

From: [Jan Anderson](#)
To: [Sunnica Energy Farm](#)
Cc: [Nick Wright](#)
Subject: Sunnica Soil
Date: 16 December 2022 14:40:25
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[SD4 \(4\).zip](#)

Dear Sirs

Sunnica – Deadline 4
Ref Nos: SUNN - AFP 191

Please find attached (appendix 1) the speech I made at the Open Floor Hearing on Friday 9th December. I have set out below in points A to E the evidence to support the points made in my speech and my conclusion that the report submitted by Daniel Baird Soil Consultancy Ltd's known as 'Soil baseline report Appendix 12B' has a series of failings that mean it cannot be relied upon to assess BMV on the Sunnica site.

A/ Daniel Baird (DB) is a member of the British Society of Soil Science (BSSS). I have therefore gone to their Guidance Document 1: Working with Soil Guidance Note on Assessing Agricultural Land Classification Surveys in England and Wales (attached at Appendix 2) and looked at the Validation process required for ALC soil surveys contained within the guidance.

Validation process (stage 1) copied below from Guidance Document I.

Validation process (Stage 1)

Reports produced or validated by, or on behalf of, Government (post 1 January 1989) should not need specialist referral.

Reports by specialist ALC companies are typically low risk but still need assessment.

In any of the situations below, refer for specialist opinion:

1	The survey has not used "the Revised guidelines and criteria for assessing the quality of agricultural land" (MAFF 1988) to determine ALC grade.
2	The survey was carried out prior to 1 January 1989 (before introduction of the 1988 ALC guidelines).
3	There is no evidence of field survey work; such as pits, auger borings and lab samples.
4	The ALC grading contradicts: (a) A detailed Post 88 ALC survey on MAGIC for England or Lle - the Predictive ALC and ALC site surveys for Wales (b) Any other validated ALC survey.
5	The ALC grading is at odds with background checks. For example the site is known to flood or lies close to a river but flooding is not mentioned in the report.
6	No ALC grade map is included.

DB's report fails under the following headings:

1/ DB has excluded irrigation contrary to the 1988 Guidelines (see p 27 appendix 5)

3/ Six pits is an insufficient number on a site of this size to give the required level of evidence of soil changes. No maps or photographs of the soil pits were provided. See appendix 4.

4/ DB finds only 37ha of BMV – ALC predictive plans and Magic maps suggest at least 50% of the site is BMV.

5/ ALC grading is at odds with the background checks. DB's own report describes varied flexible cropping throughout the site which is entirely consistent with BMV land. DB has only found 37ha of BMV over the whole site. Please also see (appendix 3a 3b & 3c) an email to Natural England dated 8/12/2022 to John Torlesse setting out the inconsistencies of DB's report set against the ALC plan, and Natural Englands Predictive BMV Land Assessment.

Validation Process (Stage 2) copied below from Guidance Document 1

Validation process (Stage 2)

If a schedule of auger borings and soil pits is not included, please request them before validating. If not provided on request, refer to ALC specialists in Natural England/Welsh Government.

The checklist below is a structured guide when reading reports. Each question relates to information included in a good report. Each question has 3 possible outcomes:

PASS	Normally expected in a good report.
CONCERN	Normally expected in a good report, but if absent this raises a concern. There is no reason to automatically refer to specialists for individual concerns. Multiple concerns could justify referral.
FAIL	Normally expected in a good report, its absence is a significant issue or omission. The report should not be accepted without referral to specialists.

Background			
1	Is the company / author a specialist in ALC?	PASS	CONCERN
2	Have published soil maps been mentioned ^{5?}	PASS	CONCERN
Climate data			
3	Is <i>interpolated</i> ⁶ climate data included for the site (esp. Field Capacity Days (FCD), Moisture Deficits (MD) and Maximum grade on climate)?	PASS	FAIL
4	Is the data consistent with that expected for the area?	PASS	FAIL
Site and standalone limitations			
5	Have gradients, micro-relief and flooding been considered / acknowledged?	PASS	CONCERN
Soils and interactive limitations			
6	Have topsoils and subsoils been field surveyed? References to soil pits, auger samples & lab samples should be included.	PASS	FAIL
7	Are the soil types clearly described, including reference to gleying, slowly permeable layers (SPL), soil wetness class (SWC) and drought?	PASS	FAIL
8	Have the reasons for ALC grading been clearly described?	PASS	FAIL
9	Have soil structure and porosity been described?	PASS	CONCERN
10	Have soils been described using Soil Survey Field Handbook (Hodgson 1997)?	PASS	CONCERN
11	Have soils been described using Munsell ⁸ soil colour notations?	PASS	CONCERN
Conclusions and references			
12	Is there a table clearly showing areas of ALC grades?	PASS	CONCERN
13	Is there a list of references (normally including Soil Survey of England and Wales mapping, the MAFF 1988 ALC guidelines, Munsell soil colour charts and the Soil Survey Field Handbook – Hodgson 1997)?	PASS	CONCERN
14	Have the limitations been justified when concluding the ALC grade(s) on the site?	PASS	FAIL
Schedule of auger borings and soil pits			
15	Has a map of auger boring & soil pit locations been included?	PASS	FAIL
16	Have laboratory analyses been included to confirm topsoil particle size distribution?	PASS	CONCERN
17	Has a schedule of auger boring information been provided?	PASS	FAIL
18	Do the auger borings show horizon depths, colours and textures?	PASS	FAIL
19	Do the auger boring records clearly show soil wetness class?	PASS	FAIL

20	Do the auger boring records clearly show topsoil stone content?	PASS	CONCERN
21	Do the auger boring records clearly show depth to gleying and depth to slowly permeable layer (SPL)?	PASS	CONCERN
22	Do the auger boring records clearly show moisture balance (MB) values for drought (Wheat & Potatoes)?	PASS	CONCERN
23	Has detailed soil pit information been provided in the report and do the pit descriptions show horizon depths, colours and textures?	PASS	FAIL
24	Do the soil pits / pit clearly show soil wetness class (WC)?	PASS	FAIL
25	Do the soil pits / pit clearly show moisture balance (MB) values for drought?	PASS	FAIL
26	Do the soil pit / pits clearly show soil structure and porosity in the subsoil?		CONCERN

If a report has a single failure in the 13 categories where the option to fail is offered the Guidance says the report should not be accepted without referral to specialists. DB's report fails in the following categories:

6/ The number of auger borings that have not gone below 40cms is 314. Auger sampling should go to 120cms (see B below). No lab samples have been provided for auger borings.

15/ A map of the soil pits has not been included.

18/ A number of auger borings were not deep enough see 6 above.

23/ Pit locations are not representative of the site. Number of pits are inadequate. Archaeological trenches have been photographed not the pits.

In Summary DB's report fails on 8 points of BSSS guidance. This report must therefore be referred.

B/ I also looked for guidance to the Government document updated 5th February 2021 Guide to assessing development proposals on agricultural land (attached as appendix 3) I have copied below the relevant sections from the document:

4.2 Grade 2 – very good quality agricultural land

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

4.3 Grade 3 – good to moderate quality agricultural land

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

4.4 Subgrade 3a – good quality agricultural land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of crops including:

- cereals
- grass
- oilseed rape
- potatoes
- sugar beet
- less demanding horticultural crops

p.6- Section 4.2&4.4 – the descriptions above describe the land on the Sunnica site.

6.3 Survey requirements

For a detailed ALC assessment, a soil specialist should normally make boreholes:

- every hectare on a regular grid on agricultural land in the proposed development area
- up to 1.2m deep using a hand-held auger

They should:

- dig small inspection pits by hand to a minimum depth of 1m to add supporting evidence to the borehole data
- dig pits where there's a change in main soil type and ALC grade to provide a good depiction of the site
- combine the survey results with local climate and site data to plot on an Ordnance Survey (OS) base map
- use a base map at an appropriate scale for detailed work, such as 1:10,000 scale

p.8- Section 6.3 – states for a detailed ALC assessment, a soil specialist should normally make boreholes up to 1.2m deep.

p.8 – section 6.3 - No evidence is presented in DB's report of digging small inspection pits to support evidence of the borehole data

p.8 – section 6.3 - Pits should be dug where there's a change in main soil type- there is no evidence in DB's report that this has happened. See (appendix 4) which shows the DB pits marked and numbered in red. There is no evidence these pits have been dug in conjunction to soil changes and pits 1, 4, and 5 are too close to field boundaries to be meaningful

C/ I also looked at the MAFF 1988 Revised guidelines attached at (appendix 5) and criteria for grading the quality of agricultural land.

1/ P.9 – the cropping rotation described by DB for the Sunnica site fits the descriptions of grades 2 and 3a land

2/ DB has discounted irrigation. This is not in accordance with section 3.4 p.27 of the current guidelines. Natural England are unable to point to a policy decision to discount irrigation. A freedom of information report (attached appendix 6) confirms no policy decision has ever been taken to remove irrigation. Opinion has only been given at Officer level.

Natural England technical information note TIN049 attached (appendix 7) states on p.4 under Further information and I quote:

'Details of the system of grading can be found in: Agricultural Land Classification of England and Wales : revised guidelines and criteria of grading the quality of agricultural land (MAFF,1988). This document was published in January 2009 and is the latest guidance on ALC land classification' The document this quote refers to is appendix 5

3/ DB has chosen to downgrade land with irrigation that has previously been surveyed and ignore the beneficial effects of irrigation on the remainder of the site. An email dated 29/10/2022 from Natural England quotes the 1997 version of PPG 7 B11 which states:

Irrigation- When irrigation is practised and water supplies are adequate and reliable, the productive capacity of agricultural land and its importance relative to non-irrigated land of the same grade will often be significantly increased'

The 6 landowners putting land into the Sunnica scheme have in excess of 2.4million m³ of irrigation water available to them across their combined holdings. This is enough water to grow 1,204 hectares of potatoes generating an income over £18 million per annum. (See appendix 14) for details.

D/ DB Survey

1/ It is not possible to find only 37ha of BMV on the 981ha surveyed site. As detailed above.

2/ This survey excluded over 30ha of the cable route much of which will be BMV. See Bidwells plan (appendix 8). Also see Bidwells report for the Mitcham family (appendix 9) and note p.2 -1.2 -1.2.1 which identifies the land as BMV.

3/ DB's report misses 304,576 cubic meters of abstraction licences on Farmer A – Chippenham Park Farm.

4/ DB's report fails to identify Farm Business B on AECOM plan 60589004

4/ Appendix 4 shows the soil pits dug by DB in red and by the Say No To Sunnica Action Group Ltd (SNTS) in blue . As clearly demonstrated DB does not dig an adequate number of pits and those that are dug are not representative of the site.

5/ Pit 6 blue dug by SNTS is on the north western boundary of Sunnica East A (shown on appendix 4). Please see at (appendix 10) photograph of the pit and at (appendix 11) the lab sample analysis. SNTS soil experts confirm the pit site as BMV. On the DB prepared plan AECOM 60589004 (appendix 12) DB has graded land opposite this pit as grade 4.

6/ The auger boring closest to SNTS pit 6 is LF164 shown on the plan (appendix 13 shaded orange) the auger details from DB's report for LF164 state this area to be stoney grade 4. You will see from the photo at appendix 10 and lab sample at appendix 11 this is not accurate for the area.

7/ This same misleading process happens with other readings on Sunnica East A. LF69/70/71/72 (highlighted in orange on appendix 13) are all graded 3a or 3b and on DBs ALC map they are shown to be in an area of grade 4. See (appendix 15) for further details.

E/Conclusion

The above points prove that the DB report cannot be relied upon and the site has to be resurveyed. This is one of the largest ever potential take ups of BMV land in England. A decision cannot be made based on DB'S flawed report.

F/ The way forward

As there remain significant differences between the parties on soil quality, Mr Kean requested that ALC matters are progressed outside the examination room.

Therefore, we propose Sunnica East Site A is resurveyed by two soil experts, one from each party who meet on site and test auger the soil, and discuss the findings. If Sunnica will not agree to this proposal, we suggest the only other reasonable proposition is to ask an independent soil expert to survey Sunnica East Site A. If as expected the results are found to differ from the DB report the remainder of the site will have to be surveyed.

This suggestion is fully supported by Peter Danks Reading Agricultural Consultants, Sam Franklin Landscape Ltd and Patrick Stephenson of Patrick Stephenson Ltd.

Yours Sincerely

Nick Wright

On behalf of A G Wright & Son (Farms) Ltd