in isolation. Every sector of our economy needs to play its part in reducing Wales’ emissions and reversing the decline of our biodiversity. This is increasingly becoming a key economic necessity, i.e. to compete in a decarbonising global economy and respond to growing consumer demands.

This is not a choice between producing food or protecting the environment. Farming takes place within the environment, and the wider environment provides the conditions and resources needed to produce food. We are already experiencing more extreme seasonal patterns in Wales such as more flooding, and more hot dry summers. These events are becoming the norm, not the exception.

We must respond now to protect our livelihoods and those of our future generations. We know how to produce exceptional food, but we need to adapt our practices to cope with these financial and climatic disruptions, and ensure agriculture is not only resilient, but a profitable thriving industry”.

11.29 The consultation proposes that, for entry to the scheme, at least 10% of each farm should be managed as habitat for the benefit of wildlife alongside the production of food, and 10% as tree cover.

11.30 The effects on food production, assessed in this report, estimated a decrease of 1,125 finished lambs per year. The current number of sheep and lambs in Wales is 8.69 million, down 7% from 2022. The number of sheep and lambs peaked at 11.8 million in 1999 (Survey of Agriculture and Horticulture, June 2023, Welsh Government (23 November 2023)).

Addressing the Four Responses/Concerns

11.31 The four concerns are responded to, in summary, as follows.

11.32 **Has Considerable Weight Been Given?** In the three DNS decisions referred to above, all of these matters were reviewed and each Inspector concluded that considerable weight had been given to the inclusion of BMVAL.

- 11.33 Anglesey includes a high proportion of BMV, but the site is all grazed. In the DNS decision in Monmouthshire (DNS/3252305) the Inspector noted that 48% of Monmouthshire was predictive BMV (para 256), but overall concluded that considerable weight had been given to the effects on soils and BMV (para 262).
- 11.34 **The Balance of Overriding Need.** This will be a matter for the decision taker, weighing the matters raised.
- 11.35 **Return to Agricultural Use is Seldom Practicable.** This is addressed fully in this response. The agricultural use, except for small areas (1.8 ha of BMV) is not lost. Agricultural use continues. Return to unfettered agricultural use on decommissioning is entirely practicable and will be required, and controlled, by condition.
- 11.36 **Welsh Minister’s Decision at St Asaph.** The Minister’s decision was at odds with her Inspector’s report. She noted in 69 that the loss of full productive capacity of BMVAL “**could impact on the objective of ensuring future food security**”, although there is no policy reference provided. The Alaw Mon site is also grazed, and with sheep. That use will continue. There will be a minor effect on food production as a matter of fact, but there is no policy in place anyway to require the land to be farmed for food production.

12 SUMMARY AND CONCLUSIONS

- 12.1 The proposed development involves installing solar panels over approximately 258 ha of agricultural land. The land is all farmed, almost all being permanent grassland, and almost all used for grazing sheep and some silage production.
- 12.2 The agricultural land quality of the Site has been assessed, and found to comprise a mixture including Grade 2, subgrade 3a and 3b and Grade 4. The pattern is complex and many fields contain a mix of different grades.
- 12.3 Land that falls into ALC Grades 2 and 3a is defined in policy as the “best and most versatile agricultural land” (BMV). Such land should be recognised as an important resource, and the Minister for Climate Change has recently confirmed that should applications fall to her department for consideration, she will object where the development involves the “loss” of BMV agricultural land unless there are significant material considerations that outweigh the need to protect such land.
- 12.4 It is concluded that the proposed development will not result in the loss of any land of BMV quality. The BMV resource will be protected, and will continue in agricultural use.
- 12.5 The land is currently grassland, grazed mostly by sheep. The land will continue to be grazed by sheep in combination with energy production.
- 12.6 This assessment therefore concludes that the ALC resource will not be lost, nor will agricultural production cease, and therefore there is protection of the BMV resource.

APPENDIX KCC1
Minister for Climate Change Letter to
Chief Planning Officers (1st March 2022)

Julie James AS/MS
Y Gweinidog Newid Hinsawdd
Minister for Climate Change



Llywodraeth Cymru
Welsh Government

Ein cyf/Our ref

To: Chief Planning Officers

1 March 2022

Dear Chief Planning Officers

Planning Policy Wales (PPW) paragraphs 3.58 and 3.59 outlines national policy towards safeguarding Wales' Best and Most Versatile (BMV) agricultural land.

Future Wales, the National Plan 2040, identifies BMV agricultural land as a national natural resource under Policy 9.

Further guidance is provided in Technical Advice Note (TAN) 6, including the consultation arrangements with the Welsh Government included at Annex B*; and, Practice Guidance: Planning Implications of Renewable and Low Carbon Energy).

Specifically PPW states that:-

'.....in development plan policies and development management decisions **considerable weight** should be given to protecting such [BMV] land from development, because of its special importance. Land in grades 1, 2 and 3a should **only** be developed if there is an overriding need for the development, and either previously developed land or land in lower agricultural grades is unavailable, or available lower grade land has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs the agricultural considerations.

The purpose of this letter is to clarify that in accordance with Welsh Government policy outlined above, where BMV land is identified within a proposed solar PV array development, considerable weight should be given to protecting such land from development, because of its special importance, and unless other significant material considerations indicate otherwise it will be necessary to refuse permission. I have instructed officials to monitor closely proposals that would involve the loss of BMV land.

Local Planning Authorities (LPA's) are required to consult with the Welsh Government before granting planning permission for any proposals which do not accord with the Development Plan and would involve the loss (both permanent and temporary) of 20 hectares or more of BMV land. This includes losses which are less than 20 hectares but likely to lead to further losses amounting cumulatively to 20 hectares or more (Article 14 (1) of the Town and Country Planning (Development Management Procedure) (Wales) Order 2012/801 imposes this requirement).

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Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Whilst LPA's are not required to consult with the Welsh Government on planning applications which do not 'trigger' the statutory requirement as set out in Annex B, paragraph B2, any loss of BMV land may be a material consideration in the determination of planning applications.

For planning applications which do not 'trigger' the statutory requirement, as set in in Annex B, paragraph B2, the Welsh Government may take the initiative in commenting on planning applications as set out under Annex B, paragraph B5.

Should solar PV array applications on BMV agricultural land come before the Department for Climate Change, the Department will object to the loss of BMV agricultural land unless other significant material considerations outweigh the need to protect such land in accordance with Welsh Government policy and guidance outlined above.

When considering the search sequence and in development plan policies and development management decisions it is important to have access to accurate land quality information. The freely available [Predictive Agricultural Land Classification \(ALC\) Map 2](#) (version 2, 2019) published by Welsh Government identifies BMV land locations. Further guidance on its use and the need for ALC surveys can be found here - [Agricultural land classification: predictive map guidance | GOV.WALES](#).

ALC surveys are complex and the reports technical in nature and the Welsh Government therefore offers a free ALC report validation service which we would encourage LPAs to utilise. All consultations can be emailed to the Land Quality Advisory Service: LQAS@gov.wales

Yours sincerely



Julie James AS/MS
Y Gweinidog Newid Hinsawdd
Minister for Climate Change

* TAN6 Annex B Reference - Article 10 of the GDPO 1995 was revoked by the Town and Country Planning (Development Management Procedure) (Wales) Order 2012/801 and replaced by article 14(1) of this Order. References to SEED are now replaced by [Land Quality Advice Service](#).

APPENDIX KCC2
Welsh Government's Frequently Asked
Questions (May 2021)

Agricultural Land Classification

Frequently Asked Questions

May 2021.



Llywodraeth Cymru
Welsh Government

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General Background Questions

What is the ALC system?

The Agricultural Land Classification (ALC) system provides a method for assessing the quality of farmland in England and Wales. The ALC system classifies land into five grades, with 1 being the best and 5 being the worst and Grade 3 subdivided into Subgrades 3a and 3b. The current grading methodology is described in [The Agricultural Land Classification of England and Wales Revised Guidelines and Criteria for Grading the Quality of Agricultural Land \(MAFF 1988\)](#) sometimes referred to as 'The Blue Book'.

What is agricultural land?

Agricultural land is land which is capable of being used for agricultural purposes (e.g. cropping). The current use of the land does not affect the grade or agricultural potential of the land. Where the potential for agriculture has been irreversibly lost (e.g. through housing development) the land should no longer be classed as agricultural. For planning purposes, it is recommended that the Local Planning Authority is contacted to confirm the status of the land. Also see: [Can land be high grade if it is not cropped or is used for grazing?](#)

What is ALC used for?

The ALC is used to grade the quality of agricultural land so that informed decisions can be made over its future use within the planning system. The planning systems in England and Wales seek to conserve the 'Best and Most Versatile (BMV) agricultural land. Government policies in **Wales** with regard to BMV land can be found on the Welsh Government ALC webpages at: [Welsh Government Web Topic - Agricultural Land Classification](#) BMV policies in **England** are set out in the National Planning Policy Framework.

What is Best and Most Versatile agricultural land?

National planning policy defines the Best and Most Versatile agricultural land as land within grades 1, 2 and 3a. This is good to excellent quality land which can best deliver the food and non-food crops for the future.

How does the Agricultural Land Classification system grade land?

The criteria for grading are based on the long term physical limitations of land for agricultural use, such as **climate** (temperature, rainfall, aspect, exposure and frost risk), **site** (gradient, micro-relief and flood risk) **and soil** (texture, structure, depth and stoniness, and also chemical properties which cannot be corrected), and interactions between these factors such as soil wetness, droughtiness and erosion. Field survey to obtain site and soil data is required. The current grading methodology is described in: [The Agricultural Land Classification of England and Wales Revised Guidelines and Criteria for Grading the Quality of Agricultural Land \(MAFF 1988\)](#)

What do the different grades mean?

Generalised Description of the Agricultural Land Classification Grades

Grade & standard colour notations	Description of agricultural land	Detail
1	Excellent quality	No or very minor limitations on agricultural use. Wide range of agricultural and horticultural crops can be grown. High yielding and consistent.
2	Very good	Minor Limitations on crop yield, cultivations or harvesting. Wide range of crops but limitations on demanding crops (e.g. winter harvested veg). Yield high but lower than Grade 1.
3 (subdivided)	Good to moderate	Moderate limitations on crop choice, timing and type of cultivation, harvesting or level of yield. Yields lower and more variable than Grade 2.
3a	Good	Moderate to high yields of narrow range of arable crops (e.g. cereals), or moderate yields of grass, oilseed rape, potatoes, sugar beet and less demanding horticultural crops.
3b	Moderate	Moderate yields of cereals, grass and lower yields other crops. High yields of grass for grazing/ harvesting.
4	Poor	Severe limitations which restrict range and/or level of yields. Mostly grass and occasional arable (cereals and forage), but highly variable yields. Very droughty arable land included.
5	Very poor	Severe limitations which restrict use to permanent pasture or rough grazing except for pioneering forage crops.

A full description of the grades can be found in [Appendix 1](#).

Can land be high grade if it is not cropped or is used for grazing?

The current land use does not affect the grade or longer term agricultural potential of the land. Land use is an economic and management choice of the land manager. The ALC grade describes what the land is potentially capable of, not what it is currently used for.

Can the ALC grading be changed by farming practices?

Normal agricultural land management will rarely, if ever, affect the ALC grading of land. The grading is based on the long term physical and chemical limitations of land for agricultural use. The current or historic agricultural management, or intensity of use, does not affect the ALC grade. ALC grading could potentially only be improved by very major and expensive interventions, well beyond the scope of normal agricultural works. Examples could include major new drainage schemes, new flood defence systems or infilling / levelling of highly uneven land. It is extremely unlikely that an ALC grading would drop because of neglect or poor agricultural management.

Will fertilizer improve the grade?

Applications of fertiliser or lime are part of the normal management of agricultural land and do not affect the grade. Normal fertiliser levels in the soil have no bearing on ALC grade. Chemical limitations in ALC relate to major long term problems that cannot easily be remediated. These can include extreme acidity, saline environments and presence of toxic elements.

What can I grow on my land? (Crop suitability)

The suitability of land for certain crops is determined by a variety of factors. The ALC Grade of the land doesn't determine what can be grown, but indicates the type of crops that are generally suited to land of that quality and versatility. Typical crops are given in Appendix 1.

Are land values determined by ALC grade?

The ALC system was developed to inform land use planning decisions. The use of the ALC system for land valuation has never been intended and should not be used for this purpose.

Grade and Map Questions

What is the grade of my land?

The only way to accurately determine the agricultural grade of land is by way of a detailed field survey in accordance with the current ALC 1988 guidelines. [What does a detailed field survey involve?](#)

In **Wales**, the Welsh Government holds detailed field survey information for selected areas and a predictive map which can be found at <http://lle.gov.wales/map/alc2>. For further information please contact LQAS@gov.wales.

The most up-to-date information on ALC Grades in **England** can be found on www.Magic.gov.uk/ (Landscape tab). Detailed field surveys (Post 1988 ALC layer on the Magic website) are available for selected areas. Also see: What about strategic maps showing the likely occurrence of best and most versatile land mentioned in [TIN049?](#)

Why do different maps show different grades for the same area?

ALC assessments became more field based and site specific from 1976, partly due to limitations of the Provisional mapping. On 1 January 1989, the current system of ALC grading was introduced: (*The Revised guidelines and criteria for grading the quality of agricultural land*: MAFF 1988). The guidelines provide the most definitive ALC grading and normally supersede any earlier surveys. In some areas there will be several different levels of detail of ALC data. Soils are variable and the grade of the land can vary over small distances. The ability to map this variation depends on the scale of the survey and the associated scale of mapping. The most detailed survey will usually represent the most definitive grading.

What are the 'Revised Guidelines'?

The ALC was devised and introduced in the 1960s and Technical Report 11 (MAFF, 1966: Technical Report 11, Agricultural Land Classification of England and Wales) outlined the national system. Following a review of the system, criteria for the sub-division of Grade 3 (3a, 3b & 3c) were published in 1976 and Technical Report 11/1 (MAFF, 1976: Technical Report 11/1, Agricultural Land Classification of England and Wales. The definition and identification of Sub-grades within Grade 3) outlined the updated.

The new and most up-to-date guidance was issued in 1988 "*The Revised guidelines and criteria for grading the quality of agricultural land*". This was implemented from 1 January 1989. The 1988 Revised guidelines were developed and tested with the aim of updating the system without changing the original concepts. This recognises two subgrades within in Grade 3: Subgrade 3a and Subgrade 3b, the latter being a combination of the previous Subgrades 3b and 3c. Consequently, modern ALC surveys are sometimes referred to as 'post 1988' or post revision. Any surveys carried out using the old guidelines (sometimes referred to as pre 1988 surveys or pre revision) would need to be reassessed under the current criteria.

Survey Related Questions

There is no detailed survey of my land, is a field survey required?

It depends why you want to know the grade of your land. For a planning purpose you should contact your local planning authority for advice.

What does a detailed field survey involve?

ALC surveys are undertaken, according to the published [Guidelines](#) by field surveyors using hand held augers to examine soils to a depth of 1.2 metres. This usually consists of one boring per hectare, supplemented by digging occasional small pits (usually by hand) to inspect the soil profile at representative locations to provide more detailed information about soil conditions to depths up to 1.2 metres. Information obtained by these methods is combined with climatic and other data to produce an ALC map and report, which will normally include individual soil profile and pit descriptions, and written explanations to support the grading applied. ALC maps are normally produced on an Ordnance Survey base at varying scales from 1:10,000 for detailed work to 1:50 000 for reconnaissance survey. It is important that ALC surveys are completed by an experienced ALC surveyor to ensure that the evidence is accurate and robust to inform planning decisions.

Can you recommend an ALC surveyor?

The Institute of Professional Soil Scientists (the professional body of the British Society of Soil Science) maintains a register of competent soil surveyors who have experience of carrying out ALC surveys. www.soils.org.uk. Other professional bodies may also maintain lists of their members who undertake ALC work. It is important that ALC surveys are completed by an experienced ALC surveyor to ensure that the evidence is accurate and robust to inform planning decisions.

Is urban land subject to ALC surveys?

Urban land may be shown on ALC survey maps. It will normally not be surveyed because the land has relatively little potential for return to agricultural use. The full definition of urban and other non-agricultural categories in the ALC system can be found in Appendix 1. You should contact your local planning authority for advice on whether an ALC survey is required to support a planning application.

Does the Welsh Government carry out ALC (detailed field) surveys?

Yes. The Welsh Government does carry out detailed Agricultural Land Classification (detailed field) surveys. These surveys are undertaken largely in response to requests from Local Planning Authorities for individual sites or areas at the urban edge which are being considered for development. The Welsh Government also holds copies of detailed individual Agricultural Land Classification (ALC) surveys carried out by them, as well as the former Welsh Office or Welsh Assembly Government. In addition the Welsh Government also provides a site survey validation service for Local Planning Authorities providing a technical assessment of submitted reports and enables them to fully consider land quality in the decision making process.

Does Natural England carry out ALC surveys?

Natural England provides advice to Local Planning Authorities on ALC matters, but does not carry out ALC field surveys. Natural England holds copies of detailed individual Agricultural Land Classification (ALC) surveys carried out by the former Ministry of Agriculture, Fisheries and Food until the late 1990s. These surveys were undertaken largely in response to requests from Local Planning Authorities for individual sites or areas at the urban edge which were to be considered for development; not all agricultural land was surveyed at the time. There is no longer a national programme to survey all areas in detail and since the late 1990's, the Government no longer undertakes detailed field surveys itself. Specialist consultants are engaged by developers, Local Planning Authorities, landowners and others

to carry out detailed Agricultural land Classification surveys for local plans and other development proposals.

What sampling density should I use in my ALC field survey?

There is no prescribed guidance on the sample density of field surveys; however, most experienced ALC surveyors use an average density of 1 sample point per hectare (carried out on the Ordnance Survey 100m grid). Soil pits are also useful to obtain further information about soil structure, porosity and stone content, rock layers etc. to enable confirmation of the grading found on site. The number of soil pits is difficult to specify in advance of starting field survey work. In general, one soil pit is dug for each of the main grades or soil types on the site, though not necessarily for each map unit, but it should be left to the professional judgement of the surveyor as to the appropriate minimum number required.

Surveys at this detailed level can also enable an assessment of the soil resources in line with the [Defra Code of Practice for the Sustainable Use of Soils on Construction Sites](#) and will allow users to present the land quality case to public inquiry level if required.

Depending upon the type of development, location, scale, purpose of the survey, availability of existing ALC data etc., less detailed surveys (or sometimes more detailed) surveys may be undertaken, but expert advice must be sought from a soil scientist or other practitioner experienced in undertaking ALC survey work. All data captured in ALC surveys is done to the same standard (i.e. standard recording of soil colour, texture etc. plus pits). The only difference in a less detailed survey is the grid spacing, not the quality or detail of data capture at the points examined.

It is important that ALC surveys are completed by an experienced ALC surveyor to ensure that the evidence is accurate and robust to inform planning decisions. The British Society of Soil Scientists run training courses and has a competency scheme, **Working with Soil**, covering aspects of soil survey and the ALC system.

What climate data is used for ALC?

The definitive climatic data used for assessing the overall climatic limitation (and for the wetness and droughtiness limitations) are obtained from a series of grid point datasets compiled specifically for ALC (Meteorological Office 1989: Climatological Data for Agricultural Land Classification). They provide long term average values of the required variables on a 5km grid covering the whole of England and Wales. These variables are interpolated for the location (grid reference) and altitude for intermediate sites.

I am a consultant/soil scientist undertaking a detailed ALC site survey and the land benefits from irrigation. Should I be taking this into account in my grading assessment?

No. The advice that irrigation should be removed from the ALC assessment was expressed in a consultation on the ALC system in 1996.

APPENDIX 1: AGRICULTURAL LAND CLASSIFICATION (ALC)

Descriptions of the Grades and Subgrades

The ALC grades and subgrades are described below in terms of the types of limitation which can occur, typical cropping range and the expected level and consistency of yield. In practice, the grades are defined by reference to physical characteristics. The grading guidance and cut-offs for limitation factors in the MAFF (1988) Agricultural Land Classification of England and Wales Revised Guidelines and Criteria for Grading the Quality of Agricultural Land enable land to be ranked in accordance with these general descriptions.

Descriptions are also given of other land categories which may be used on ALC maps.

Grade 1: Excellent Quality Agricultural Land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2: Very Good Quality Agricultural Land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural or horticultural crops can usually be grown but on some land of this grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1 land.

Grade 3: Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When more demanding crops are grown, yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a: Good Quality Agricultural Land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b: Moderate Quality Agricultural Land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4: Poor Quality Agricultural Land

Land with severe limitations which significantly restrict the range of crops and/or the level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5: Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

Descriptions of other land categories used on ALC maps

Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including: housing, industry, commerce, education, transport, religious buildings, cemeteries. Also, hard-surfaced sports facilities, permanent caravan sites and vacant land; all types of derelict land, including mineral workings which are only likely to be reclaimed using derelict land grants.

Non-agricultural

'Soft' uses where most of the land could be returned relatively easily to agriculture, including: golf courses, private parkland, public open spaces, sports fields, allotments and soft-surfaced areas on airports/ airfields. Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply.

Woodland

Includes commercial and non-commercial woodland. A distinction may be made as necessary between farm and non-farm woodland. Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses. Temporary structures (e.g. polythene tunnels erected for lambing) may be ignored.

Open water

Includes lakes, ponds and rivers as map scale permits.

Land not surveyed

Agricultural land which has not been surveyed. Where the land use includes more than one of the above land cover types, e.g. buildings in large grounds, and where map scale permits, the cover types may be shown separately. Otherwise, the most extensive cover type will usually be shown.

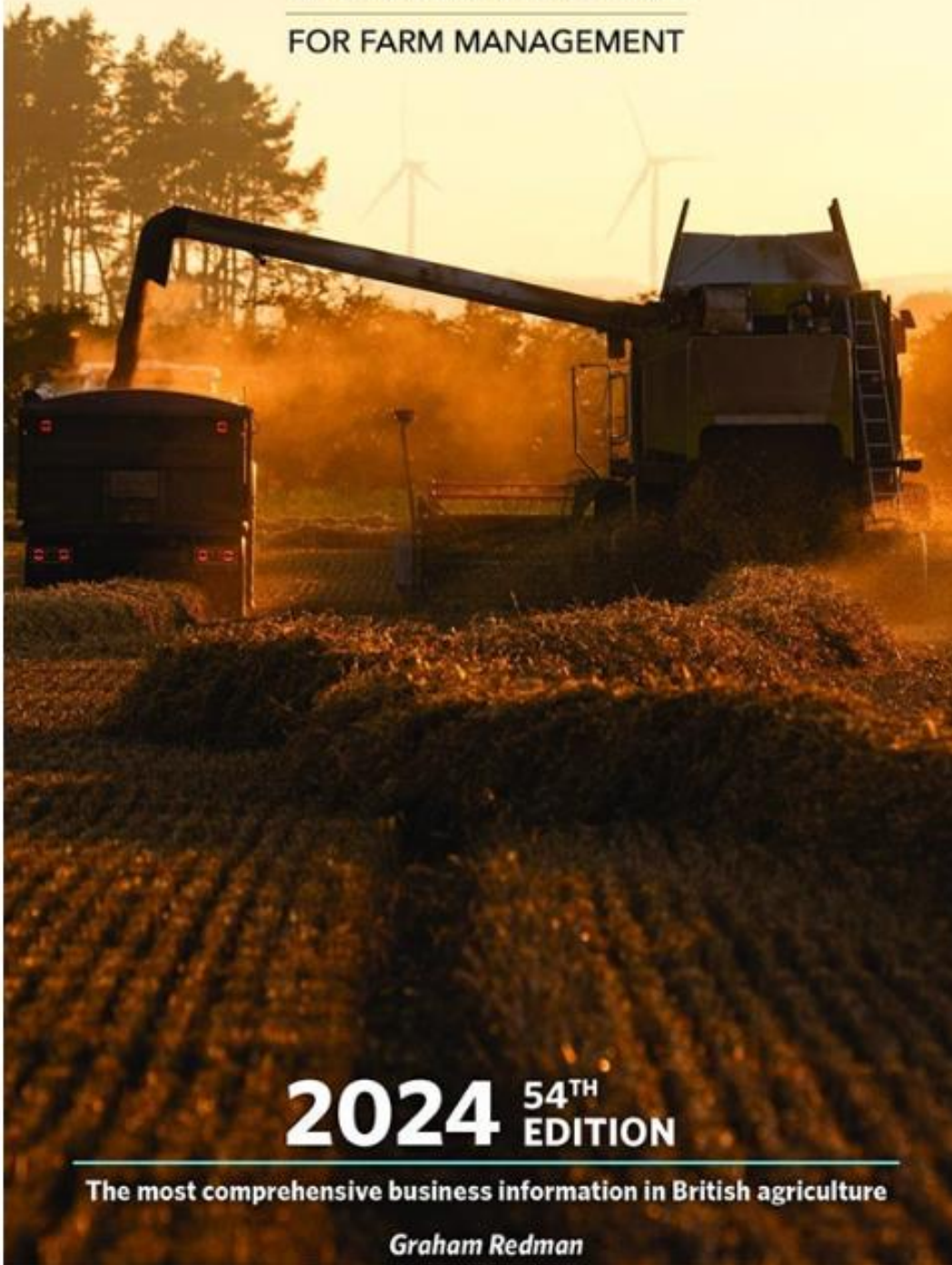
Source: Section 2: [MAFF \(1988\) Agricultural Land Classification of England and Wales Revised Guidelines and Criteria for Grading the Quality of Agricultural Land.](#)

APPENDIX KCC3
Extract John Nix Pocketbook



John Nix Pocketbook

FOR FARM MANAGEMENT



2024 54TH
EDITION

The most comprehensive business information in British agriculture

Graham Redman

SHEEP

*Spring Lambing Flocks***Lowland Spring Lambing per Ewe (selling lambs off grass)**

Performance Level	Low	Average	High
<i>Value of Lamb £/Lamb</i>	89	94	99
£/Ewe	£	£	£
Lamb Sales	115	141	167
Wool	2	2	2
Less Ewe and Ram Depreciation	27	27	27
Output	89	115	142
Variable Costs:			
Concentrate (Ewe and Lamb)	20	19	18
Vet & Med		11	
Miscellaneous		16	
Variable Costs (ex. forage)	47	46	45
Gross Margin £/Ewe, (ex. Forage)	42	69	96
Number of Ewes with lambs per Ha.	8	9	10
Forage Variable Costs £/Ewe	16	14	13
Gross Margin £/Ewe	26	55	84
Gross Margin £/Forage Ha (Acre)	212	497	836
	(86)	(201)	(339)

Rearing Performance Data

Lambing Stats	Low	Average	High
Ewes in Lamb	92%	95%	97%
Lambing Percentage	160%	175%	190%
Lambs born per 100 ewes	147	166	184
Young Lamb Deaths	8%	6%	5%
Older Lamb Deaths	4.5%	4.0%	3.5%
Total Lamb Losses	13%	10%	9%
Lambs sold per 100 ewes put to ram	129	150	169

These performance figures are assumed for flocks of mature ewes, i.e. shearlings and older. Where ewe-lambs or mainly shearlings are included in flock performance adjustment needs to be made. The breed will have a large effect on performance data.

1. *Lamb Sales.* Prices for lambs sold for slaughter are for the 2024 season. Average sale liveweight of 42kg, averaging £2.35/kg making £98.7 per finished lamb. 20% of lambs sold as stores for £65 per head and 20% sold for breeding at £110 per head. This gives an average price of £93 per lamb.
2. *Wool:* 2.4kg/ewe at £0.90/kg

APPENDIX KCC4
Comments of the Soil, Peatland and
Agricultural Land Use Planning Unit,
13th December 2023

Soil Policy & Agricultural Land Use Planning Unit
Uned Polisi Pridd a Chynllunio Defnydd Tir Amaethyddol
Yr Adran Newid Hinsawdd / Department for Climate Change.
Change



Llywodraeth Cymru
Welsh Government

Ref: DNS/3274702

Dafydd Gwilym
Enso Energy
Unit 1 & 2
Cirencester Office Park
Cirencester
GL7 6JJ

Via Email: alaw@ensoenergy.co.uk

13th December 2023.

Dear Dafydd Gwilym,

Re: Pre-application consultation response under article 10(2) of the Developments of National Significance (Procedure) (Wales) Order 2016 – Alaw Môn Solar Farm, Anglesey – DNS/3274702.

In reference to your email of 1st November consulting on the above proposed application, the Department offers the following response for your consideration in respect of soils and Best and Most Versatile (BMV) agricultural land. This response is made in accordance with:

- National Development Framework (NDF) Future Wales: The National Plan 2040¹
- Planning Policy Wales (PPW), Edition 11 – 2021²
- Schedule 5, Paragraph (p) of The Developments of National Significance (Procedure) (Wales) Order 2016³
- DCPO letter – ‘BMV agricultural land and solar PV arrays’ – 2022⁴
- Annex B of Technical Advice Note (TAN) 6 – 2010⁵

This response will first set out our consideration of Agricultural Land Classification (ALC) survey undertaken at the site, followed by our substantive response on the application.

¹ <https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf>

² <https://www.gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11-0.pdf>

³ <https://www.legislation.gov.uk/wsi/2016/55/contents/made>

⁴ <https://www.gov.wales/best-and-most-versatile-agricultural-land-and-solar-pv-arrays>

⁵ <https://www.gov.wales/technical-advice-note-tan-6-planning-sustainable-rural-communities>

Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

1. Agricultural Land Classification (ALC) Survey - Technical Assessment and Advice:

An ALC report has been prepared by Askew Land and Soil Ltd. (LRA) (Ref: C772, dated 15th June 2021) and is included in the Environmental Statement (ES) – Appendix 13.1. The report found the survey area to consist of 39.0ha Grade 2, 147.1ha Subgrade 3a, 99.0ha Subgrade 3b, 7.5ha Grade 4 and 7.2ha 'other land' – Total of 299.8ha surveyed.

The Department has previously validated the ALC survey report (July 2021) and can confirm it has been undertaken in accordance with the 'Revised Guidelines and Criteria for Grading the Quality of Agricultural Land' (MAFF 1988)⁶ and can be accepted as an accurate reflection of the land quality on the site.

This confirms that the proposed application site (area within the redline boundary, 268.77ha – ES Figure 13.2), **if approved, would involve the loss of 159ha (approx. 393 acres) of Best and Most Versatile (BMV) agricultural land** (36.7ha Grade 2, and 122.3ha Subgrade 3a) (ES Chapter 13, Table 13.5).

2. Substantive Response

Having considered this proposal in light of the DCPO letter (1/3/22), Policy 9, 17 and 18 of National Development Framework (NDF) Future Wales, The National Plan 2040 and Planning Policy Wales (PPW); as per Article 10(2)(d) of the 2016 Order, the Department advises the applicant that, as a specialist consultee, **it has concerns and that it would object to an application for planning permission made in the same or substantially the same terms** for the following reasons:

- i. **It is considered that the proposal has failed to give considerable weight to protecting BMV agricultural land because of its special importance.**

Planning Policy Wales is explicitly clear. Paragraphs 3.58 and 3.59 of PPW state (emphasis added):

*3.58 Agricultural land of grades 1, 2 and 3a of the Agricultural Land Classification system (ALC) is the best and most versatile and **should be conserved as a finite resource for the future.***

*3.59 When considering the search sequence and in development plan policies and development management decisions **considerable weight should be given to protecting such land from development, because of its special importance.** Land in grades 1, 2 and 3a **should only be developed if there is an overriding need for the development, and** either previously developed land or land in lower agricultural grades is unavailable, or available lower grade land has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs the agricultural considerations. If land in grades 1, 2 or 3a does need to be developed, and there is a choice between sites of different grades, development should be directed to land of the lowest grade.*

⁶ <https://publications.naturalengland.org.uk/file/5526580165083136>

The loss of 159ha (approx. 393 acres) of confirmed BMV agricultural land is a matter of national significance with reference to The Developments of National Significance (Procedure) (Wales) Order 2016 (as amended), Schedule 5, paragraph (p) and would represent an unacceptable adverse impact on this vital 'national natural resource'.

Over 48% of Anglesey (equal to Monmouthshire) is considered as predictive BMV agricultural land according to the Predictive ALC Map⁷, demonstrating the area is a nationally important resource for our agricultural capability.

ii. The Department has concerns regarding the search area, arguments of overriding need and possible alternative sites.

The Department does not dispute the benefits of solar energy but considers that there is no need to locate solar energy developments on BMV agricultural land, given its scarcity as a finite resource and the sequential test approach to planning policy on this matter. Therefore, the ability to locate solar energy on a wide range of sites should not conflict with BMV policy.

The Department does not consider the justification noted in the Planning Statement and Site Selection Report meets the test to demonstrate an 'overriding need' is established for the specific site and the development of 159ha of BMV agricultural land.

iii. Its return to agriculture as BMV agricultural land is '...seldom practicable'.

It is welcomed that a Framework Soil Management Plan is provided by the applicant. However, it is not possible to recreate BMV agricultural land which is damaged. BMV land is therefore a finite resource, and it is important that this is fully recognised. It is acknowledged in TAN 6 (paragraph 6.2.2) that '*...once agricultural land is developed, even for 'soft' uses ..., its return to agriculture as best and most versatile agricultural land is seldom practicable*'.

The Department does not accept the argument that the development is temporary (40yrs). The period that the development is present and operational on the site is long term and generational. There is a high risk that an application for repowering may be made, given the long-term nature of this application, and a risk of general acceptance for non-agricultural solar use.

The change of use to energy generation means the land could not, if needed, be farmed to its BMV potential, due to the infrastructure installed for solar generation. The land would be limited to extensive, low-level grazing at best.

iv. Recent DNS Decision on Solar PV Application involving BMV agricultural land (DNS/3247619 - Elwy Solar Energy⁸ - Refused).

The Department submits the Welsh Ministers recent decision on the above case is relevant to this application in respect of BMV agricultural land. Specifically the following paragraphs:

67. National Planning Policy in PPW is clear, BMVAL should be conserved as a finite

⁷ <https://www.gov.wales/agricultural-land-quality-statistics-planning-authorities-2020>

⁸ <https://planningcasework.service.gov.wales/api/documents/download/A46366124?hash=16931c2b386205840f256153b4c564c9d2e349cdb050c86a053138eb98d3f440>

resource for the future. Paragraph 3.59 of PPW states that BMVAL should only be developed if there is an overriding need for the development and previously developed land or land in lower agricultural grades is unavailable, or available lower grade land has an environmental value which outweighs the agricultural considerations.

68. "Overriding need" is not defined in national planning policy. I agree there is a need for renewable energy and accept the proposed development would make a significant contribution towards the Welsh Government's targets for renewable energy generation. However, national policy requires "overriding need" to be demonstrated when developments are located on BMVAL. In my letter to Chief Planning Officers ("the CPO letter"), dated 1 March 2022, I reiterated the importance I place on protecting BMVAL from development as it is a finite, national resource. In terms of this planning application, I am concerned about the loss of a nationally significant amount of BMVAL to facilitate the proposal. I note the applicant's "Agricultural Quality of Land at St Asaph" report identifies that 43.1ha of the application site is made up of BMVAL (IR 291) and I recognise not all this land would be under solar PV panels (IR 292).

69. The affected BMVAL land would be unavailable for food production for the 37 year duration of the project, a considerable period of time for the loss of full productive capacity of BMVAL, which could impact on the objective of ensuring future food security. I note the land could be used for grazing during this period, however, I do not consider this compensates in any way for the loss of BMVAL. As the CPO letter highlights, the Welsh Ministers are concerned about the permanent and temporary loss of BMVAL land. Irrespective of whether the land could be restored to BMV quality or whether the loss of BMVAL would be permanent, it is not disputed that the proposed development would involve development on BMVAL land. In such circumstances PPW is clear, the BMVAL should only be developed if there is an overriding need for the development.

70. I acknowledge and accept the benefits of the scheme, as described by the Inspector in IR 332-334. These benefits include the generation of a substantial amount of renewable energy. However, I am not satisfied the benefits of the scheme and the acknowledged need for increased renewable energy override the need to protect the significant amount of BMVAL on the application site from development, which would have a 37 year lifespan.

71. As I have reached the conclusion there is no "overriding need" for the proposed development on the BMVAL within the application site I have not gone on to consider the site selection approach and whether it accords with the requirements in paragraph 3.59 of PPW nor have I considered whether the affected land could be restored to BMVAL following decommissioning. However, given the fragility of this finite resource I am not convinced the measures proposed during construction, operation and decommissioning would be sufficient to protect soils and there is a significant risk of permanent loss of BMVAL.

72. I am satisfied the Inspector has identified all the main considerations relating to the application and am content with the Inspector's assessment and reasoning on all matters, other than those relating to BMVAL. Regarding BMVAL I consider the scheme fundamentally conflicts with national planning policy for the reasons I explain above.

73. In making my determination on this application I note the statutory requirement in

section 38(6) of the Planning and Compulsory Purchase Act 2004 for decisions to be made in accordance with the development plan unless material considerations indicate otherwise. I have taken into account the relevant policies of FW and the LDP, which form the development plan for the purposes of this application.

74. I accept the proposed development aligns with and supports the requirements of FW and PPW, regarding the need to achieve decarbonisation of energy, build resilience to the impacts of climate change and support the delivery of renewable energy. I also acknowledge and accept the benefits of the scheme and I am satisfied the IR addresses all other relevant matters. However, I conclude the amount of renewable energy that would be generated, and the other identified benefits of the proposal do not override the need to protect the significant amount of BMVAL on the application site from development. Therefore, the proposal is contrary to national planning policy on BMVAL as expressed in paragraphs 3.58 and 3.59 of PPW.

75. For the above reasons I hereby refuse planning permission for DNS/3247619.

The advice expressed does not bind any other part of Welsh Government commenting on the proposal. I trust the above comments are clear and unambiguous.

Yours sincerely



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