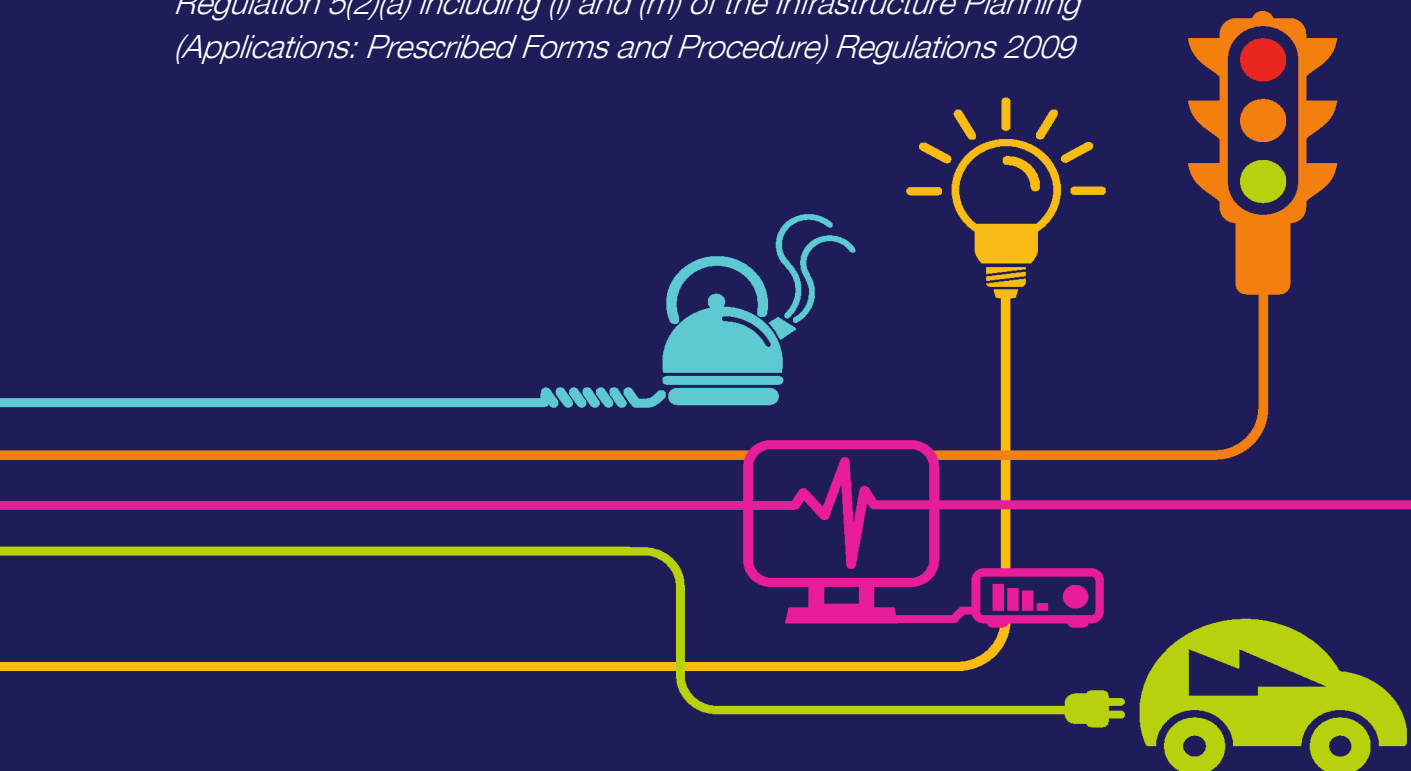


Agriculture Consultation Correspondence

Chapter 18 – Appendix 2

National Grid (North Wales Connection Project)

*Regulation 5(2)(a) including (l) and (m) of the Infrastructure Planning
(Applications: Prescribed Forms and Procedure) Regulations 2009*



nationalgrid

North Wales Connection Project

Volume 5

Document 5.18.2.2 Appendix 18.2 Agriculture Consultation Correspondence

National Grid
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CV34 6DA

Final September 2018

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Document Control			
Document Properties			
Organisation	Wardell Armstrong		
Author	Eleanor Reed		
Approved by	Helen Simpson		
Title	Agriculture Consultation Correspondence		
Document Reference	Document 5.18.2.2		
Version History			
Date	Version	Status	Description/Changes
September 2018	Rev A	Final	Final for submission

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1. Consultation Correspondence

1.1 INTRODUCTION

- 1.1.1 Appendix 18.2 contains a record of all correspondence with the Land Quality Advisory Service (LQAS) at the Welsh Government in relation to the Proposed Development.

1.2 INITIAL CORRESPONDENCE TO WITH LQAS (12 OCTOBER 2016)

- 1.2.1 An initial email was sent to the LQAS general information email address on 12 October 2016 to establish the appropriate contact person within LQAS. LQAS responded on 13 October 2016 and subsequently provided a copy of the digitised Provisional ALC map for Wales on 19 October 2016.

Fro [redacted] [mailto:[redacted]@wales.gsi.gov.uk]

Sent: 13 October 2016 16:52

To [redacted]

Subject: RE: Soils Advice

Hello [redacted]

Apologies for the delay in reply.

Yes the Land Quality Advisory Service is the correct consultee. I would lead on any consultation so it would save time to sent any documentation directly to me.

I am away until Monday afternoon but would be happy to discuss if needed.

Kind regards

[redacted]
Ffôn/Tel [redacted]

Llywodraeth Cymru | Welsh Government

Llandrindod

Spa Road East

Powys

LD1 5HA

Agricultural Land Classification:

<http://gov.wales/topics/environmentcountryside/farmingandcountryside/agricultural-land-classification/?lang=en>

Llywodraeth Cymru | www.llyw.cymru | Welsh Government | www.gov.wales

Ystyriwch yr amgylchedd cyn argraffu'r e-bost hwn – diolch | Please consider the environment before printing this email - thank you

Dyla'r datganiadau neu'r sylwadau uchod gael eu trin fel rhai personol ac nid o reidrwydd fel datganiadau neu sylwadau gan Llywodraeth Cymru, unrhyw ran ohono neu unrhyw gorff sy'n gyslltiedig ag ef | Any of the statements or comments made above should be regarded as personal and not necessarily those of the Welsh Government, any constituent part or connected body

From: [REDACTED] mail [REDACTED] wardell-armstrong.com]

Sent: 12 October 2016 16:33

To: LQAS

Subject: Soils Advice

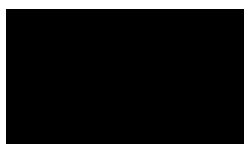
To whom it may concern,

I would like to obtain the Land Quality Advisory Service's views on the proposed soil assessment and land quality methodology for a large scale infrastructure project in Anglesey and Gwynedd.

Although the proposed methodology has been agreed by Natural England on similar projects in England, we feel it is important to seek the views of the Welsh Government in this regard before progressing the Welsh project.

I do not wish to send you too much information if this request is not applicable to you. I would be grateful if you could confirm whether you are the correct point of contact, or if possible provide me with an alternative.

Many thanks in advance.



| Environmental Scientist

Wardell Armstrong LLP

City Quadrant, 11 Waterloo Square, Newcastle Upon Tyne, NE1 4DP

t: [REDACTED]

From [REDACTED] mail [REDACTED] wales.gsi.gov.uk]

Sent: 19 October 2016 12:47

To: [REDACTED]

Subject: FW: ALC for Wales

Hello [REDACTED]

I've attached a digital version of the provisional map but there are serious limitations with it (detailed below).

How are you intending on using the map?

We may be able to help further with desk assessments if you have specific sites of interest.

I am out of the office until 28th. If you email, I'll return with a call as soon as I can.

All the best

[REDACTED]

Please find attached the GIS layer for the Provisional Map.

Please note this is to be withdrawn in 2017 and replaced by a new Predictive Map.

The 'Provisional' Series of ALC maps were produced between 1967 and 1974 at a scale of 1:63360, covering all of England and Wales. They were compiled by reconnaissance survey using soil and climatic information, plus expert knowledge of local agriculture. MAFF Technical Report 11 (1966) provided the guidelines. The Provisional maps were only intended as a strategic guide to land quality, primarily to support regional and county level planning. The intention was to refine and finalise the maps, including development of a linked economic classification. The maps were never refined or finalised. The proposed economic classification was abandoned, for a variety of reasons.

In 1988, a significant further revision was made – The Revised guidelines and criteria for grading the quality of agricultural land (MAFF 1988). This included a split of Grade 3 into Sub-grades 3a and 3b as well as much more robust soil / climate assessments. The 1988 MAFF guidelines were introduced on 1 January 1989. They are the only approved system for grading agricultural land quality in England and Wales.

The Provisional Map does not take account of the revisions made in 1988.

The Provisional ALC maps are still in use with some planning authorities, land agents, consultants and other bodies. This is despite of (a) different and more current extant guidance being in place (b) knowledge the Provisional ALC grades do not accurately match the field survey grades, using the MAFF 1988 Guidelines c) accuracy limitations for site specific assessment d) pre-date the subdivision of Grade 3.

On leaving the Government Secure Intranet this email was certified virus free. Communications via the GSi may be automatically logged, monitored and/or recorded for legal purposes.

Wrth adael Mewnwyd Ddiogel y Llywodraeth nid oedd unrhyw feirws yn gysylltiedig â'r neges hon. Mae'n ddigon posibl y bydd unrhyw ohebiaeth drwy'r GSi yn cael ei logio, ei monitro a/neu ei chofnodi yn awtomatig am resymau cyfreithiol.

1.3 INITIAL CONSULTATION LETTER TO LQAS (20 OCTOBER 2017)

1.3.1 An initial consultation letter was issued, via email, to LQAS on 20 October 2016. The letter outlined the proposed methodology for determination of ALC grading and requested clarification regarding the proposed use of the digital Provisional 1:250,000 scale ALC mapping for Wales in light of the proposed withdrawal of the Provisional mapping in 2017 and subsequent replacement with a new Predictive map.

1.3.2 To prevent unnecessary duplication, the letter is not reproduced within this appendix as it was updated with additional text (see section 1.6 below) following a request for clarification made by LQAS (Section 1.4).

1.4 LQAS RESPONSE (16 NOVEMBER 2016)

1.4.1 LQAS's response to the above letter was received, via email, on the 16 November 2016. The response confirmed that the proposed methodology was acceptable, but requested clarification regarding the use of agroclimatic data. The response also explained the differences between the Predictive and Provisional ALC Mapping.

De 

RE: HS/ER/NT12315/004 - ADVICE REGARDING ALC METHODOLOGY FOR THE NORTH WALES CONNECT PROJECT

Thank you for your letter dated 20 October consulting the Department on the proposed ALC methodology for the North Wales Connection Project.

The consultation relates to the following requests:

1. To comment on the proposed methodology as given in the letter dated 20 October.

The proposed methodology is acceptable. For permanent land take an ALC survey will be undertaken. For temporary development, a desk top study will be completed and combined with targeted ALC survey work.

Using the NATMAP and associated data, a reasonably good idea can be formed as to where the better soils are located and which have the potential to be BMV when the ALC Guidelines are taken into account. This approach, in part, is used by Welsh Government when targeting survey work.

When assigning a wetness class, the ALC surveyor will need to also calculate the field capacity days. This is not mentioned in the methodology.

The ALC surveyor will need to be aware of Tables 6 and 7 (of the ALC Guidelines) and the footnote conditions associated with particular topsoil textures if encountered.

2. To confirm whether the use of the Provisional ALC Map is acceptable

The limitations of the Provisional ALC Map are explained and taken account of in the methodology. The proposed use is acceptable.


3. To confirm how the Predictive ALC Map will differ from the Provisional ALC Map.

- The Provisional Map was not drawn in accordance with the latest ALC Guidelines; the Predictive Map will be.
- The Provisional Map does not split ALC Grade 3; the Predictive Map will show Grade 3a and 3b.
- The Predictive map has been developed on a 50m grid so additional detail can be taken into account for particular limitations (slope, climate, urban, non-ag, rock outcrops etc.).
- Welsh Government will be able to interrogate the Predictive Map to understand why it has assigned a particular grade. This cannot be done with the Provisional Map and we do not fully understand the grading decisions taken when it was drawn.
- The Predictive Map uses the latest detailed terrain data.
- The Predictive Map will take account of 30 years ALC survey experience in Wales. Some soil associations have been refined based on surveyor experience.
- Urban and non-agricultural areas will be updated.
- The Predictive Map will take account of flood risk data, not available at the time of drawing the Provisional Map.
- Recently derived data on peat and rock outcrops will be used in the Predictive Map.
- The Predictive Map takes the dominant soil series within the association.

The Predictive Map is designed to be a living document and updated as better data sets are created and should ALC criteria be updated. This is a general overview and I would be happy to discuss the Predictive Mapping Project in more detail.

I would also be pleased to discuss your methodology or ALC as part of the Connect Project should you have any questions.

Yours sincerely


Adran yr Amgylchedd a Materion Gwledig | Department for Environment and Rural Affairs
Llywodraeth Cymru | Welsh Government

1.5 EMAIL RESPONSE TO LQAS (17 NOVEMBER 2016)

1.5.1 The following email response was issued to LQAS on 17 November 2016, upon receipt of their consultation response in section 1.4, above. This was followed by the submission of a clarified methodology (section 1.6)

RE: HS/ER/NT12315/004 - Advice regarding ALC Methodology for the North Wales Connect Project

Dea 

Many thanks for confirming that our proposed ALC methodology for the North Wales Connect Project is acceptable; and that we will be able to continue to use the existing 'Provisional ALC' dataset up to submission.

Thank you also for the comprehensive explanation of the new 'Predicted ALC' dataset, it will be a very useful and powerful tool in ensuring accurate assessment and decision making; and we look forward to its release.

In relation to your comment regarding field capacity days (FCD), I can confirm that we have used The Meteorological Office's published agroclimatic data for England and Wales on a five kilometre grid basis to calculate FCD and consequently wetness class along the route, apologies that this was not made clear in the methodology document we provided. We will ensure that this is made clear in the methodology provided in the ES.

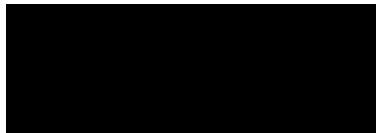

Wardell Armstrong LLP

1.6 UPDATED CONSULTATION LETTER TO LQAS (21 NOVEMBER 2016)

1.6.1 In further response to the LQAS response presented in section 1.3, a revised consultation letter was issued, via email, to LQAS on 21 November 2016. This letter was an update of the letter issued to LQAS on 20 October 2016 (the updates resulted in the addition of text only). To show changes from the original text, the updated (additional) text is highlighted in **bold**.

Our ref: HS/ER/NT12315/005

Date: 21 November 2016



Land Quality Advisory Service,
Llywodraeth Cymru | Welsh Government
Llandrindod
Spa Road East
Powys
LD1 5HA

By email

De



RE: Updated ALC Methodology for the North Wales Connection Project.

Further to your comments regarding the proposed ALC methodology received on the 16th November 2016, the methodology has been updated. The updated text refers to the calculation of the climatic limitation and subsequently the number of field capacity days, which is necessary when determining the wetness class.

The updated text is highlighted in **bold**.

The North Wales Connection Project is the proposed development of approximately 35 km of overhead electricity lines between the existing substations at Wylfa on Anglesey and Pentir in Gwynedd. The North Wales Connection Project is subject to a Development Consent Order (DCO) and National Grid is currently consulting on the Proposed Project. A Preliminary Environmental Impact Report (PEIR) forms part of the consultation materials and work to develop the Environmental Statement and review the Proposed Project following consultation responses are on-going. Further details of the North Wales Connection Project can be found at the following link <http://www.northwalesconnection.com/>.

This letter sets out details of the proposed methodology for determining the Agricultural Land Classification (ALC) grading of land within the Proposed Project Boundary. These data will then be used in the impact assessment set out in the Agriculture chapter of the Environmental Statement.

The methodology sets out a desk-based approach whereby published and purchased data sources will be used to determine the general soil

characteristics of areas of temporary disturbance within the Proposed Project Boundary and identify the ALC grading.

It is important to note that regardless of the methodology utilised for areas of temporary development within the Proposed Project Boundary, the methodology employed at the Substations (i.e. area permanent land take), will follow standard procedures as set out in Natural England's Technical Information Note 049, 'Agricultural Land Classification: protecting the Best and Most Versatile agricultural land'. Whereby a soil survey will be carried out at a density of approximately one soil profile pit per 10ha or less (with at least one soil pit per site) and soil cores at a density of approximately one point per hectare, avoiding features such as hedgerows and tracks.

Proposed Methodology

The 1:250,000 scale National Soil Map dataset for the area within the Proposed Project Boundary (as shown at the above link), plus a 100m buffer, has been purchased from the National Soil Resources Institute, Cranfield University. The dataset contains NATMAPvector data, which provides spatial distribution of soil associations; and associated datasets containing properties of soil associations, such as percentage of component soil series. These data are collectively referred to as the LandIS NATMAP dataset¹. It is proposed that these data will be used to inform ALC as described below.

Although Natural England have previously agreed the use of this methodology for similar large scale overhead and underground electricity infrastructure projects in England, the Project recognises that the Welsh Government is responsible for the protection of soils and agricultural land within Wales and may have different requirements and priorities to their English counterparts. Therefore, it would be greatly appreciated if the Land Quality Advisory Service could provide comment on the methodology. We have also contacted Natural Resources Wales (NRW) and they have confirmed that all consultation regarding Agriculture, including the verification of methodologies, should go through the Land Quality Advisory Service.

When used in isolation, the published Provisional ALC mapping cannot be used to identify the presence or absence of Best and Most Versatile (BMV) land or the distribution of ALC grading at the field level. However, it may be used in conjunction with published soils data, LandIS NATMAP data and "Soils and their use in Wales"², to determine the likely proportion of BMV land through the identification of areas of potential Subgrade 3a or 3b land.

The LandIS NATMAP dataset provides the area covered by each soil association and its component soil series within the Proposed Project Boundary. The LandIS data also gives the percentage distribution of the dominant or key component soil series within each association; discounting any ancillary soil series which only make up a small proportion of the soils within the

association. The percentage distribution of the dominant soil series is therefore adjusted so that their total equals 100%; this is because inclusion of the lesser ancillary series would unnecessarily complicate the assessment without increasing its accuracy. The area covered by each key soil series, within areas identified as ALC Grade 3 land on the Provisional ALC mapping can then be derived.

Published data from “Soils and their use in Wales” will be used to identify the typical limitations to ALC displayed by each of the identified soil series. Limitations include typical soil depth, soil texture, soil stone content and soil wetness. These limitations will then be used to determine the subdivision of ALC Grade 3 into Subgrade 3a and 3b; using the methodology set out below and described in the ALC guidelines³.

The soil texture information is obtained from the published soil profile descriptions. Where a soil texture is identified as heavy or medium (i.e. silty clay loam and clay loam), it is assumed the distribution is a fifty-fifty split. Additionally, if more than one soil texture is listed in the description of soils series, their proportions will be assumed to be equal. Furthermore, if more than one soil wetness is listed in the description of soils series, the proportions are assumed to be equal. Where soil wetness can be improved via appropriate land management, it is assumed that appropriate management practices are in place.

The ALC grade is also influenced by the prevailing climatic conditions. The overall climatic limitation is assessed using the average annual rainfall and accumulated temperature. These data are obtained from the Meteorological Office published agroclimatic data for England and Wales on a five kilometre grid basis.

From the climatic data, the number of field capacity days can be determined, which impacts the Wetness Grade of the soil associations depending on the location in the Proposed Project Boundary.

If the calculation of the ALC grade from the published data results in a Grade other than 3a or 3b, the Grade will be corrected. For example, a calculated Grade 1 or 2 will remain BMV land, but re-assigned to Subgrade 3a, whilst a calculated Grade 4 or 5 will remain non-BMV, but re-assigned to Subgrade 3b. Where it is not possible to determine one single grade for a soil series, equal proportions will be assumed.

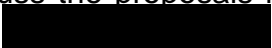
The combination of the soil series areas within mapped ALC Grade 3 agricultural land; the proportion of Subgrade 3a and 3b of each series; and the mapped ALC Grades 1 and 2 land, can therefore provide the total potential area of BMV within the Proposed Project Boundary.

It is noted that, the spatial arrangement of the ALC Grading cannot be obtained from the NATMAP data, as only the proportion of each soil series within an association is provided, not their geographical location. Therefore, the relative proportions of Subgrade 3a and 3b within the Proposed Project Boundary can only be presented in a tabular form and not represented in a mapped format.

The lack of spatial information will not affect the reporting or impact assessment along the majority of the route. However, it is acknowledged that for certain areas of the route corridor it may be pertinent to undertake limited soil survey, subject to the available desk top data and landowner discussion, to verify the ALC grading and BMV status at particular points.

Your comments on the above proposed methodology would be greatly appreciated.

Additionally, the methodology above is based upon the use of the digital Provisional 1:250,000 ALC mapping for Wales, which your department kindly provided. However, we are aware that this mapping will be withdrawn in 2017 and replaced with a new predictive map. The Project timescales are such that the ALC analysis, as described above, is to be conducted in late 2016; and presented in the Environmental Statement to be submitted in 2017. Therefore, we would be grateful if you could confirm that the use of the current Provisional ALC map of Wales is acceptable. We would also be grateful if you could provide an indication of how the new predictive mapping will differ from the current Provisional mapping, so that it can be considered in our assessment.


Thank you for your assistance with this matter. If you have any questions or wish to discuss the proposals further, please do not hesitate to contact me or my colleague 

Yours sincerely

for Wardell Armstrong LLP



[wardellarmstrong.com](http://www.wardellarmstrong.com)

¹: Cranfield University, 2015. The Soils Guide, available . Cranfield University, UK (accessed: 25/04/2016).

²: Soil Survey of England and Wales, 1984. Soils and their use in Wales

³: MAFF, 1988. Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.