

Document Reference	Appendix No.	Title
4.01.2	1.2	Scoping Direction



The Planning Inspectorate  
Yr Arolygiaeth Gynllunio

# DNS: EIA Scoping Direction

## 3245503: Oaklands Solar Farm

28 July 2021

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**This Scoping Direction is provided on the basis of the information submitted to the Planning Inspectorate on 24 May 2021, in addition to consultation responses received. The advice does not prejudice any recommendation made by an Inspector or any decision made by the Welsh Ministers in relation to the development, and does not preclude the Inspector from subsequently requiring further information to be submitted with the submitted DNS application under Regulation 24 of [The Town and Country Planning \(Environmental Impact Assessment\) \(Wales\) Regulations 2017](#) (as amended) (“The 2017 Regulations”).**

## 1. Introduction

The Planning Inspectorate (“the Inspectorate”) received a request under [Regulation 33](#) of the 2017 Regulations for a Scoping Direction in relation to the proposed construction of a solar farm and energy storage along with associated infrastructure.

The request was accompanied by a [Scoping Report](#) (SR) that outlines the proposed scope of the Environmental Statement (ES) for the proposed development.

This Direction has taken into account the requirements of the 2017 Regulations as well as current best practice towards preparation of an ES. In accordance with the 2017 Regulations the Inspectorate has consulted on the SR and the responses received from the consultation bodies have been taken into account in adopting this Direction.

The Inspectorate is authorised to issue this Scoping Direction on behalf of the Welsh Ministers.

## 2. Site Description

The site extends to some 126 ha of farmland, located approximately 0.7 km to the South of the village of Bonvilston in the Vale of Glamorgan. Further details are given from paragraph 2.1.1 of the SR and a site location plan is included at Figure 2.1.

## 3. Proposed Development

The proposal is for construction of a ground-mounted photovoltaic solar farm and associated battery energy system, together with associated landscaping, works, infrastructure and access. A full description of the various elements is set out at paragraph 3.1 of the SR.

The scope of the EIA should include all elements of the development as identified in the SR, both permanent and temporary, and this Scoping Direction is written on that basis.

In line with the requirements of [Regulation 17](#) and [Schedule 4](#) to the 2017 Regulations, any reasonable alternatives considered should be presented in the ES. The reasons behind the selection of the chosen option should also be provided in the ES, including where environmental effects have informed the choices made.

## 4. Consultation

In line with [Regulation 33\(7\)](#) of the 2017 Regulations, formal consultation was undertaken with the following bodies:

- Local Planning Authority [Vale of Glamorgan Council] (VoG)
- Natural Resources Wales (NRW)
- Cadw
- Dŵr Cymru (DCWW)
- The Health and Safety Executive (HSE)
- The Landscapes, Nature and Forestry Division of the Welsh Government (LNFD)
- The Defence Infrastructure Organisation (DIO)

Responses received are included in **Appendix 1**.

## 5. Environmental Impact Assessment Approach

The Applicants should satisfy themselves that the ES includes all the information outlined in [Schedule 4](#) of the 2017 Regulations. In addition, the Applicant should ensure that the Non-Technical Summary includes a summary of all the information included in Schedule 4. Consider a structure that allows the author of the ES and the appointed Inspector and Decision Maker to readily satisfy themselves that the ES contains all the information specified [Regulation 17](#) and Schedule 4 of the 2017 Regulations. Cross refer to the requirements in the relevant sections of the ES and include a summary after the Contents page that lays out all the requirements from the Regulations and what sections of the ES they are fulfilled by.

As the assessments are made, consideration should be given to whether standalone topic chapters would be necessary for topics that are currently proposed to be considered as part of other chapters, particularly if it is apparent that there are significant effects and a large amount of information for a particular topic.

There may also be topic areas scoped out of the ES where the developer may wish to include application documents that sit outside of the ES and provide information that will support their consultation(s) and the decision-making process. The developer is encouraged to liaise with key consultees regarding non-ES application documents which are not a legislative requirement of the DNS regime. If agreement cannot be reached over non-ES application documentation, then the developer may wish to explore whether the Inspectorate can help provide clarity via its statutory preapplication advice service.

The ES should focus on describing and quantifying significant environmental effects. Policy considerations / arguments relating to those impacts should be addressed in other documentation supporting the application (e.g. a Planning Statement), which cross references the ES where necessary.

### 5.1 Baseline

[Schedule 4](#) of the 2017 Regulations states that the 'baseline scenario' is "A description of the relevant aspects of the **current** state of the environment" (emphasis added). The baseline of the ES should reflect actual current conditions at that time.

## 5.2 Reasonable Alternatives

In line with the requirements of [Regulation 17](#) and [Schedule 4](#) to the 2017 Regulations, any reasonable alternatives studied by the Applicant should be presented in the ES. The reasons behind the selection of the chosen option should also be provided in the ES, including where environmental effects have informed the choices made.

It is worth bearing in mind that under the [Conservation of Habitats and Species Regulations 2017](#) ("the Habitats Regulations") unless it can be clearly shown to the Welsh Ministers that the project would have no adverse effect on the integrity of any designated sites, it would have to be shown that there is no feasible alternative solution (see advice note from [IEMA](#)). Further advice regarding the Habitats Regulations is provided in the final chapter of this Screening Direction.

## 5.3 Currency of Environmental Information

For all environmental aspects, the applicant should ensure that any survey data is as up to date as possible and clearly set out in the ES the timing and nature of the data on which the assessment has been based. Any study area applied to the assessments should be clearly defined. The impacts of construction, operation and decommissioning activities should be considered as part of the assessment where these could give rise to significant environmental effects. Consideration should be given to relevant legislation, planning policies, and applicable best practice guidance documents throughout the ES.

The ES should include a chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters. Where professional judgement has been applied this should be clearly stated.

The ES topic chapters should report on any data limitations, key assumptions and difficulties encountered in establishing the baseline environment and undertaking the assessment of environmental effects.

## 5.4 Cumulative Effects

The Inspectorate welcomes the commitment to address cumulative effects. Effects deemed individually not significant from the assessment, could cumulatively be significant, so inclusion criteria based on the most likely significant effects from this type of development may prove helpful when identifying what other developments should be accounted for. The criteria may vary from topic to topic.

The applicants should note that best practice is to include proportionate information relating to projects that are not yet consented, dependent on the level of certainty of them coming forward. While development that has been constructed at the time of completion of the ES will form part of the baseline it may still be necessary to include such developments in the consideration of cumulative effects.

All of the other developments considered should be documented and the reasons for inclusion or exclusion should be clearly stated. Professional judgement should be used to avoid excluding other development that is close to threshold limits but has characteristics

likely to give rise to a significant effect; or could give rise to a cumulative effect by virtue of its proximity to the proposed development. Similarly, professional judgement should be applied to other development that exceeds thresholds but may not give rise to discernible effects. The process of refinement should be undertaken in consultation with the relevant statutory consultees listed in section 4 of this direction as appropriate. The applicants should also closely monitor the DNS Portal for other proposals in the vicinity.

It is noted that at the time the SR was produced, the applicants had identified eight operational solar farms and the proposed solar farm at Parc Dyffryn within a 5km radius of the site. The applicants are advised to keep a watching brief during the process of assessment, in order to ensure completeness at the time the ES is finalised.

The scope of the cumulative assessment should be fully explained and justified in the ES.

The Planning Inspectorate's guidance for Nationally Significant Infrastructure Projects – [Advice Note 17: Cumulative Effects Assessment](#) sets out a staged process for assessing cumulative impacts that may be of relevance to the Applicant.

### 5.5 Mitigation

Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should provide reference to how the delivery of measures proposed to prevent/ minimise adverse effects is secured (through legal requirements or other suitably robust methods) and whether relevant consultees agree on the adequacy of the measures proposed.

### 5.6 Population and Human Health

The Applicant should ensure that the ES addresses any significant effects on population and human health, in light of the EIA Regulations 2017. This could be addressed under the separate topic chapters or within its own specific chapter.

### 5.7 Transboundary Effects

[Schedule 4 Part 5](#) of the EIA Regulations requires a description of the likely significant transboundary effects to be provided in an ES. The ES should address this matter as appropriate.

## 6. Environmental Impact Assessment Aspects

This section contains the Inspectorate's specific comments on the scope and level of detail of information to be provided in the Applicant's ES. Environmental topics or features are not scoped out unless specifically addressed and justified by the Applicant and confirmed as being scoped out by the Inspectorate. In accordance with Regulation 17(4)(c) the ES should be based on this Scoping Direction in so far as the Proposed Development remains materially the same as the Proposed Development described in the Applicant's Scoping Report.

The Inspectorate has set out in this Direction where it has / has not agreed to scope out matters on the basis of the information available at this time. The Inspectorate is content that the receipt of a Scoping Direction should not prevent the Applicant from subsequently agreeing with the relevant consultees to scope such matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.

### 6.1 Aspects Scoped In

Subject to the comments provided at Table 1, the following aspects are scoped into the ES:

**Ecology**

**Landscape and Visual Impact**

**Heritage**

**Noise**

**Climate Change**

**Cumulative Effects**

**Hydrology, Flood Consequences and Drainage**

**Traffic and Transport (in relation to the construction and decommissioning phases)**

**Air Quality (in relation to the construction and decommissioning phases)**

**Major Accidents or Disasters**

**Human Health**



### 7. Table 1: The Planning Inspectorate's Comments

ID	Reference in Scoping Report	Issue	Comment
<b>Applicant's proposed Aspects proposed to be scoped out</b>			
ID.1	5.9.1	Glint and Glare	The approach set out from paragraph 5.9.1 of the SR is noted and the intention to consult with the Civil Aviation Authority is welcomed. The Inspectorate agrees that Glint and Glare can be scoped out of the ES and assessed in a standalone document. However, if following consultation, it is considered that there is potential for likely significant effects in this respect that would warrant doing so, the applicant should consider scoping this topic back into the ES as appropriate.
ID.2	5.9.3	Agricultural Land Quality	The approach set out at paragraph 5.9.3 of the SR is noted. Given the limited potential for BMV on the site and comments received from LNFD, the Inspectorate agrees that Agricultural Land Quality can be scoped out of the ES. The applicant's attention is drawn to the response provided by LNFD and included at Appendix 1, and the applicant should note that if the detailed soil assessment does indicate the presence of BMV land they should consult LNFD. Should the site contain 20 ha or more of BMV, then this aspect must be included in the ES.
<b>Applicant's proposed Aspects without standalone chapters</b>			
ID.3	5.8.1	Hydrology, Flood Consequences and Drainage	The approach to assessment of Hydrology, Flood Consequences and Drainage set out from paragraph 5.8.1 of the SR, along with the production of a standalone Flood Consequences Assessment, is considered appropriate. The applicant's attention is drawn to comments provided by NRW, included at Appendix 1.

ID	Reference in Scoping Report	Issue	Comment
ID.4	5.8.6	Traffic and Transport	The approach to the assessment of Traffic and Transport set out from paragraph 5.8.6 of the SR, along with the production of a standalone Construction Traffic Management Plan (CTMP), is considered largely appropriate. It is acknowledged that additional traffic would be minimal during the operational phase and that the majority of impacts in this respect would occur during construction. The ES should therefore ensure that the impacts of construction and decommissioning phase traffic are assessed where relevant to the environmental aspects that are within the scope of the ES. Given that it will include details of any required mitigation, the CTMP should be included as a technical appendix to the ES and cross referenced as appropriate.
ID.5	5.8.10	Air Quality	The SR suggests at paragraph 5.8.13 that Air Quality will not be considered as part of the ES, but it is not included in the applicant's list of topics to be scoped out and the Inspectorate does not agree to this topic being scoped out at this stage. Whilst it is agreed that a standalone chapter is not required, Air Quality in relation to the construction and decommissioning phase (dust, construction traffic emissions) should be considered in relevant chapters of the ES. Given that it will include details of any required mitigation, the CMP should be included as a technical appendix to the ES and cross referenced as appropriate.
ID.6	5.8.14	Major Accidents and Disasters	The proposal includes energy storage facilities and at this stage it is not clear which type of batteries are proposed. The Inspectorate notes that there is a potential fire risk associated with certain types of batteries such as lithium-ion and that safety measures are required in the design to minimise the risk of fire. The Inspectorate considers this to be part of the EIA process in line with Schedule 4 of the EIA Regulations (Wales) 2017.

ID	Reference in Scoping Report	Issue	Comment
			<p>The Applicant may consider the submission of a Battery Safety Management Plan confirming that the risks are understood, accounted for and mitigated as far as practicable, in agreement with relevant consultees. The Applicant is reminded of the responsibilities set by the Regulatory Reform (Fire Safety) Order 2005. The ES should ensure that risks of accidents are accounted for and mitigated in line with Schedule 4. A proportionate section on this aspect should be included in the ES.</p> <p>The applicant's attention is also drawn to comments received from the Health and Safety Executive in relation to the location of a Major Accident Hazard Pipeline at Pentrebanne / St. Athan, to the eastern side of the A4228.</p> <p>The ES will need to address the potential of increasing downstream flood risk, with cross reference to the FCA as required. The level of detail required will depend on the advice received from the Lead Local Flood Authority. The ES should confirm what advice is received and justify the approach taken to this matter.</p>
ID.7	5.8.17	Soils and Geology	<p>Soils and Geology is not included in the applicant's proposed list of topics to be scoped out. However, the Inspectorate agrees that it does not need to be considered in the ES and <b>this topic is therefore scoped out of the ES, subject to the provisions mentioned in ID2 above.</b></p>
ID.8	5.8.19	Public Health and Wellbeing	<p>It is acknowledged that effects in this respect are unlikely to be significant. As noted above, the 2017 EIA Regulations require that an EIA consider effects on population and human health. The ES should therefore address this issue in a proportionate manner.</p>

ID	Reference in Scoping Report	Issue	Comment
ID.9	5.8.20	Socio Economic	Socio Economic effects are not included in the applicant's list of topics to be scoped out. However, the information set out from paragraph 5.8.20 of the SR is acknowledged and the Inspectorate considers that <b>this topic can be scoped out of the ES.</b>
	<b>Ecology</b>		
ID.10	5.2.29	Overall approach to ecological assessment	<p>Subject to the comments set out below and those received from consultees, the approach to ecological assessment set out in the SR is considered broadly appropriate. However, in relation to certain protected species that are within the scope of the ES, the SR suggests that no further survey work will be conducted. It is not possible to understand the conservation value of the site for those protected species or to identify likely impacts and their significance (or required mitigation) without an understanding of the species' use of the site or details of their population. As such, the Inspectorate considers that where protected species are within the scope of the ES, further survey work cannot be ruled out at this stage. The applicant should strive to reach an agreed approach to further assessment to inform the ES with NRW.</p> <p>The applicant should also note that the Inspectorate has not received a consultation response from VoG's Ecologist. It is therefore recommended that the applicant seek further consultation with the LPA in this respect when preparing the ES.</p>
ID.11	5.2.14	Great Crested Newts (GCN)	The information set out in the SR is noted. However, the applicant's attention is drawn to comments received from NRW; the Inspectorate agrees with those comments.

ID	Reference in Scoping Report	Issue	Comment
			GCN surveys should be undertaken in accordance within a 500 m radius of the site boundary and the ES should assess any likely impacts on GCN and the potential for suitable mitigation. The applicant is encouraged to liaise with NRW as appropriate.
ID.12	5.2.18	Bats	The approach to the assessment of impacts on Bats set out in the SR is considered largely appropriate. The applicant's attention is drawn to the Inspectorate's comments at ID.10 above and to comments received from NRW, including the need to ensure that surveys should cover all trees with the potential to support bats that could be affected.
ID.13	5.2.24	Dormouse	The applicant's attention is drawn to comments received from NRW in this respect and the Inspectorate's comments at ID.10 above.
ID.14	5.2.27	Otter	The applicant's attention is drawn to comments received from NRW in this respect and the Inspectorate's comments at ID.10 above.
ID.15	5.2.3	Nant Whitton Woodlands SSSI	NRW suggests that the Nant Whitton, which runs through the Nant Whitton Woodlands SSSI should be scoped into the assessment of local water courses. Given the potential for changes in the watercourse to affect the SSSI, the Inspectorate agrees with NRW. The Nant Whitton should be included in the ES assessment of impacts on local watercourses and the SSSI.
ID.16	5.2.34	Barry Woodlands SSSI	The applicant's attention is drawn to comments received from NRW regarding the path of the River Waycock through the Barry Woodlands SSSI. Given that potential link, the ES should incorporate a proportionate level of assessment in this respect, with reference to appropriate mitigation and avoidance measures.

ID	Reference in Scoping Report	Issue	Comment
ID.17	5.2.33	Local Watercourses	The applicant's attention is drawn to comments received from NRW in relation to the potential for impacts on local watercourses arising during the construction phase. The applicant is reminded that, as set out above, construction and decommissioning phase impacts should be assessed in the ES as appropriate.
<b>Landscape and Visual Impact Assessment (LVIA)</b>			
ID.18	5.3	Approach to LVIA	The approach to LVIA, in accordance with the <i>Guidelines for Landscape and Visual Impact Assessment (Third Edition)</i> , set out at section 5.3 of the SR, is considered appropriate. The intention to liaise with key consultees in order to agree key aspects of the methodology and to identify final receptors for assessment is welcomed.
<b>Heritage</b>			
ID.19	5.4	Approach to Heritage	<p>The approach to Heritage set out in the SR is considered largely appropriate. The applicant's attention is drawn to comments received from Cadw in this respect.</p> <p>Further to paragraph 5.4.11 of the SR and in light of comments from Cadw, an assessment of the impact of development on historic landscapes (ASIDOHL) for the Llancarfan Registered Landscape of Historic Interest should be included in the ES. Cadw would be the 'curator' for that assessment and the applicant should consult with it regarding the content of the ASIDOHL.</p> <p>The list of guidance to be utilised, set out at paragraph 5.4.7 of the SR, should also include the Welsh Government's <i>'Setting of Historic Assets in Wales'</i> (2017).</p>

ID	Reference in Scoping Report	Issue	Comment
			The intention to carry out further archaeological assessment is welcomed. The applicant should consult with the Glamorgan Gwent Archaeological Trust, with a view to agreeing the approach to geological survey and the need for any further assessment.
<b>Noise</b>			
ID.20	5.5	Approach to assessment of Noise and Vibration	The approach to the assessment of noise and vibration, as set out in section 5.5 of the SR, is considered appropriate. The intention to consult with VoG in order to agree the detailed methodology and monitoring locations is welcomed.
<b>Climate Change</b>			
ID.21	5.6	Climate Change	It is unclear from paragraphs 6.1 and 6.2 of the SR whether the applicant intends to produce a standalone chapter on Climate Change. For clarity, the Inspectorate is content, provided an appropriate level of assessment is included, that it is left to the applicant to decide whether to include a standalone chapter or to address this issue as necessary in each separate chapter. The SR refers to offsetting of some 868,000 tonnes of CO <sub>2</sub> over the project's lifespan; the applicant is reminded that positive significant effects should also be reflected in the ES. The ES should also address whether the project is vulnerable to climate change in a proportionate fashion in the appropriate chapter.
<b>Cumulative Effects</b>			
ID.22	5.7	Approach to assessment	The approach to the assessment of cumulative effects is considered appropriate. The applicant is advised to continue dialogue with relevant

ID	Reference in Scoping Report	Issue	Comment
			consultees and to monitor the <a href="#">DNS Portal</a> to ensure a comprehensive assessment in the final ES.



## 8. Other Matters

**This section does not constitute part of the Scoping Direction, but addresses other issues related to the proposal.**

### 8.1 Habitats Regulation Assessment

[The Conservation of Habitats and Species Regulations 2017](#) require competent authorities, before granting consent for a plan or project, to carry out an appropriate assessment (AA) in circumstances where the plan or project is likely to have a significant effect on a European site (either alone or in combination with other plans or projects). The competent authority in respect of a DNS application is the relevant Welsh Minister who makes the final decision. It is the Applicant's responsibility to provide sufficient information to the competent authority to enable them to carry out an AA or determine whether an AA is required.

When considering whether or not significant effects are likely, applicants should ensure that their rationale is consistent with the [CJEU finding](#) that mitigation measures (referred to in the judgment as measures which are intended to avoid or reduce effects) should be assessed within the framework of an AA and that it is not permissible to take account of measures intended to avoid or reduce the harmful effects of the plan or project on a European site when determining whether an AA is required ('screening'). The screening stage must be undertaken on a precautionary basis without regard to any proposed integrated or additional avoidance or reduction measures. Where the likelihood of significant effects cannot be excluded, on the basis of objective information the competent authority must proceed to carry out an AA to establish whether the plan or project will affect the integrity of the European site, which can include at that stage consideration of the effectiveness of the proposed avoidance or reduction measures.

The Planning Inspectorate's guidance for Nationally Significant Infrastructure Projects – [Advice Note 10: Habitat Regulations Assessment relevant to Nationally Significant Infrastructure Projects](#) may prove useful when considering what information to provide to allow the Welsh Ministers to undertake AA. Where it is effective to cross refer to sections of the ES in the HRA, a clear and consistent approach should be adopted.

### 8.2 SuDS Consent

Whilst a separate legislative requirement from planning permission, the Applicant's attention is drawn to the statutory SuDS regime that came into force in Wales in January 2019. The applicants' intention to seek SuDS consent in parallel with the DNS application is noted. The requirement to obtain SuDS consent may require iterative design changes that influence the scheme that is to be assessed within the ES and taken through to application. As such, it is recommended that the applicant contact the local SuDS Approval Body early on.

#### 8.1 The National Development Framework (Future Wales: the national plan 2040), Planning Policy Wales (PPW) 11, and the revocation of TAN 8

On [24 February 2021](#), the Welsh Government published the [National Development Framework](#) (NDF). The NDF has development plan status, forming the highest tier of the development plan hierarchy in Wales. Planning Policy Wales has been updated to [edition 11](#). TAN 8 was revoked on the same date.

## **9. Appendix 1 – Consultation Responses**

**APPLICANT:** James Cook Sirius

**Land at Oaklands Farm, Pancross Farm and Redlands Farm near Bonvilston**

Solar farm and energy storage (battery) development with ancillary infrastructure across a total area of approximately 126 ha of farmland

**SITE AND CONTEXT**

The site is a large expanse of 126 hectares of farmland to the south of St Nicholas and Bonvilston. There are a number of trees and hedgerows forming field boundaries on the site.

Part of the site is within a Local Search Area for Solar Energy designated by the Local Development Plan, with the western part of the site, small areas in the south and the land to the east of Five Mile Lane falling outside this.

The whole site is outside the settlement boundary and the area to the west of Five Mile Lane is in the Nant Llancarfan Special Landscape Area, with the area to the east being within the Dyffryn Basin and Ridge Slopes Special Landscape Area. The western part of the site is within the Llancarfan Landscape of Outstanding Historic Interest. The predicated agricultural land classification of the site is mixed, with the highest predicated classification being Grade 3b.

There are a number of Sites of Importance for Nature Conservation (SINC) on the site boundary. These mostly sit outside the site, with some small areas of these being within it. The Nant Whitton Woodland Site of Special Scientific Interest (SSSI) is approximately 170 metres away to the south west.

There are a number of scheduled monuments in close proximity and the site seems to encroach on the boundary of one of these, Coed-y-Cwm Ringwork, in its north east. There are also a number of archaeological records on the site. Dyffryn Gardens, which is on the Historic Parks & Gardens register is approximately 400 metres away to the east and Llantrithyd Place, which is also on the register, is approximately 1100 metres away to the west. The site is also approximately 500 metres, 700 metres, 1400 metres and 2200 metres from Conservation Areas in St Nicholas, Bonvilston and Llantrithyd respectively. There are also a number of listed buildings in the surrounding villages.

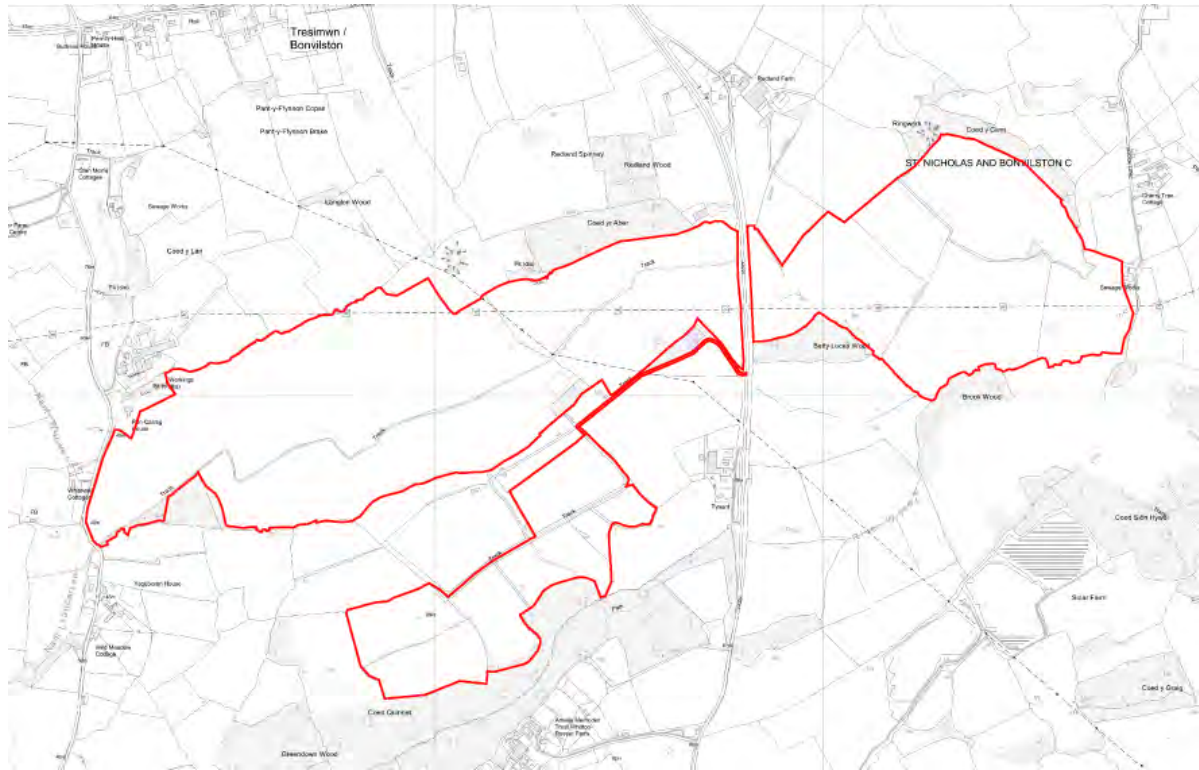
A number of small areas of the site are considered at risk of surface water flooding. The very eastern edge of the site is in Zone B for flood risk, as defined by the Development Advice Maps accompanying Technical Advice Note 15 (Development and Flood Risk), with a very small area of this edge being in Zone C2.

Although there are no public rights of way crossing the site, there are a number that run close to the boundary.

There are overhead power lines crossing the site.

The site is within an area safeguarded in the Local Development Plan for its limestone resources, with the western and eastern edges also safeguarded for their mineral and gravel deposits.

### *Location Plan:*



## DESCRIPTION OF DEVELOPMENT

The applicant proposes to construct and operate a solar farm and energy storage development on the site. The site is accessed via existing field gates off the A4226.

It is proposed that the site will have a grid connection export capacity of circa 50MW of electricity. The scheme is a “Development of National Significance” (DNS) and therefore any planning application will be decided by the Welsh Ministers rather than the Council.

The applicant has requested a scoping direction to set out the Welsh Ministers’ view on the matters that should be included within an Environmental Statement to accompany such a planning application. The Planning Inspectorate has requested, on behalf of the Welsh Ministers, that the Council provide a view on this.

A scoping direction request report has been submitted to accompany that request.

## PLANNING HISTORY

1984/01002/OUT, Address: West of Blacklands Farm, Bonvilston, Proposal: Agricultural dwelling and farm buildings, Decision: Withdrawn 11<sup>th</sup> December 1984.

1986/01210/OUT, Address: Oaklands Farm, Bonvilston, Proposal: Agricultural worker's dwelling. Cattle shed, Decision: Approved, 21<sup>st</sup> May 1987.

1987/00526/FUL, Address: Redlands Wood, Bonvilston, Proposal: Family leisure park, Decision: Refused 6<sup>th</sup> October 1987.

1990/00443/OUT, Address: Redlands Farm, Bonvilston, Proposal: Mixed leisure/residential/education/landscaping incorp. racecourse, ancillary buildings, new settlement, independent school, hotel, highway improvements, Decision: Withdrawn 28<sup>th</sup> February 1991.

1990/00591/FUL, Address: Oaklands Farm, Bonvilston, Proposal: Private farm house, Decision: Refused 4<sup>th</sup> September 1990.

1990/01264/OUT, Address: Oaklands Farm, Bonvilston, Proposal: Detached farmhouse, Decision: Approved 14<sup>th</sup> January 1992.

1994/00139/PN, Address: Tyn-Y-Coed Farm, Bonvilston, Cardiff, Proposal: Steel building to cover existing silage clamp, Decision: Refused 18<sup>th</sup> March 1994.

1994/00561/PN, Address: Tyn Y Coed Farm, Bonvilston, Proposal: Steel framed building, Decision: Further prior approval (PNA/PND/PNT/PNQ), Case Officer: SG, Decision Date: 15<sup>th</sup> July 1994.

1998/00486/PN, Address: Tyn Y Coed Farm, Bonvilston, Proposal: Building for storage of hay/straw, Decision: Approved 12<sup>th</sup> June 1998.

1999/00744/FUL, Address: Tyn Y Coed Farm, Bonvilston, Proposal: Single storey extension and conservatory, Decision: Approved 20<sup>th</sup> August 1999.

2005/00978/FUL, Address: Tyn Y Coed Farm, Bonvilston, Proposal: Two storey extension, Decision: Approved 16<sup>th</sup> September 2005.

2006/01724/FUL, Address: Oaklands Farm, Bonvilston, Proposal: Stationing of mobile home for agricultural worker for 3 years, Decision: Approved 25<sup>th</sup> May 2007.

2011/01121/FUL, Address: Blackland Farm, Bonvilston, Proposal: Change of use to pre-training facility for race horses, Decision: Approved 16<sup>th</sup> December 2011.

2014/00499/SC1, Address: A4226 Five Mile Lane, between Sycamore Cross and to the north, Proposal: Proposed highway improvements, Decision: Environmental Impact Assessment (Screening)- Required, 5<sup>th</sup> June 2014.

2014/00813/SC2, Address: Five Mile Lane, Barry, Proposal: Five Mile Lane improvements, Decision: EIA (Scoping) - Further info required, 27<sup>th</sup> August 2014.

2020/00088/SC1, Address: Land at Pancross and Oaklands Farm, Near Bonvilston, Proposal: Request for screening opinion - Solar farm and power storage units (batteries) across approximately 111 ha of land (solar generation maximum installed capacity of 65 MWp) with ancillary infrastructure, Decision: Special observations 13<sup>th</sup> February 2020.

## CONSULTATIONS

All consultation responses received are available to view on the Council's website under application number 2021/00763/OBS.

Dwr Cymru Welsh Water responded on 1<sup>st</sup> June 2021 advising that they have no comments to make.

Natural Resources Wales were consulted on 15<sup>th</sup> June 2021. They responded on 17<sup>th</sup> June 2021 advising they will provide their response directly to the Planning Inspectorate and will therefore not be responding to the consultation.

Cadw were consulted on 15<sup>th</sup> June 2021. They responded on 1<sup>st</sup> July 2021 advising that the Environmental Statement should include a detailed assessment of the proposed assessment on designated historic assets and an assessment of development on a historic landscape (ASIDOHL). They comment that the scoping report suggests that a geophysical survey should be carried out in the area of the proposed development including this cropmark. This would appear to be an appropriate first stage in identifying the nature extent and importance of this archaeological site, but there may be a need for archaeological evaluation to be undertaken to fully ascertain this information. The extent of the area that the geophysical survey should be carried out in and the need for further archaeological evaluation should be determined by the Glamorgan-Gwent Archaeological Trust and therefore their advice should be sought on these issues.

Highways Development, The Public Rights of Way Officer, the Council's Drainage Section, Shared Regulatory Services, Glamorgan Gwent Archaeological Trust, Planning Policy and the Council's Ecology Officer were consulted on 15<sup>th</sup> June 2021, but no comments have been received at the time of writing this report.

## REPORT

### Planning Policies and Guidance

#### **Local Development Plan:**

Section 38 of The Planning and Compulsory Purchase Act 2004 requires that in determining a planning application the determination must be in accordance with the Development Plan unless material considerations indicate otherwise. The Vale of Glamorgan Adopted Local Development Plan 2011-2026 forms the local authority level tier of the development plan framework. The LDP was formally adopted by the Council on 28 June 2017, and within which the following policies are of relevance to this proposal:

#### **Strategic Policies:**

POLICY SP1 – Delivering the Strategy

POLICY SP9 – Minerals  
POLICY SP10 – Built and Natural Environment

**Managing Growth Policies:**

POLICY MG17 – Special Landscape Areas  
POLICY MG19 – Sites and Species of European Importance  
POLICY MG20 – Nationally Protected Sites and Species  
POLICY MG21 – Sites of Importance for Nature Conservation, Regionally Important Geological and Geomorphological Sites and Priority Habitats and Species  
POLICY MG22 – Development in Minerals Safeguarding Areas  
POLICY MG30 – Local Search Areas for Solar Energy

**Managing Development Policies:**

POLICY MD1 - Location of New Development  
POLICY MD2 - Design of New Development  
POLICY MD4 - Community Infrastructure and Planning Obligations  
POLICY MD7 - Environmental Protection  
POLICY MD8 - Historic Environment  
POLICY MD9 - Promoting Biodiversity  
POLICY MD19 - Low Carbon and Renewable Energy Generation

In addition to the Adopted LDP the following policy, guidance and documentation supports the relevant LDP policies.

**Future Wales: The National Plan 2040:**

Future Wales – the National Plan 2040 is the national development plan. Future Wales provides a strategic direction for all scales of planning and sets out policies and key issues to be considered in the planning decision making process. The following chapters and policies are of relevance to this proposal:

Chapter 3: Setting and achieving our ambitions

- 11 Future Wales' outcomes are overarching ambitions based on the national planning principles and national sustainable placemaking outcomes set out in Planning Policy Wales.

Chapter 4: Strategic and Spatial Choices: Future Wales' Spatial Strategy

- Guiding framework for where large-scale change and nationally important developments will be focussed over the next 20 years.
- Strategy builds on existing strengths and advantages and encourages sustainable and efficient patterns of development.

Chapter 5 – The Regions

- The Vale of Glamorgan falls within the South East region.
- Regional policies provide a framework for national growth, for regional growth, for managing growth and supporting growth.
- In the absence of SDPs, development management process needs to demonstrate how Future Wales' regional policies have been taken into account.

#### Policy 9 – Resilient Ecological Networks and Green Infrastructure

- Action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment.

#### Policy 17 – Renewable Energy

- Support for developing renewable and low carbon energy from all technologies and at all scales.
- Significant weight to the need to meet Wales' international commitments and the target to generate 70% of consumed electricity by renewable means by 2030 to combat the climate emergency.
- All proposals for large scale wind and solar developments should demonstrate that they will not have an unacceptable adverse impact on the environment and describe the net benefits it will bring.

#### Policy 18 – Renewable and Low Carbon Energy Developments of National Significance

- Sets out the criteria for assessing such proposals and refers to the need to consider the cumulative impact of existing and consented renewable energy schemes.

#### **Planning Policy Wales:**

National planning policy in the form of Planning Policy Wales (Edition 11, 2021) (PPW) is of relevance to this proposal.

The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales.

The following chapters and sections are of particular relevance:

#### Chapter 2 - People and Places: Achieving Well-being Through Placemaking

- Maximising well-being and sustainable places through placemaking (key Planning Principles, national sustainable placemaking outcomes, Planning Policy Wales and placemaking)

#### Chapter 3 - Strategic and Spatial Choices

- Good Design Making Better Places
- Sustainable Management of Natural Resources
- Placemaking in Rural Areas
- Development in the Countryside (including new housing)
- Supporting Infrastructure

#### Chapter 5 - Productive and Enterprising Places

- Economic Infrastructure (electronic communications, transportation Infrastructure, economic development, tourism and the Rural Economy)



- Energy (reduce energy demand and use of energy efficiency, renewable and low carbon energy, energy minerals)
- Making Best Use of Material Resources and Promoting the Circular Economy (design choices to prevent waste, sustainable Waste Management Facilities and Minerals)

## Chapter 6 - Distinctive and Natural Places

- Recognising the Special Characteristics of Places (The Historic Environment, Green Infrastructure, Landscape, Biodiversity and Ecological Networks, Coastal Areas)
- Recognising the Environmental Qualities of Places (water and flood risk, air quality and soundscape, lighting, unlocking potential by taking a de-risking approach)

### **Technical Advice Notes:**

The Welsh Government has provided additional guidance in the form of Technical Advice Notes. The following are of relevance to this proposal:

- Technical Advice Note 5 – Nature Conservation and Planning (2009)
- Technical Advice Note 6 – Planning for Sustainable Rural Communities (2010)
- Technical Advice Note 12 – Design (2016)
- Technical Advice Note 15 – Development and Flood Risk (2004)
- Technical Advice Note 23 – Economic Development (2014)
- Technical Advice Note 24 – The Historic Environment (2017)

### **Welsh National Marine Plan:**

National marine planning policy is in the form of the Welsh National Marine Plan (2019). The primary objective of WNMP is to ensure that the planning system contributes towards the delivery of sustainable development and contributes to the Wales well-being goals within the Marine Plan Area for Wales. WNMP is of limited relevance to this proposal:

### **Supplementary Planning Guidance:**

In addition to the adopted Local Development Plan, the Council has approved Supplementary Planning Guidance (SPG). Some SPG documents refer to previous adopted UDP policies and to ensure conformity with LDP policies, a review will be carried out as soon as is practicable following adoption of the LDP. The Council considers that the content and guidance of the adopted SPGs remains relevant and has approved the continued use of these SPGs as material considerations in the determination of planning applications until they are replaced or otherwise withdrawn. The following SPG are of relevance to this proposal:

- Biodiversity and Development (2018)

- Conservation Areas in the Rural Vale (2006)
- County Treasures (2009)
- Design in the Landscape (2006)
- Minerals Safeguarding (2018)
- Planning Obligations (2018)
- Renewable Energy (2019)
- Trees, Woodlands, Hedgerows and Development (2018)
- Bonvilston Conservation Area Appraisal and Management Plan (2009)
- Llancarfan Conservation Area Appraisal and Management Plan (2009)
- Llantrithyd Conservation Area Appraisal and Management Plan (2009)
- St Nicholas Conservation Area Appraisal and Management Plan (2009)

In addition, the following background evidence to the Local Development Plan is considered relevant to the consideration of this proposal insofar as it provides a factual analysis and information that is material to the issues addressed in this report:

- Agricultural Land Classification background paper (2015) (Also see LDP Hearing Session 1 Action Point 12 response)
- Designation of Landscape Character Areas (2013 Update)
- Designation of Special Landscape Areas (2013 Update)
- Designation of SLAs Review Against Historic Landscapes Evaluations (2013 Update)
- Identification of SINCs (2013)
- Minerals Planning revised background paper (2014) (Also see LDP Hearing Session 13, Action Point 1, 3 and 4 response)
- Renewable Energy Assessment (2016 Update) (Also see LDP Hearing Session 18, Action Point 8 and 9 response)

**Other relevant evidence or policy guidance:**

- Developments of National Significance (Wales) Regulations 2016 (as amended)
- Developments of National Significance- Procedural Guidance Version 2.2 produced by The Planning Inspectorate
- Welsh Government Circular 016/2014: The Use of Planning Conditions for Development Management
- Welsh Office Circular 11/99 – Environmental Impact Assessment
- Welsh Office Circular 13/97 - Planning Obligations

## **Well-being of Future Generations (Wales) Act 2015**

The Well-being of Future Generations Act (Wales) 2015 places a duty on the Council to take reasonable steps in exercising its functions to meet its sustainable development (or wellbeing) objectives. This report has been prepared in consideration of the Council's duty and the "sustainable development principle", as set out in the 2015 Act. In reaching the recommendation set out below, the Council has sought to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

### Issues

In reaching a scoping opinion, the decision maker must have regard to the matters listed in Paragraph 14 (6) of the Regulations (The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017) and before adopting a scoping opinion, the decision maker must take into account:

- (a) Any information provided by the applicant about the proposed development;
- (b) The specific characteristics of the particular development;
- (c) The specific characteristics of development of the type concerned; and
- (d) The environmental features likely to be significantly affected by the development.

A report has been submitted by the applicant to accompany their scoping list setting out how the Environmental Statement would be presented. The topic chapters proposed are as follows. It is considered this list is acceptable. Comments are given on the contents of each chapter as follows.

### **Hydrology, Hydrogeology and Drainage:**

The scoping report suggests on page 10 that a chapter will be provided on this matter, but then goes on to suggest this will not be significantly affected by the proposal.

It is noted that the areas considered at risk of both surface water and fluvial flooding are small and it is considered likely a proposal could be designed without having significant effects.

No comments have been received from the Council's Drainage Engineers on this matter and therefore no further comments are offered on the information proposed to be set out in this chapter. Should comments be received they will be forwarded to the Planning Inspectorate.

### **Ecology and Nature Conservation:**

It is agreed that ecological survey and assessment work is required for the proposal.

In terms of specific sites, it is considered this chapter should focus on the effects of the development on the Sites of Importance for Nature Conservation adjoining the perimeter of the site and the Nant Whitton Woodlands Site of Special Scientific Interest, which is in very close proximity to the site.

In terms of impacts this proposal has on individual species, it is considered this chapter should focus on the impact on bat populations, particularly if trees are to be lost, and the impact of the proposal on potential otter and dormouse habitat.

It is considered a robust scheme of biodiversity enhancement should be provided mitigate any effects on biodiversity and to ensure a biodiversity gain.

No comments have been received from the Council's Ecologist at the time of writing this report and therefore no further comments are offered on the proposed surveys, assessments and methodology set out in the scoping report. Should comments be received they will be forwarded to the Planning Inspectorate.

### **Noise and Vibration:**

It is agreed that a noise and vibration assessment should be provided as set out in the scoping report. No comments have been received from the Council's Shared Regulatory Services Team at the time of writing this report and therefore no further comments are offered on the proposed methodology for the assessment set out in the scoping report. Should comments be received they will be forwarded to the Planning Inspectorate.

### **Landscape and Visual Impact:**

It is agreed that a Landscape and Visual Impact Assessment should be provided as set out in the scoping report. This should focus on the effects of the proposal on the two special landscape areas the site sits within, and the effect on the Llancarfan Landscape of Outstanding Historic Interest.

No further comments are offered on the proposed methodology set out in the scoping report.

### **Historic Environment:**

It is noted that a desk based archaeological assessment has been provided as an appendix to the scoping report which provides some discussion on the matters below.

The Environmental Statement should include a detailed assessment of the effects of the proposed development on the following scheduled monuments and listed buildings, following the methodology outlined in the Welsh Government's best-practice guidance Setting of Historic Assets in Wales (2017):

#### Scheduled Monuments

- GM117 Coed y Cwm Ringwork
- GM298 Castell Moel
- GM613 Castle Ringwork 850m ENE of Ty'n-y-Coed

#### Listed Buildings

- 13602 Parish Church of St Mary the Virgin
- 13603 Ty Mawr (Great House)
- 16319 Bonvilston Cottage

- 16320 Churchward Cross at Parish Church of St Mary
- 16321 Village Farmhouse

The application area is partly inside the boundaries of the Registered Llancarfan Landscape of Special Historic Interest. The development is of a sufficient scale to have more than a local impact on the historic landscape. Consequently, the Environmental Statement should include an assessment of development on a historic landscape (ASIDOHL). Cadw will be the “curator” for the preparation of this ASIDOHL and should be contacted by the assessor prior to it being commenced in order to agree which historic landscape character areas should be included in the study.

The desk based archaeological assessment identifies a number of archaeological features within the site. In particular a cropmark has been identified which may be of prehistoric or medieval date.

The scoping report suggest that a geophysical survey should be carried out in the area of the proposed development including this cropmark. It is agreed this should be provided, but there may be a need for an archaeological evaluation to subsequently be undertaken. The extent of the area that the geophysical survey should be carried out in and the need for further archaeological evaluation should be determined by the Glamorgan-Gwent Archaeological Trust and therefore their advice should be sought by the developer on these issues. It should be noted that no comments have been received from the Glamorgan Gwent Archaeological Trust. Should such comments be received they will be forwarded to the Planning Inspectorate.

It is agreed that a programme of archaeological works should be provided as set out in the scoping report. However, again no comments have been received from the Glamorgan Gwent Archaeological Trust on this matter.

The effects of the proposals on the setting of conservation areas at Bonvilston, St Nicholas, Llancarfan and Llantrithyd Place should be assessed as should the effects on the settings of Dyffryn Gardens and Llantrithyd Place Historic Parks and Gardens. It should be noted that Cadw have not provided any comments with respect to Historic Parks and Gardens and if such comments are received they will be forwarded to the Planning Inspectorate.

### **Climate Change:**

No comments are offered on this proposed chapter.

### **Cumulative Impacts:**

It is agreed that the assessment of the effects should focus on the cumulative impact with other solar farms within the area, particularly on the cumulative landscape effects.

The following topics are not proposed to be covered in specific chapters in the Environmental Statement as the applicant considers they are unlikely to be materially affected or give rise to significant environmental effects as a consequence of the proposed development. No concerns are raised regarding this approach. Comments have been given below each heading:

**Major Accidents and/or Disasters:**

No comments are offered on this topic.

**Soils and Geology:**

No comments have been received from the Council's Shared Regulatory Services Team at the time of writing this report and therefore no further comments are offered. Should comments be received they will be forwarded to the Planning Inspectorate.

**Public Health and Wellbeing:**

No comments have been received from the Council's Shared Regulatory Services Team at the time of writing this report and therefore no further comments are offered. Should comments be received they will be forwarded to the Planning Inspectorate.

**Air Quality:**

It is agreed that the main effects are likely to be due to construction. No comments have been received from the Council's Shared Regulatory Services Team at the time of writing this report and therefore no further comments are offered. Should comments be received they will be forwarded to the Planning Inspectorate.

**Traffic and Transport:**

It is agreed that the main effects are likely to be due to construction. No comments have been received from the Council's Highway Development Team at the time of writing this report and therefore no further comments are offered. Should comments be received they will be forwarded to the Planning Inspectorate.

**Socio Economic:**

No comments are offered on this topic.

The applicant proposes to scope the following topic areas out, but provide a standalone technical assessment to demonstrate no significant effects will occur. Comments are provided below each heading:

**Agricultural Land Quality:**

It is noted that the predicted agricultural land classification given in the report is different to the information held on the Council's records. It is however agreed that due to the size of the site a soil assessment should be undertaken. It is agreed that this matter can be considered as a standalone document.

**Glint and Glare (aviation receptors):**

The Council has not consulted the Civil Aviation Authority in writing this report. Therefore, no comments are offered on this topic.

It is considered that the recommendation below complies with the Council's well-being objectives and the sustainable development principle in accordance with the requirements of the Well-being of Future Generations (Wales) Act 2015.

**RECOMMENDATION**

The Council would advise the Planning Inspectorate that the Environmental Statement submitted should address the matters set out in the attached Officer's Report.

1. The Council would advise the Planning Inspectorate that the Environmental Statement submitted should address the matters set out in the attached Officer's Report.

**NOTE:**

**Please note that this consent is specific to the plans and particulars approved as part of the application. Any departure from the approved plans will constitute unauthorised development and may be liable to enforcement action. You (or any subsequent developer) should advise the Council of any actual or proposed variations from the approved plans immediately so that you can be advised how to best resolve the matter.**

**In addition, any conditions that the Council has imposed on this consent will be listed above and should be read carefully. It is your (or any subsequent developers) responsibility to ensure that the terms of all conditions are met in full at the appropriate time (as outlined in the specific condition).**

**The commencement of development without firstly meeting in full the terms of any conditions that require the submission of details prior to the commencement of development will constitute unauthorised development. This will necessitate the submission of a further application to retain the unauthorised development and may render you liable to formal enforcement action.**

**Failure on the part of the developer to observe the requirements of any other conditions could result in the Council pursuing formal enforcement action in the form of a Breach of Condition Notice.**



## Vale of Glamorgan Highway Authority Observation Sheet

Planning Application Ref:	2021/00763/OBS
Observations By:	Ahmad Asadi
Date:	15 July 2021
Location:	Land at Oaklands Farm, Pancross Farm and Redlands Farm near Bonvilston
Proposal:	Solar farm and energy storage (battery) development with ancillary infrastructure across a total area of approximately 126 ha of farmland
Case Officer:	Mrs. Helen Winsall

In relation to the above pre application and considering the submitted details, the Highway Authority would comment as follows:

Due to the type and size of the proposal the Highway Authority would require a robust Transport Assessment to identify the main transport issues relating to a proposed development.

The Transport Assessment will generally include an audit and appraisal of the following:

### Existing conditions

- Existing site information
- Baseline traffic data
- Existing site use and means of access

### Proposed Development

- Proposed land use and scale of development
- Proposed improvements to site accessibility by sustainable modes of travel
- Proposed parking and servicing strategy (in accordance with the Vale of Glamorgan Council parking standards), turning facilities for large vehicles and appropriate access arrangement



- Residual vehicle trip impact (if any)
- Transport implications of construction traffic (if there are specific local difficulties identified)

The Planning Inspectorate  
Crown Buildings  
Cathays Park  
Cardiff  
CF10 3NQ

ebost/email:

dns.wales@planninginspectorate.gov.uk

23/06/2021

Annwyl Syr/Madam / Dear Sir/Madam,

**TOWN AND COUNTRY PLANNING ACT 1990  
THE DEVELOPMENTS OF NATIONAL SIGNIFICANCE (PROCEDURE) (WALES)  
ORDER 2016 (AS AMENDED)  
TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT)  
(WALES) REGULATIONS 2017**

**BWRIAD / PROPOSAL: SOLAR FARM AND ENERGY STORAGE (BATTERY)  
DEVELOPMENT WITH ANCILLARY INFRASTRUCTURE ACROSS A TOTAL AREA OF  
APPROXIMATELY 126 HA OF FARMLAND.**

**LLEOLIAD / LOCATION: LAND AT OAKLANDS FARM, PANCROSS FARM AND  
REDLANDS FARM NEAR BONVILSTON, VALE OF GLAMORGAN, CF5 6TQ**

Thank you for consulting Cyfoeth Naturiol Cymru / Natural Resources Wales about the above, which we received on 26/05/2021.

You are seeking our advice on the scope of the Environmental Impact Assessment (EIA) in relation to Natural Resources Wales's functions to help to inform your Scoping Direction.

We advise the following matters / topics are scoped in (and 'down') to the Environmental Statement (ES) due to likely significant effects from the scheme.

## **Ecology**

### Protected Species

We note from the Scoping Direction Request report that:

- Phase 1 Habitat surveys have been undertaken.

- There are records of great crested newts in the area and that eDNA survey for great crested newt at some ponds within the site have been attempted but the ponds were dry when visited.
- Some trees with potential bat roost features have been identified on site, and that the woodlands, hedges, fields boundaries and watercourse corridors on site provide/offer optimal bat habitat.
- The hedgerows and woodland on site provide optimal dormouse habitat; and that presence on site is assumed to be highly probable.
- The watercourses and adjacent woodland areas are suitable for otter.
- Further survey is planned for bats to assess trees with potential roost features.

Any habitat surveys should accord with the NCC Phase 1 survey guidelines (NCC (1990) Handbook for Phase 1 habitat survey. NCC, Peterborough). We advise that Phase 1 surveys are undertaken and completed during the summer to ensure the best chance of identifying the habitats present.

### *Great Crested Newts*

Three ponds are identified on site on the Phase 1 habitat map and the Scoping Direction Request report notes records of great crested newt in the area. A review of mapping shows multiple additional ponds in the vicinity of the site and we note the presence of potentially suitable habitat on site which is connected to further suitable habitat in the wider landscape.

We advise that great crested newt surveys are undertaken in accordance with the good practice guidance for the site and within a 500m radius of the boundary of the site. The EIA should assess the likely impacts of the proposals on great crested newts and include suitable mitigation measures.

### *Bats*

We note that from the Scoping Direction Request report that the EIA will be supported and informed by an assessment of trees for potential bat roosts, and further bat surveys, if required. We advise that bat surveys should comprise all trees with potential to support bats that may be impacted by the development.

The EIA should assess the likely impacts of the proposals on bats and include suitable mitigation measures.

### *Dormouse*

The Scoping Direction Request report identifies that there are habitats on site with potential to support dormice. The report proposes to assume presence of dormouse on the site.

We note that the proposals cover a number of fields, including hedgerow field boundaries and woodland. The Scoping Direction Request report states that dormouse habitats “are predicted to be ... largely unaffected” but there is no additional detail on potential impacts on dormouse at this stage. The EIA should assess the likely impacts of the proposals on habitats suitable for dormouse and include suitable mitigation measures. As detailed in the

report, if proposals change significantly and changes to likely impacts are identified then this could trigger a requirement for survey.

#### *Otter*

We note from the Scoping Direction Request report that the EIA intends to scope-in otter without a requirement for species specific surveys, because the current scheme proposes that habitat suitable to support otter is predicted to be largely unaffected. As for dormouse above, the EIA should assess the likely impacts of the proposals on otter, and include suitable mitigation measures. As detailed in the report, if proposals change significantly and changes to likely impacts are identified then this could trigger a requirement for survey.

#### *Protected Species summary*

The EIA should include the species specific impacts in the short, medium and long term together with any mitigation and compensation measures proposed to offset the impacts identified. Should potential impacts be identified, we advise that the EIA set out how the long term mitigation or compensation will be secured, including management and monitoring information and long term financial and management responsibility.

#### *EPS Licence*

Where a European Protected Species is identified and the development proposal will contravene the legal protection they are afforded, a licence should be sought from NRW. Should a licence be identified as appropriate, the EIA should set out how the works will satisfy the three requirements as set out in the Conservation of Habitats and Species Regulations 2017.

#### *Local Biodiversity Interests*

We recommend that the local authority's Ecologist is consulted on the scope of the work to ensure that regional and local biodiversity issues are adequately considered, particularly those habitats and species listed in the relevant Local Biodiversity Action Plan, and that are considered important for the conservation of biological diversity in Wales.

NRW would expect the developer to contact other relevant people/organisations for biological information/records relevant to the site and its surrounds. These include the relevant Local Records Centre and any local ecological interest groups (e.g. bat groups, mammal groups).

#### Protected Sites (SSSIs) and Watercourses

We note that the Scoping Direction Report identifies that the proposal site is within 5km of the following Sites of Special Scientific Interest (SSSI):

- Nant Whitton Woodlands (195m)
- Ely Valley (2.5km)
- Coedydd Y Barri / Barry Woodlands (2.6km)
- Fferm Walters (3.9km)
- Pysgodlyn Mawr (3.9km)

We note the amended proposal boundary which is now approximately 195m away from Nant Whitton Woodlands SSSI. This SSSI is designated for its semi-natural broadleaved woodland. This should be scoped in to the ES and appropriate avoidance and mitigation measures proposed.

With regard to the local watercourses, it is stated the 'River Llancarfan' (Nant Llancarfan) and River Waycock are to be scoped in. The River Waycock flows through Barry Woodlands SSSI and changes in run off rates or water quality have potential to cause effects on this SSSI. At this stage, we consider it likely that robust pollution control measures and retaining greenfield run off rates should ensure to likely significant effects on this SSSI and watercourse.

The Nant Whitton which runs through the Nant Whitton Woodlands SSSI should also be scoped in.

We are of the view that once the site is operational the pollution risk will be low. However, the construction stage presents a significant risk to the water environment from pollution (e.g. high suspended solids run-off during storm events). The topography of this site declines towards the nearby rivers, which could increase the risk of pollution during a wet weather event.

Therefore, we request that the construction phase is taken into account as part of the assessment of local watercourses and that these watercourses are considered in the ES. We agree that a Construction Environmental Management Plan should be prepared. We also advise runoff rates should be close to greenfield rates during the construction and operational phases to prevent changes to the hydrology of the area and impact on SSSIs.

There is potential for the development to cause an increase in the rate of flow of water into the catchment, we note that 5.8 of the Scoping Direction Report commits to a SAB application and undertaking an assessment of the hydrology of the site and surrounding area during the EIA. We would re-iterate that changes to the marshy grassland could have an impact on this.

#### Securing Biodiversity Enhancement

We also advise that, in accordance with the Environment (Wales) Act 2016 and Planning Policy Wales, the application demonstrates how it can deliver biodiversity enhancements and thus contribute to promoting ecological resilience. This is reaffirmed in the Welsh Government letter of 23/10/19 to all Chief Planning Officers.

#### **Advice on matters that can be scoped out - Flood Risk**

The western site boundary is on the edge of Zone C2 of the Development Advice Map (DAM) contained in TAN15 and the 1% (1 in 100 year) and 0.1% (1 in 1000 year) annual probability fluvial flood outlines. There is no information to suggest that the proposal will involve land raising within the flood outlines. We consider that the proposed development is unlikely to have a significant environmental effect in respect of flood risk.

We acknowledge the applicant's intention to incorporate detail on how the development has been designed in respect of flood risk within a Flood Consequences Assessment

(FCA) and that the FCA will be a separate but supporting document to the Environment Statement.

For information, we are aware that village of Llancarfan has been subject to a number of historic flooding events and any changes in land management may alter the hydrological response to significant rainfall events as highlighted above. It will be important to ensure the scheme does not increase downstream flood risk and where possible seeks to reduce run off rates and increase storage where possible. We suggest you seek further advice on this matter from the Lead Local Flood Authority (LLFA) who are the appropriate body to provide further advice on surface water matters.

### **Other Matters**

Please note, we have considered the likelihood of significant effects from the scheme on environmental interests listed on our consultation topics list: *Development Planning Advisory Service: Consultation Topics* (September 2018), which is published on our [website](#). Our advice does not rule out the potential for the proposed development to affect other interests.

Our advice is made without prejudice to comments we may subsequently wish to make when consulted on any planning application, any environmental permit, the submission of more detailed information, or an Environmental Statement.

We advise the applicant that, in addition to planning permission, it is their responsibility to ensure they secure all other permits/consents/licences relevant to their development. Please refer to our [website](#) for further details.

If you have any queries on the above, please do not hesitate to contact us.

Yn gywir / Yours faithfully

### **Annabelle Evans**

Cynghorydd - Cynllunio Datblygu / Advisor - Development Planning  
Cyfoeth Naturiol Cymru / Natural Resources Wales



Llywodraeth Cymru  
Welsh Government

Plas Cawerddin 57 Cefn Coed

73000

The Planning Inspectorate

By email

Eich cyfeirnod  
Your reference

DNS 3245503

Ein cyfeirnod  
Our reference

DH

Dyddiad  
Date

28 June 2021

Llinell uniongyrchol  
Direct line

Ebost  
Email:

Dear Sir/Madam

**Solar farm and energy storage (battery) development with ancillary infrastructure across a total area of approximately 126 ha of farmland, Land at Oaklands Farm, Pancross Farm and Redlands Farm near Bonvilston, Vale of Glamorgan, CF5 6TQ**

Thank you for your letter of 26 May 2021 consulting Cadw on the Scoping opinion as to the contents of an EIA for above proposed development of national significance (DNS).

Please find below our advice on the scope of the EIA in relation to Cadw's functions.

The national policy and Cadw's role in planning are set out in Annex A.

### Assessment

We have been asked to provide a scoping opinion as to the contents of an Environmental Impact Assessment (EIA) that will be submitted in support of an application for the proposed Oaklands Solar Farm that will be determined by Welsh Ministers following the Development of National Significance procedures, to be accompanied by an Environmental Impact Assessment (EIA).

A scoping report prepared by Sirius Planning has been submitted with the request for the scoping opinion and this was accompanied by a Heritage Desk-based Assessment (HDBA) prepared by Archaeology Wales. The contents of these documents have been considered when preparing this advice.

### Scheduled Monuments

GM117 Coed y Cwm Ringwork  
GM298 Castell Moel  
GM613 Castle Ringwork 850m ENE of Ty'n-y-Coed

### Listed Buildings

13602 Parish Church of St Mary the Virgin  
13603 Ty Mawr (Great House)

Mae Gwasanaeth Amgylchedd Hanesyddol Llywodraeth Cymru (Cadw) yn hyrwyddo gwaith cadwraeth ar gyfer amgylchedd hanesyddol Cymru a gwerthfawrogiad ohono.

The Welsh Government Historic Environment Service (Cadw) promotes the conservation and appreciation of Wales's historic environment.

Rydym yn croesawu gohebiaeth yn Gymraeg ac yn Saesneg.  
We welcome correspondence in both English and Welsh.



BUDDSODDWR MEWN POBL  
INVESTOR IN PEOPLE



16319 Bonvilston Cottage  
16320 Churchward Cross at Parish Church of St Mary  
16321 Village Farmhouse

The HDBA has identified that the proposed development will have an adverse impact on the settings of the above designated historic assets. Whilst it has given initial consideration to the potential impact on these designated historic assets it does not provide any detailed assessment. Consequently the EIA should include a detailed assessment of the impact of the proposed development on these designated historic assets following the methodology outlined in the Welsh Government's best-practice guidance Setting of Historic Assets in Wales (2017).

#### Registered Historic Landscapes

Llancarfan

The application area is partly inside the boundaries of the Registered Llancarfan Landscape of Special Historic Interest.

The development is of a sufficient scale to have more than a local impact on the historic landscape and there is potential conflict with development plan policy. Consequently, the EIA should include an assessment of development on a historic landscape (ASIDOHL). Cadw will be the "curator" for the preparation of this ASIDOHL and should be contacted by the assessor prior to it being commenced in order to agree which historic landscape character areas should be included in the study.

#### Non-Designated Historic Assets

The HDBA has identified a number of archaeological features inside the application area. In particular a cropmark which may be of prehistoric or medieval date. It is noted that the HDBA suggests that this will be of regional and therefore medium archaeological value but without further investigation this cannot be confirmed and it should be noted that many similar prehistoric and medieval enclosures are of National importance.

The scoping report suggests that a geophysical survey should be carried out in the area of the proposed development including this cropmark. This would appear to be an appropriate first stage in identifying the nature extent and importance of this archaeological site, but there may be a need for archaeological evaluation to be undertaken to fully ascertain this information. The extent of the area that the geophysical survey should be carried out in and the need for further archaeological evaluation should be determined by the Glamorgan-Gwent Archaeological Trust, the archaeological advisors to the Vale of Glamorgan Council and therefore their advice should be sought on these issues.

Yours sincerely,

Denise Harris  
Diogelu a Pholisi/ Protection and Policy



## **Annex A**

### Our role

Details about our role in the DNS process are available [online](#).

### National Policy

Applications for planning permission are considered in light of the Welsh Government's land use planning policy and guidance contained in Planning Policy Wales (PPW), Conservation Principles for the Sustainable Management of the Historic Environment in Wales, Technical Advice Notes and related guidance.

PPW ([Chapter 6 – The Historic Environment](#)) explains that it is important that the planning system looks to protect, conserve and enhance the significance of historic assets. This will include consideration of the setting of an historic asset which might extend beyond its curtilage. Any change that impacts on an historic asset or its setting should be managed in a sensitive and sustainable way.

Thank you for your email dated 26 May 2021 consulting HSE on Manmoel Wind Farm - EIA Scoping Consultation Development of National Significance (DNS). Please find HSE's advice below.

### **HSE's Land Use Planning Advice**

1. With reference to the drawing with the title **Site Boundary Plan (Drwg No. SRE1113/02/01, Rev. 0, Date 25/02/2021)** two redlined areas are shown separated by a public highway (A4228). Running parallel with the eastern side of the A4228 a ribbon section of the proposed development falls within HSE public safety consultation zones associated with a Major Accident Hazard Pipeline operated by Wales and West Utilities:
  - a. Pentrebane / St. Athan [p1] (HS033) [Transco ref: 1565, HSE ref: 4132704]
2. The redlined area(s) does not currently fall within the consultation distances of any Major Accident Hazard Installation(s).
3. HSE will not advise against the proposed development, providing the proposed development does not introduce populations, either permanent or temporary, into any of HSE's public safety consultation zones which are assigned to individual Major Accident Hazard Pipeline(s).
4. Please note if at any time a new Major Accident Hazard Pipeline is introduced or existing Pipeline modified prior to the determination of a future application, then the HSE reserves the right to revise its advice.
5. Likewise if prior to the determination of a future application, a Hazardous Substances Consent is granted for a new Major Hazard Installation or a Hazardous Substances Consent is varied for an existing Major Hazard Installation in the vicinity of the proposed project, then again the HSE reserves the right to revise its advice.

### **Would Hazardous Substances Consent be needed?**

6. The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which HSC is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) (Wales) Regulations 2015.
7. Hazardous Substances Consent would be required if the proposed development site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations.
8. Further information on HSC should be sought from the relevant Hazardous Substances Authority.

### **Explosives sites**

There are no licensed explosive sites in the vicinity so HSE has no comment to make in this regard.

Thank you for using the dedicated email account for HSE to respond to NSIPs and DNSs at [nsip.applications@hse.gov.uk](mailto:nsip.applications@hse.gov.uk) .

Kind regards

*Monica*

Monica Langton  
Divisional Support Team  
CEMHD  
1.2 Redgrave Court  
Bootle

## **Re: DNS 3245503 - Oaklands Solar Farm - EIA Scoping Consultation.**

Thank you for consulting the Department on the scoping opinion consultation for advice concerning agricultural land quality and the application of Best and Most Versatile (BMV) policy (PPW para 3.58 and 3.59). This advice relates to technical information only; not the merits or otherwise of the proposal (TAN6, Annex B6).

### **1. Agricultural Land Classification (ALC) - Information:**

The Predictive ALC Map (v2) shows the current site as dominantly ALC Subgrade 3b, Grade 4 and some Grade 5. The site lies in a high Field Capacity Day area (>225 days) and the dominant soil types shown on the National Soil Map are the poorly drained (clayey).

The site was originally surveyed in 1979 (011/79) as part of the Bonvilston and St Nicholas Local Plan (attached). This was a reconnaissance level survey, covering about 1800ha of land in the locality. The current site is one small area within the 1979 survey.

In 1990, part of this area was reassessed (021/90) Redlands Farm, Bonvilston (attached). This survey includes most of the current site but not the area south of Blackland Farm. Of the overlapping areas, most of the current site is shown as Subgrade 3b and Grade 4. Please note, the 021/90 survey was a reconnaissance level reassessment of the ALC Pre-Revision 011/79 survey. The report mentions the area was "*briefly re-examined*". The Department does not hold the auger boring records from the 021/90 survey that overlap with the current site. As such, the precision of grading in this area is uncertain.

### **2. Agricultural Land Classification (ALC) - Advice:**

Overall, the likelihood of any significant areas of BMV agricultural land within the proposed solar farm area appears very low. This is based on the 011/79 and 021/90 ALC surveys, coupled with the high Field Capacity Day period and published soil mapping showing clayey soils. The Department can't give any guarantee of the precision of grade boundaries in these surveys. This is due to a lack of field data and the broader scale reconnaissance nature of the work.

If a detailed ALC of the site is undertaken, the Department would be available to validate it. Validation is a free of charge service completed by the Department.

Regards

Arwel Williams

Arwel Wyn Williams

Cynghorydd Polisi Pridd a Defnydd Tir Amaethyddol / Agricultural Land Use & Soil Policy Advisor  
Is-adran Tirweddau, Natur a Choedwigaeth / Landscapes, Nature and Forestry Division  
Llywodraeth Cymru / Welsh Government

AGRICULTURAL LAND CLASSIFICATION  
REDLANDS FARM  
BONVILSTON, SOUTH GLAMORGAN

INTRODUCTION

The original Agricultural Land Classification Map Sheet 154 covering the South Glamorgan area was published in 1966 at a scale of 1:63360. The Redlands Farm area was classified as partly grade 2 and partly grade 4. The Bonvilston Nicholas area was resurveyed in detail in 1979 for local planning purposes, in order to revise the original gradings where necessary and to provide a sub division of land classified as grade 3. This local plan survey covered about 1800 ha of land and included Redlands Farm. It confirmed a large area of grade 2 and smaller area of subgrade 3a at Redlands Farm, to the south of and adjacent to the A48. The remainder of the farm was classified as subgrade 3c, grade 4 and non-agricultural. The different gradings largely reflected differences in soil types over the farm.

Since 1 January 1990 revised guidelines and criteria have been used for assessing the quality of agricultural land, taking advantage of the availability of new knowledge and data, in order to improve the objectivity and consistency of assessments of land quality. Because of the continuing planning interest and interest in land quality around the Redlands Farm area, this smaller area of 310ha has been briefly re-examined and resurveyed in terms of the revised ALC system.

CLIMATE

More extensive and objective climatic data are an important part of the revised ALC.

Interpolated values for the climate parameters, as calculated for Redlands Farm area, at a height of approximately 100m AOD are as follows.

Average Annual Rainfall (AAR)	- 1172 mm
Median Accumulated Temperature above 0°C January to June (ATO)	- 1447 day °C
Median Duration of Field Capacity Days (FCD)	- 234 days
Average Summer Rainfall, April to September (ASR)	- 534 mm
Median Accumulated Temperature above 0°C April to September (ATS)	- 2346 day °C
Moisture Deficit (Winter Wheat)	- 71 mm
Moisture Deficit (Potatoes)	- 55 mm

The area has a high rainfall (AAR) with high accumulated temperatures (ATO). It is relatively sheltered. Overall climate provides only a minor limitation to agricultural productivity.

## SOILS

Soils in the north of the farm alongside the A48 were confirmed as brown coarse loamy topsoil textures, over coarse loamy or fine loamy subsoils. Such soils were found to be well drained, and deep, but with gravelly subsoil horizon restricting augering depth in places. Topsoil stone content was no more than slightly stoney. Such soils would provide only minor limitation to agriculture. South of Redlands Farm itself, the soil type changes to a heavier fine loamy over clayey, the clayey subsoil providing a moderately severe or severe soil wetness limitation.

## AGRICULTURAL LAND CLASSIFICATION

This brief re-examination of the Redlands Farm area in terms of the revised ALC largely confirmed the classification of the land made during the detailed survey in 1979. In particular it confirmed a large area of grade 2 and smaller area of sub-grade 3a alongside the A48 in the north of the survey area. Land classified as subgrade 3c in 1979 would now be incorporated into subgrade 3b in the revised ALC system.

## SUMMARY

Grade 1	-
Grade 2	46 ha
Subgrade 3a	8 ha
Subgrade 3b	140 ha
Grade 4	109 ha
Grade 5	-
Non agricultural	22 ha
Total	325 ha

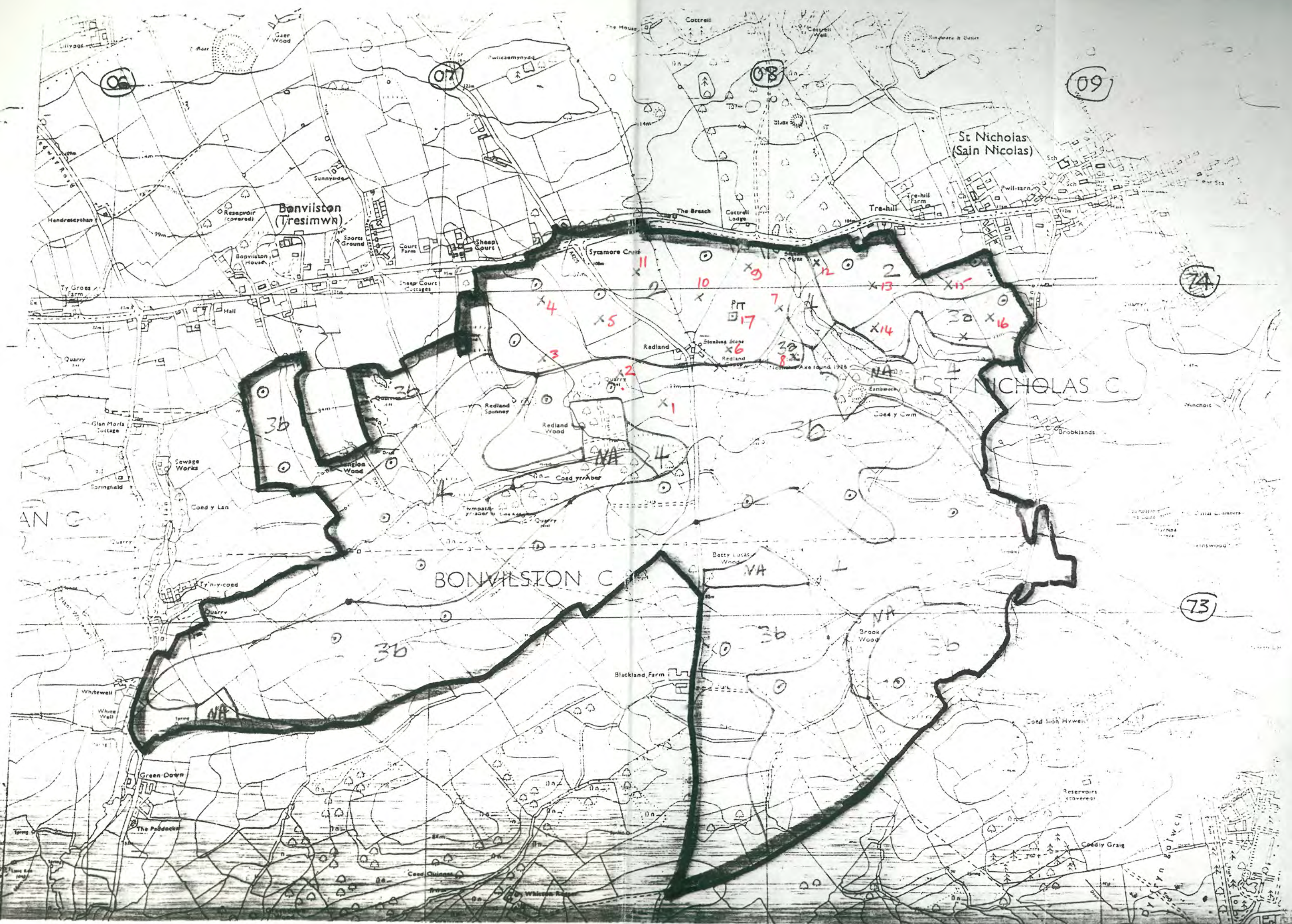
RPG  
Trawsgoed  
July 1990



## REFERENCES

1. MAFF (1984) The Agricultural Climate of England and Wales Reference Book 435 HMSO, London
2. Met Office 1989 Climatological Data-sets for Agricultural Land Classification. Meteorological Office, Bracknell
3. Geological Survey of Gt Britain, Sheets 261 and 262, Bridgend
4. Soil Survey of England and Wales (1983), 1:250,000 Soil Map Series, Sheet 2: Wales
5. MAFF/Soil Survey of England and Wales (1984) Soil Texture Leaflet 894
6. MAFF (1988) Agricultural Land Classification of England & Wales. Revised guidelines and criteria of grading the quality of agricultural land.





Bonvilston  
(Tresimwn)

St Nicholas  
(Sain Nicolas)

ST NICHOLAS C

BONVILSTON C

AN C

73

74

09

08

07

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Handrepschan

Ty Groes Farm

Quarry

Glan Morfa Cottage

Springfield

Coed y Lan

Quarry

Whitewall

Green Down

The Paddock

Spring

Reservoir (covered)

Bopvilston House

Hall

Sewage Works

Coed y Lan

Tyn-y-coed

Quarry

White Well

Green Down

The Paddock

Spring

Sunnyside

Sports Ground

Court Farm

Coed y Lan

Coed y Lan

Tyn-y-coed

Quarry

White Well

Green Down

The Paddock

Spring

Reservoir (covered)

Bopvilston House

Hall

Sewage Works

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White Well

Green Down

The Paddock

Spring

Reservoir (covered)

Bopvilston House

Hall

Sewage Works



PROF.NO	DEPTH[CM]	TEXTURE	COLOUR	WEITNESS	STONE	RELIEF	ALC
1	30 50+	[M]/[H]CL C	10YR 3/3 DK BROWN 10YR 4/1 BRNSH GREY	IV	<5%, 2-6CM	<3 S	3b
2	30 90+	SL SL/[M]CL	10YR 3/4 DK BROWN 7.5YR 4/4 BROWN	I	<5%	<2 SW	2
3	25 70 70+	SL SL IMPEN	7.5YR 4/4 7.5YR 5/6 BRT BROWN	I	<5%	4-5 W	2
4	25 60 60+	SL [C]SL IMPEN	7.5YR 4/4 7.5YR 4/6	I	5-10%, 2-6	4-5 W	2
5	25 60 60+	SL [C]SL IMPEN	7.5YR 4/4 7.5YR 4/6	I	5-10%, 2-6	<2	2
6	35 60 60+	S[Z]L SL IMPEN	7.5YR 4/4 7.5YR 5/4-5/6	I	<5%	3 E	2
7	30 50 50+	SL SL IMPEN	7.5YR 4/4 7.5YR 4/6	I	5-10%, 2-6	3 E	2
8	25 40 40+	SL SL ROCK?	7.5YR 4/4 7.5YR 4/6	I	10%, 2-6CM	2 SE	3a
9	35 60 60+	SL [M]CL IMPEN	7.5YR 4/4 7/5YR 4/6	I	5-10%, 2-6	3 E	2
10	25 55 80+	SL [M]CL [M]SCL	7.5YR 4/4 7.5YR 5/6 7.5YR 4/6	I-II	5%, 2-6CM	2 SE	2-3a
11	35 70 80+	SL/[M]CL SL/[M]CL SCL	7.5YR 4/4 7.5YR 4/6 7.5YR 4/6	I	5%, 2-6CM	<2	2-3a
12	25 50 50+	SL [M]CL IMPEN	7.5YR 4/4 7.5YR 4/6	I	5-10%, 2-6	3 W	2
13	25 70 80+	SL [M]CL S[C]L	7.5YR 4/3 7.5YR 4/6 7.5YR 5/6-6/4	I-II	<5%, 2-6CM	<2	2-3a
14	25 50	SL SL/[M]CL	7.5YR 4/4 7.5YR 4/6	I	10-15%, 2-6	5 SE	3a



PROF.NO	DEPTH[CM]	TEXTURE	COLOUR	WEINNESS	STONE	RELIEF	ALC
	50+	IMPEN					
15	30	SL	7.5YR 4/3	I	<5%,2-6CM	<2	2
	50	SL	7.5YR 4/4				
	50+	IMPEN					
16	25	SL	7.5YR 4/3	I	<5%,2-6CM	4 S	2-3a
	40	S[C]L	7.5YR 4/4				
	40+	IMPEN					
17	25	SL	7.5YR 4/4	I	<5%,2-6CM	<2	2
	45	SL/[M]CL	7.5YR 5/6				
	80+	[C]SL	7.5YR 4/6				

**BONVILSTON, ST NICHOLAS AND PETERSTON-SUPER-ELY (Areas 8 and 9)**

The survey of the Bonvilston, St Nicholas and Peterston-Super-Ely area was carried out in November/December 1979 at a scale of 1:25000. It covers an area of approximately 1600 ha of agricultural land

**Relief**

The geology of the area is very varied, giving rise to great variation in relief and soil type. The underlying rocks form a series of E-W bands of differing age, in the sequence, from North to South Liassic limestones and shales, Rhaetic shales, Triassic Marls, Old Red Sandstone, Carboniferous limestone, Rhaetic shales and Liassic limestones and shales. The harder Carboniferous limestone rocks have formed a ridge between Bonvilston and St Nicholas known as the Downlands. Partially covering and abutting against the northern edge of the Downlands are deep drift deposits derived from the terminal moraine marking the Southern extent of the last S Wales glaciation. These glacial deposits rise to over 130 m OD locally (400') around Contrell and on the edge of the Tair Onen forest NW of Bonvilston and exhibit a very hummocky 'kame and kettle' topography.

To the North of the Downlands lies the wide valley of R Ely, filled with deep alluvial deposits and forming the area known as the Peterston moors. To the south the land slopes down gradually towards the coastal plateau of South Glamorgan, forming an undulating plain, predominantly of Lower Liassic limestones and shales, dissected in places by tributaries of the Kenson river and river Waycock.

**Climate**

In the Vale of Glamorgan rainfall increases markedly inland from the coast. At Cowbridge and Tair Onen, each a similar distance inland (5 miles) to this area the long term average rainfall (1941-70) is 1227 mm pa (48") and 1200 mm pa (47") respectively. Rainfall  $> 40"$  is approaching the effective limit for good arable production. The proximity of the coast has a beneficial effect on temperatures in the area and helps provide a long (c 300 days) growing season.

**Soils**

The area exhibits a variety of different soil types, mirroring changes in the underlying geology. Four main soil types have been identified relevant to the evaluation of agricultural land in the area.

(1) The glacial morainic sands and gravels have given rise to coarse loamy soils. Such soils are characteristically deep, sandy and containing many stones and cobbles. Over most of this soil type drainage is good and the soils are important agriculturally; in places however such soils are imperfectly drained, especially where bordering on other heavier soil types and this presents a slight limitation to agricultural use.

(2) Where the drift is thin or non-existent on areas of carboniferous limestone, as for example south of St Nicholas, well-drained fine loamy soils have developed. These vary in depth from as little as 10 cm (4") to over 1 metre. Shallow depth is the main limitation of such soils to agricultural use, especially ploughing depth, albeit probably not affecting plant rooting depth significantly because of the fissured nature of the underlying limestone, allowing root penetration.

(3) In places especially over Liassic and Rhaetic rocks fine clayey soils have developed, particularly to the south of Bonvilston and the A48. These have fine silty clay loam topsoils with heavy clayey subsoils. They are characteristically poor drained, are difficult to cultivate and are nearly everywhere under permanent pasture, often infested with rushes.

(4) A large area of alluvial soils have been mapped in the valley of the R Ely, south west of Peterston-Super-Ely. Such soils are generally light silty loams and sandy loams but are very wet and support only rush-infested grassland because of the high water table and flood risk from the R Ely.

#### **Land Use**

Dairy farming is predominant in each of the three parishes in the area, with large areas of permanent grassland especially on the poorly drained soils, and on the north-facing slopes of the Downlands. Many of the dairy farms also fatten lambs on grass, for sale between June and August. Barley is the principal arable crop, grown on the well drained soils, together with occasional horticultural crops. Large areas of woodland, particularly scrub woodland, still exist in the area, especially SE of Bonvilston on the heavy clay soils of the 'Blacklands', unsuitable for intensive agricultural use.

There is a long tradition of farming in the area. During the 18th and 19th centuries the area formed part of the three large estates in South Glamorgan based on the houses at Cottrell (now demolished) NW of St Nicholas, Dyffryn (now an Education Centre) SE of St Nicholas, and Llantrithyd (now derelict) SW of Bonvilston. These estates have now largely been split up but vestiges still remain in the landscape, as for example the large area of 'parkland' adjacent to the main A48 road, south of the site of Cottrell house.

#### **Agricultural Land Classification**

- Grade 1. No land has been classified as grade 1 in this area, because of limitation of relief, climate and soils.
- Grade 2. Land has been classified as grade 2 where soils were found to be well-drained, where more than 18" deep and present on flat or gently sloping sites. A band of grade 2 land has been mapped along the main A48 road between Bonvilston and St Nicholas, following the line of the Limestone Downlands.
- Grade 3a. Land has been classified as grade 3a where soils are found to be well drained, and on land sloping at between 1 in 8 and 1 in 7. Such areas have been mapped within and adjacent to the grade 2 land on the Downlands. A small area of grade 3a has also been mapped west of Peterston-Super-Ely where well drained but stony soil has developed on a gently sloping site above the alluvial soils of the R Ely.
- Grade 3b. Land has been classified as grade 3b where slopes are generally between 1:7 and 1:6. Patches of silty clay loam soils north of Peterston and around Leach Castle Farm SW of Bonvilston have also been included in this grade.

Grade 3c. Poorly drained areas south of Bonvilston have been classified as grade 3c, together with similar areas around Kingsland Farm, south of Peterston-Super-Ely and fringing the alluvial soils in the R Ely valley. Other areas, particularly on the north-facing slopes of the Downlands with slopes of between 1:6 and 1:5 have been included in this grade. A small area SE of St Nicholas where depth was generally very shallow ( $< 8''$ ) was also placed in this grade where it was thought this would constitute a serious limitation to agricultural use. Most of the land in this grade is restricted to permanent grassland, with occasional arable or fodder crops.

Grade 4. Very poorly drained soils in the Blacklands south of Bonvilston have been classified as grade 4. Rush-infested grassland occurs commonly in this area and standing water was frequently observed particularly in gateways during the field survey in December 1979. Poorly drained alluvial soils in the valley of the R Ely and very steeply sloping ( $> 1:5$ ) land, again particularly on the Downlands escarpment, where the use of agricultural machinery is largely precluded, have also been included in this grade.

Grade 5. No land in this area has been classified as grade 5.



# REVISION OF AGRICULTURAL LAND CLASSIFICATION AND SUB-DIVISION OF GRADE 3

## SOUTH GLAMORGAN

### BONVILSTON, ST NICHOLAS AND PETERSTON-SUPER-ELY

This is one of a continuing series of surveys intended to revise the Agricultural Land Classification in South and Mid Glamorgan, particularly in areas subject to strong pressures for urban development. This report concerns about 1800 ha of land West of Cardiff in the parishes of Bonviston, St Nicholas and Peterston-Super-Ely. Detailed field sampling of soils was carried out in the area during November and December 1979 and used as a basis for revising the classification, supplemented by recent aerial photography, and other published soil, geological and climatic data.

#### PHYSICAL FACTORS AFFECTING LAND QUALITY

##### (1) Geology, Relief and Drainage

The geology of the area is very varied, giving rise to great variation in relief and soil type. The underlying rocks form a series of E-W bands of differing age, in the sequence, from North to South Liassic limestones and shales, Rhaetic shales, Triassic Marls, Old Red Sandstone, Carboniferous limestone, Rhaetic shales and Liassic limestones and shales<sup>1</sup>. The harder Carboniferous limestone rocks have formed a ridge between Bonviston and St Nicholas known as the Downlands. Partially covering and abutting against the northern edge of the Downlands are deep drift deposits derived from the terminal moraine marking the Southern extent of the last S Wales glaciation. These glacial deposits rise to over 130 m OD locally (400') around Cottrell and on the edge of the Tair Onen forest NW of Bonviston and exhibit a very hummocky 'kame and kettle' topography.

To the North of the Downlands lies the wide valley of R Ely, filled with deep alluvial deposits and forming the area known as the Peterston moors. To the South the land slopes down gradually towards the coastal plateau of South Glamorgan, forming an undulating plain, predominantly of Lower Liassic limestones and shales, dissected in places by tributaries of the Kenson river and river Waycock.

##### (2) Climate

In the Vale of Glamorgan rainfall increases markedly inland from the coast. At Cowbridge and Tair Onen, each a similar distance inland (5 miles) to the area under study, the long term average rainfall (1941-70) is 1227 mm pa (48") and 1200 mm pa (47") respectively.<sup>2</sup> Rainfall >40" is approaching the effective limit for good arable production. The proximity of the coast has a beneficial effect on temperatures in the area and helps provide a long (300-330 days) growing season.<sup>3</sup>

##### (3) Soils

The area exhibits a variety of different soil types, mirroring changes in the underlying geology.<sup>4</sup> The glacial morainic sands and gravels have given rise to two main soil types, the Radyr and the Miskin. Both are generally silty or fine sandy loams which can be very deep, often varying in colour between reddish-brown and grey and containing many stones and cobbles. The Miskin series is

generally imperfectly drained and is often found in narrow strips, surrounding larger areas of well drained Radyr soils. The Radyr series is extensively developed where the morainic deposits are banked against the northern side of the Downlands where unaffected by steep slopes it provides few limitations to agricultural use. An intricate pattern of Radyr, Miskin and other poorly drained drift soils, all in hummocky drift terrain occurs in the broad depression of Bro Miskin, NW of Bonvilston. This has been mapped by the Soil Survey as the Hensol Complex, small areas of which overlap on to the area under study.

Where the drift is thin or non-existent on areas of carboniferous Limestone, as for example south of St Nicholas, soils of the Lulsgate series have developed. These are well drained loams and silty loams, varying in depth from as little as 10 cm (4") to over 1 metre. Shallow depth is the main limitation of such soils to agricultural use, especially ploughing depth, although probably not affecting plant rooting depth significantly because of the fissured nature of the underlying limestone, allowing root penetration.

To the South of Bonvilston, and the main A 48 road, the Dyffryn and Charlton Bank soil series have been mapped on Lower Liassic limestones and shales, and Rhaetic shales respectively. These both have fine silty clay top soils with extensive mottling and heavy clayey subsoils, reflecting the much finer nature of the parent material in the underlying Liassic and Rhaetic rocks. They are generally poorly drained. Dyffryn soils are usually shallower than those of Charlton Bank. Both soil types are difficult to cultivate and are nearly everywhere under permanent grassland, often infested with rushes. Small patches of poorly drained fine textured reddish or greenish soils associated with the Charlton Bank series have been mapped as the Hurcot complex, and occur over a small area south of St Nicholas.

A large area of alluvial soils has been mapped in the valley of the R Ely, SW of Peterston-Super-Ely. These soils are generally light silty loams and sandy loams but are very wet and support rush-infested grassland because of the high water table and flood risk from the R Ely.

Small areas of silty clay loam soils of the Ston Easton and Sigingstone series occur in the extreme North and West of the area.

#### (4) Land Use

Dairy farming is predominant in each of the three parishes in the area, with large areas of permanent grassland especially on the poorly drained Dyffryn and Charlton Bank soils, and on the North-facing slopes of the Downlands. Many of the dairy farms also fatten lambs on grass, for sale between June and August. Barley is the principal arable crop, grown on the well drained Radyr and Lulsgate soils, together with occasional horticultural crops. Large areas of woodland, particularly scrub woodland, still exist in the area, especially SE of Bonvilston on the heavy clay soils of the 'Blacklands', unsuitable for intensive agricultural use.

There is a long tradition of farming in the area. During the 18th and 19th centuries the area formed part of three large estates in South Glamorgan based on the houses at Cottrell (now demolished) NW of St Nicholas, Dyffryn (now an Education Centre) SE of St Nicholas, and Llantrithyd (now derelict) SW of Bonvilston.<sup>5</sup> These estates have now largely been split up but vestiges still remain in the landscape, as for example the large area of 'parkland' adjacent to the main A 48 road, south of the site of Cottrell house.



## AGRICULTURAL LAND CLASSIFICATION

Definitions of the grades of agricultural land are contained in the ADAS published reports. 6, 7

- Grade 1. No land has been classified as grade 1 in this area.
- Grade 2. Radyr soils on deep drift and Lulsgate soils where more than 18" deep and present on flat or gently sloping sites have been classified as grade 2. A band of grade 2 land has been mapped along the main A 48 road between Bonvilston and St Nicholas, following the line of the Limestone Downlands.
- Grade 3a. Radyr and Lulsgate soils where they occur between 12" and 18" deep and on land sloping at between 1 in 8 and 1 in 7 have been classified as grade 3a. Areas have been mapped within and adjacent to the grade 2 land on the Downlands. A small area of grade 3a has also been mapped West of Peterston-Super-Ely where the well drained Radyr series has developed on a gently sloping site above the alluvial soils of the R Ely.
- Grade 3b. Radyr and Lulsgate soils on sites where slopes are generally between 1:7 and 1:6 have been classified as grade 3B. Patches of silty clay loam soils of the Ston Easton and Sigingstone series north of Peterston and around Leach Castle Farm SW of Bonvilston have also been included in this grade.
- Grade 3c. Poorly drained areas of Dyffryn and Charlton Bank soils south of Bonvilston have been classified as grade 3c, together with similar areas of Hensol complex around Kingsland Farm, south of Peterston-Super-Ely and fringing the alluvial soils in the R Ely valley. Other areas, particularly on the north-facing slopes of the Downlands with slopes of between 1:6 and 1:5 have been included in this grade. A small area of Lulsgate soil SE of St Nicholas where depth was generally very shallow (8") was also placed in this grade where it was thought this would constitute a serious limitation to agricultural use. Most of the land in this grade is restricted to permanent grassland, with occasional arable or fodder crops.
- Grade 4. Very poorly drained Dyffryn and Charlton Bank soils in the Blacklands south of Bonvilston have been classified as grade 4. Rush-infested grassland occurs commonly in this area and standing water was frequently observed particularly in gateways during the field survey in December 1979. Poorly drained alluvial soils in the valley of the R Ely and very steeply sloping (>1:5) land, again particularly on the Downlands escarpment, where the use of agricultural machinery is largely precluded, have also been included in this grade.
- Grade 5. No land in this area has been classified as grade 5.

J D C FINCH  
Senior Research Officer

January 1980

#### REFERENCES

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2. Unpublished rainfall data supplied by Welsh Water Authority.
3. Met Office unpublished information on growing season provided by W H Hogg.
4. Crampton C B (1972) Soils of the Vale of Glamorgan Mem Soil Survey Great Britain.
5. Williams S, ed (1975) S Glamorgan, a county history. Stewart Williams publishers, Barry.
6. MAFF 1966 Agricultural Land Classification. Technical Report No 11.
7. MAFF 1976 Agricultural Land Classification, Sub-division of Grade 3. Technical Report No 11/1.

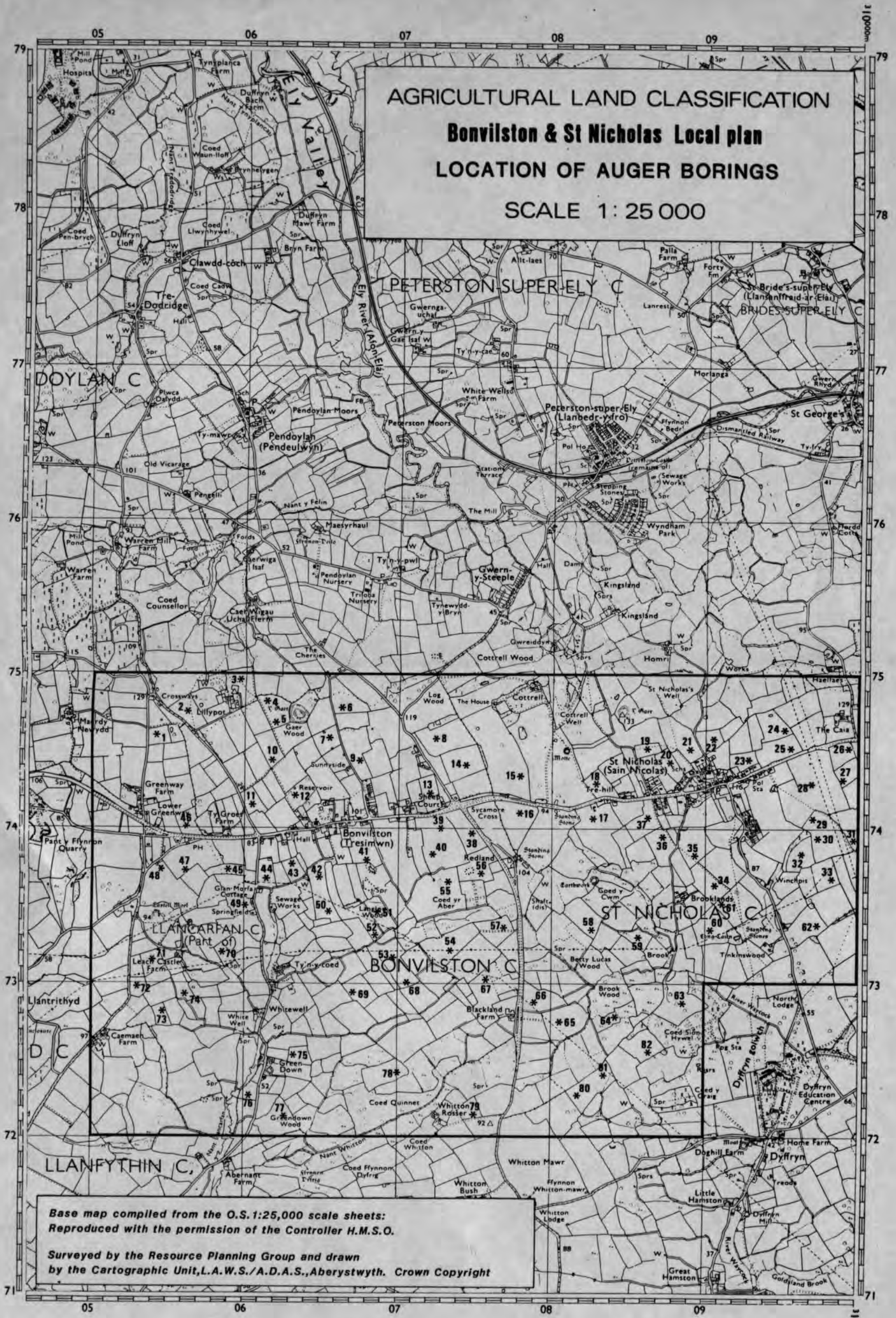


# AGRICULTURAL LAND CLASSIFICATION

## Bonvilston & St Nicholas Local plan

### LOCATION OF AUGER BORINGS

SCALE 1:25 000






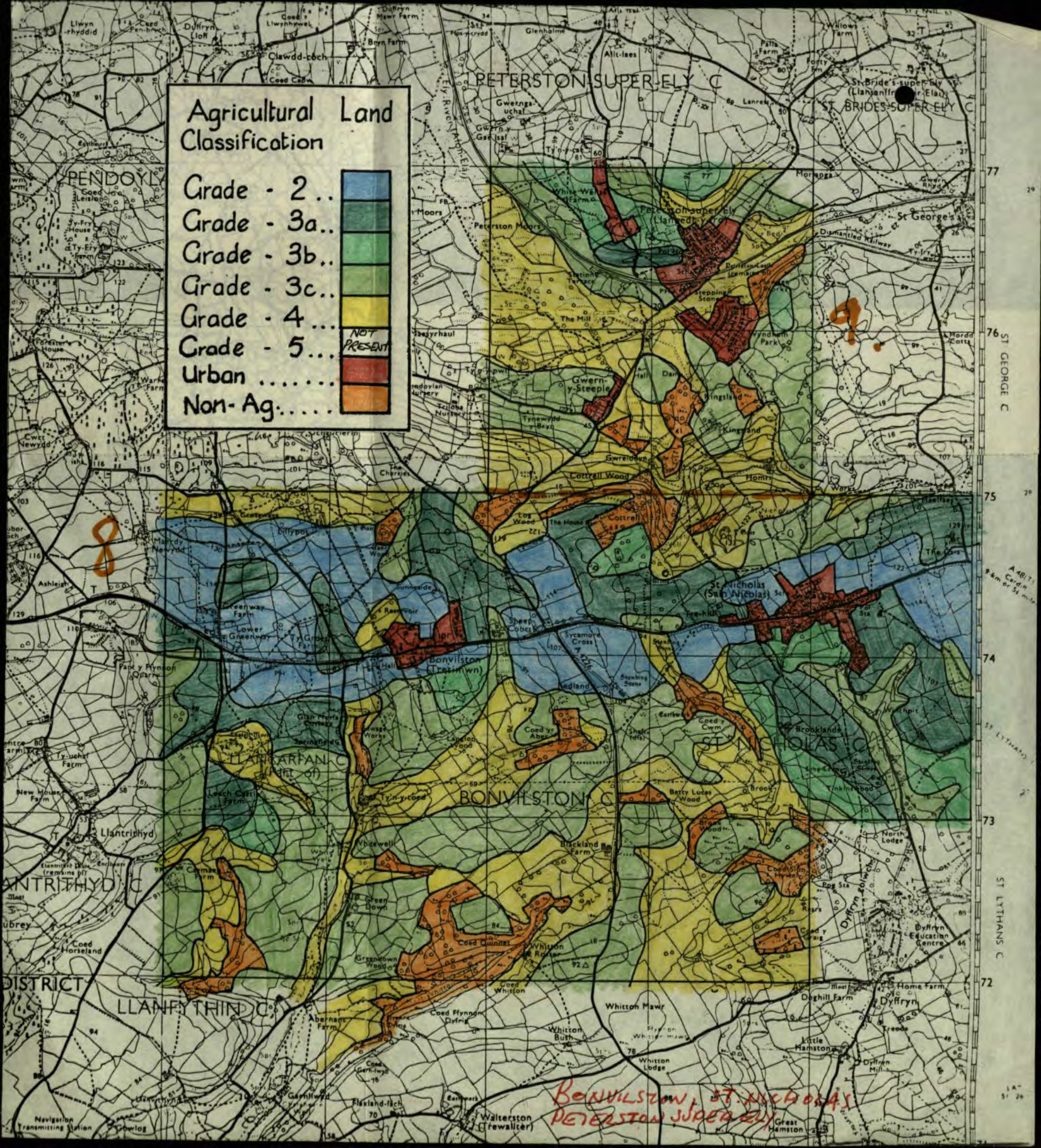
Base map compiled from the O.S. 1:25,000 scale sheets:  
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by the Cartographic Unit, L.A.W.S./A.D.A.S., Aberystwyth. Crown Copyright



# Agricultural Land Classification

Grade - 2..	
Grade - 3a..	
Grade - 3b..	
Grade - 3c..	
Grade - 4...	
Grade - 5...	NOT PRESENT
Urban .....	
Non-Ag.....	



BONVILSTON, ST. NICHOLAS  
PETERSTON SUPER ELY

77  
76 ST GEORGE C  
75  
74  
73  
72 ST LYTHANS C

A 481 T  
Card 4  
9 km or 5 1/2 miles

1 A  
51 26

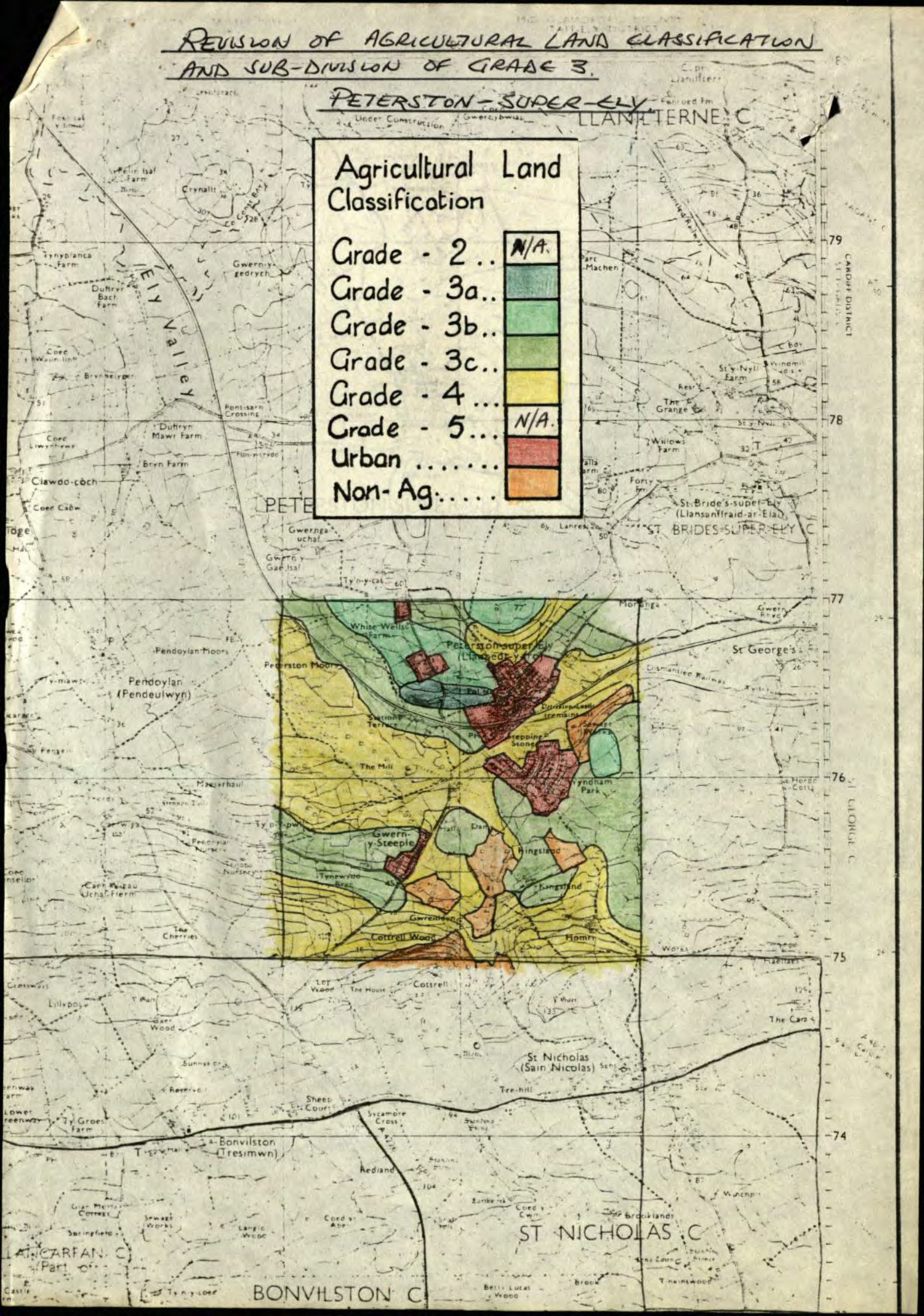


# REVISION OF AGRICULTURAL LAND CLASSIFICATION AND SUB-DIVISION OF GRADE 3.

## PETERSTON-SUPER-ELY

### Agricultural Land Classification

Grade - 2 ..	N/A.
Grade - 3a..	
Grade - 3b..	
Grade - 3c..	
Grade - 4 ...	
Grade - 5 ...	N/A.
Urban .....	
Non-Ag.....	





21/02/18 RSC

## NOTE

- SOME SOIL DATA ON 010-1979 IN HMSO NOTEBOOKS UNDER DONVILSTON WITH POINT MAP ON THIS FILE REFERENCED A1. 22 POINTS
- POINT DATA ALSO ON HMSO 010-1479 FOR PETERSTON - SWERELY BUT NO POINT MAP ON FILE. 18 POINTS
- NO POINT DATA FOR MAP REF A2. 37 POINTS COVERING ST. NICHOLAS