

Dear Sirs and Madam,

**Re: Sunnica EN010106**

**Unique ref nos:AFP191**

*Introduction*

1. I write following the release by the Planning Inspectorate of a further letter from Natural England (NE) dated 13th March 2023 [REP8-057], and a final statement of common ground between NE and Sunnica dated 13th March 2023 [REP8-031]. This letter focuses on agricultural the agricultural matters set out in those documents, focusing on calculation of agricultural land classification.
2. I have considered these documents. NE's position on agricultural and ALC matters is flawed and should not be relied upon by the ExA. As I and others have previously said in this Examination, the work done by Sunnica on agricultural and ALC matters is flawed and should not be relied upon by the ExA.

*Natural England's Approach*

3. NE is the statutory and independent advisor on natural environment. I have been directed to NE's general purpose which is to 'ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development'. That includes 'contributing in other ways to social and economic well-being through management of the natural environment'. I understand that, in achieving this latter point, that purpose may 'in particular, be carried out by working with local communities'. NE has statutory duties to advise public authorities and, where requested, any person on matters relating to its general purpose.
4. In this Examination NE's approach has been unfair and flawed. NE have refused to engage with or meet with Interested Parties in this Examination on ALC matters. This is notwithstanding the fact that they have met with Sunnica on at least four occasions between October 2022 and March 2023 to discuss agriculture and ALC matters (see their SoCG with Sunnica[REP8-031]). In contrast, NE have refused to meet with me, SNTS, or SNTS's professional advisors on agriculture in spite of numerous requests. They have refused to meet online or by telephone. Indeed, between November 2022 and March 2023 I have personally sent 13 emails to NE on

this issue. While I received acknowledgements of receipt, there has never been any comment on the details contained within my emails.

5. On 12th January 2023 I received an email from NE which set out its view on its role in this Examination. I have provided this attached to this email (appendix 1). It is a clearly flawed approach.
6. The information I have provided, and has been provided by SNTS and its professional advisors, is clearly relevant information about the assessment of ALC for the land on which the scheme is proposed. However, NE have refused to take into account that clearly important information. I say that this is an illogical approach which shows a failure to comply with its general purpose, including the requirement to be 'working with local communities', and a failure to give me, SNTS, and SNTS's professional advisors appropriate advice. It has also led to NE reaching an illogical outcome in accepting the evidence of Sunnica in Daniel Baird Soil Consultants Ltd's (DBSC) report without even considering, let alone engaging properly with, the facts and issues raised by me, SNTS, and SNTS's professional advisors.
7. Their approach in this examination has been unfair and appears partial to the position advanced by Sunnica. It is unacceptable for them to behave in this way. The ExA must not give weight to, or take into account, NE's position on agricultural and ALC matters considering these flaws.

#### *DBSC Report*

8. NE have accepted the findings of the DBSC report notwithstanding the clear flaws which have been brought to its attention on numerous occasions. NE has simply failed to engage with these clearly relevant matters. This approach for an independent and impartial regulator is improper and illogical.
9. I and others have maintained throughout the Examination that the report produced by DBSC on agricultural and ALC matters [APP-115] is flawed and not fit for purpose. I most recently set this out in my deadline 8 submission [REP8-053]. Without repeating all of that ground, I summarise the following:
  - a. At [APP-115, page 21] the DBSC report references the Guidelines of the British Society of Soil Science (BSSS). But the report fails these guidelines for the reasons set out at [REP4-045, pages 1 and 3].

- b. This failure to comply with the BSSS Guidelines is again confirmed by the attached review from Paul Wright (appendix 2), a fellow of the BSSS. This accords with the earlier reports I and SNTS have submitted where the same point is made.
- c. The auger borings undertaken by DBSC are too shallow and do not accurately reflect the soil on site. This is expanded on in appendix 2, and addressed at my [REP8-053, para B].
- d. An insufficient number of soil inspection pits have been dug. They have also not been dug to reflect the different soil series present on the site. This is expanded on in appendix 2, and addressed at my [REP8-053 para C].
- e. A full spreadsheet of the moisture balance calculations (MBC) requested by NE at [REP5-096] has still not been provided. A sample of just 6 such calculations were supplied at deadline 8 for the 780 auger borings recorded in [APP-115, page 80-148]. In no way do the selections represent the area; for example, number 1 on Lee Farm at the Northern end of the site stops for hard stone when this area was identified by archaeologists as Fen Edge. This is also addressed at my [REP8-053D]. NE has not been shown the detailed work that should underlie the calculation of moisture balance that underpins the assessment of droughtiness which is a critical part of the ALC assessment at the site. There is no reasonable justification for any of the allowances claimed to have been made, rather they have been set according to the whim of DBSC.
- f. DBSC have ignored the effects of irrigation entirely. This is incorrect and not in accordance with the in place guidance from MAFF. This is also addressed at my [REP8-053, para E].
- g. Much of the land in the scheme grows high yields of high quality root crops with planting of early carrots in February and harvesting of sugar beet in January. There are few areas in the UK where the soil is suitable for these crops. Production cannot easily be moved elsewhere. This is also addressed at my [REP8-053, para F].
- h. We have provided clear evidence of the work that should be done on auger boring in our video produced at [REP7-109c] and [REP7-109d]. This precisely goes to the flaws in the approach undertaken by DBSC.
- i. In the appeal decision on Ripon Motorway Services dated 13<sup>th</sup> April 2021 [REP8-053 para H] DBSC's evidence on ALC was rejected. The Planning Inspector in that case described the evidence of DBSC as largely unconvincing. The same incorrect methods

have been used here and thus the evidence in respect of our case is similarly largely unconvincing.

- j. No explanation has been given why DBSC's results of surveying 924 hectares just finds 9 hectares of best and most versatile land (BMV). This conclusion does not accord with the available mapping evidence from NE themselves and the Soils of the Cambridge District map. An explanation why the detailed 1:63,630 soils of Cambridge District map (one inch to the mile) has not been used has not been given. This is expanded on in appendix 2 and at my [REP8-053 para I].

- 10. These are all significant flaws which have been raised by me, SNTS, and SNTS's professional advisers with NE. There is no evidence that they have considered them, or considered them properly. No reasons have been provided for rejecting these identified flaws. Such an approach does not properly engage with key evidence and has led to an illogical approach to the ALC evidence.

*The NE letter of 13 March 2023 [REP8-057]*

- 11. I have reviewed the part of the NE letter dealing with agriculture and ALC matters. On that issue I comment on the MBC section:
  - a. On point 1: I agree.
  - b. On points 2: there is a reference to [REP4-030] but I think the reference should be to [REP4-032]. Para 2.1.6 introduces an 'allowance' made by DBSC that was introduced in a technical note required by NE at [REP4-032]. No justification or evidence for the quantum of the allowance is given. No explanation of when it has been applied are given. NE should not have allowed this allowance to go unexplained and unjustified. It's use in this way threatens the standing of the ALC system as a clear and consistent way of assessing and comparing land quality in the planning system.
  - c. On point 3: I agree.
  - d. On point 4: no adequate clarification of the allowance has been provided. The calculation of MBC is a precise sum. The calculations should come out exactly the same if the correct procedures and figures are used. It is a flaw that the numbers calculated do not agree between NE and DBSC but the former has dismissed this as irrelevant and has not required clarification. NE asked for the spreadsheet showing all MBC calculations but were provided with three calculations and did three of their own. Only

one of those calculations matched DBSC's own calculations taken from DBSC's 780 observations as part of the DBSC baseline assessment. This approach to MBC is flawed and unexplained.

12. Reference is also made to a clarification in an email sent from Sunnica to NE on 28<sup>th</sup> February 2023. That email has not been entered into the Examination at this point, and only a few days remain. It is inappropriate for submissions to the statutory advisor not to be aired in the open so that independent advisors on all sides engage with the evidence. This approach is unfair and indicative of the flawed process.

*The NE – Sunnica Statement of Common Ground [REP8-031, pages 15-17]*

13. I have reviewed the final statement of common ground between NE and Sunnica. There are a number of problems with this document which I set out below:
  - a. Allowance for irrigation in the ALC assessment: NE have not been able to identify or reference a document which changes the quoted position set out in extant policy. TIN049 points clearly to the 1988 MAFF Guidelines as giving the definitive guidelines for classifying land. It is illogical for NE to ignore those extant guidelines and prefer an email from an NE employee dated 18<sup>th</sup> June 2019 [APP115, page 66] to support their stance on irrigation. Even if NE maintain their incorrect agreement with this approach, they have allowed DBSC to entirely ignore irrigation as a relevant factor in [APP-115] which is in itself contrary to their email of 18<sup>th</sup> June 2019 which states 'irrigation can have a beneficial effect but it would be considered as another factor for planning authorities to take into account.'
  - b. Loss of BMV land: NE have incorrectly agreed that this scheme will not lead to a significant permanent loss of BMV. This is so in circumstances when they have not engaged with the criticisms of the DBSC approach in any proper way. In addition, NE have ignored their own predictive 2017 map which shows that 576 hectares are predicted to be BMV. My position is that this is a more accurate view of the BMV land, supported by detailed surveys and maps from the soil survey. NE have not engaged with this nor required DBSC to justify the massive difference between their own predictive mapping and their assessment in this case.
  - c. Incomplete ALC survey data: NE are aware of the points advanced above which are significant flaws in the DBSC assessment and survey. However, they have not engaged with these flaws. If Sunnica were confident of the results then an independent survey

of the scheme should have been allowed, as stated by BSSS, and NE should have called for this to happen. Proposals of a joint survey have been made by SNTS but not taken up. It is imperative that NE take an independent position and seriously engage with relevant information advanced by MPs, councils, and local people. To fail to do so appears partial to Sunnica's position.

- d. Technical note [REP4-032]: this technical note did not resolve the outstanding issues with the DBSC report as [REP5-096] sets out. See, for example, [REP5-096, point 2.4.2].
- e. RAC report in SoCG: the RAC report is of limited relevance as the area of overlap was 3.3 hectares in grade 4 land in line with predictive mapping. This finding does not at all assist in showing how RAC should have graded the remainder of the land. Indeed, it supports the conclusion that the predictive mapping is correct.
- f. Survey methodology: agreement on these issues has been done without published minutes or clarity for Interested Parties or the ExA. This approach impedes proper submissions and proper consideration of the evidence. The email dated 13/10/2022 listed in the SoCG has not been published. See point 12 above.

14. Ultimately, the statement of common ground is flawed because of the approach of NE in not engaging with all relevant evidence and taking an improper and illogical approach to the evidence advanced by DBSC.

### *Conclusion*

15. I understand that ALC is a key issue in land use planning terms, and in those circumstances it is imperative that NE and DBSC engage with the serious flaws and inconsistencies that have been identified. At the very least, proper reasons that engaged with the flaws in the assessment were required to be given. The problems are required to be engaged with. They have simply failed to do so and this fundamentally flaws their positions.
16. The approach to the examination adopted by NE has been unfair, failed to consider important matters, not been in accordance with its general purpose, and provided no reasons for rejection of the serious concerns advanced by myself, SNTS, and SNTS's professional advisers. The conclusions reached by NE are flawed and illogical considering the extensive problems with DBSC's report that have been identified, with which NE does not appear to have engaged. The ExA and the Secretary of State must not place weight on, or rely on, the submissions of NE in this regard. For the reasons advanced previously, I also maintain that the report of DBSC is fatally flawed and should not be relied upon either.

Yours faithfully

Nick Wright

**Appendix 1** – Letter from Natural England

**Nick Wright**

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**From:** [REDACTED]  
**Sent:** 12 January 2023 17:19  
**To:** Nick Wright  
**Subject:** RE: Sunnica Industrial Solar Site.

Dear Nick,

Thank you for your email.

Natural England's role in the examination process is as a statutory adviser to the Examining Authority and impartial regulator.

We do not have the resources to respond in detail to concerns raised by other interested parties. We have reviewed the additional information that has been provided through the examination process and will submit our comments at the next deadline. Where there remain issues to be addressed, these will be progressed by requesting further information from the applicant where necessary.

Many thanks

Joanna Parfitt  
Lead Adviser | Sustainable Development | Norfolk & Suffolk  
Dragonfly House, 2 Gilders Way, Norwich NR3 1UB  
[www.gov.uk/natural-england](http://www.gov.uk/natural-england)

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**Appendix 2** – Expert review by Paul Wright *B.A. M.Sc. F.I.Soil Sci.*, fellow of the British Society of Soil Science (BSSS)

## **Review of the Agricultural Land Classification of Sunnica's Lee Farm Site**

Paul Wright has a BA (Hons) in Geography, an MSc in Soil Survey and Pedology and is a Fellow of the British Society of Soil Science (BSSS), and currently the soils lead for HS2 Ltd. He is the author of *Soil, Climate and Productive Capacity* in Agricultural Valuations; a Practical Guide (Williams R.G. ed) and is the main author of the BSSS Guidance Note 2, *Soils and Land Quality: How to find online maps and data sets*. He worked for the Soil Survey of England and Wales at its Cambridge Office and later for Atkins Agriculture in Cambridge, and carried out numerous soil and ALC surveys in East Anglia and so is very familiar with the type of soils found at the Sunnica sites.

### **Scope of this review**

This review focuses on the soil survey by Daniel Baird Soil Consultancy Ltd (DBSC) of Sunnica East A, the details of which are contained in Appendix 12B: Soils and Agriculture Baseline Report of the Sunnica Energy Farm Environmental Statement [REP2-240d].

### **Available background information**

#### Published soil maps

DBSC refers to the 1:250,000 scale National Soil Map (Eastern England), but this is not the best reference. There is another available that is nearly five times greater in scale.

This area is mapped as part of the 1:63,630 (one inch to one mile) *Soils of the Cambridge District* (Hodge C.A.H. and Seale R.S. 1966) and the majority of soils of Lee Farm west are mapped as the Swaffham Prior series of well drained calcareous loamy soils over chalk rubble derived from the Zig Zag Chalk Formation. In the south east there is a complex of sandy soils of Worlington and Freckenham series. The Soil Survey archives at Cranfield hold the six inches to one mile sheets from which the one inch map was created, and these show soil boundaries field by field. Scanned copies of these can be purchased and are a valuable reference





### Published ALC mapping

The Provisional 1:250,000 ALC map shows all this land as Grade 2, apart from some Grade 3 in the south east, coinciding with the mapped occurrence of sandy Worlington and Freckenham soils. Consequently, Natural England's own predictive map of ALC marks the whole area as having a better than 60% probability of being best and most versatile (BMV).



This correspondence between the soil and ALC map is unsurprising as Messrs Hodge and Seale were based in Anstey Hall, Cambridge in the offices of what was then the National Agricultural Advisory Service. The regional manager for latter was Norman Sneesby who was responsible for the production of the provisional ALC map at the same time as the soil survey was being undertaken. These close colleagues collaborated in the production of the ALC map; hence the similarity between the soil and ALC map at this location, reflecting known soil conditions.

### Aerial imagery showing patterned ground

The last two glaciations did not reach Cambridgeshire, but the land was subjected to an arctic climate with permafrost and mass movement (solifluction) of superficial material in the arctic summers. Permafrost pushed wedges of ice deep into the soil, heaving and shattering the underlying chalk and creating fissures, often in polygonal patterns, into which the overlying loamy drift fell when the ice wedges melted. This area is noted for the patterned ground resulting from this periglacial action, with white patches where chalky material (chalky drift and chalk rubble) is close to the surface and darker patches where the chalk is deeper in the frost wedge fissures. Below is Google Earth Imagery for part of Sunnica East, showing this pattern.

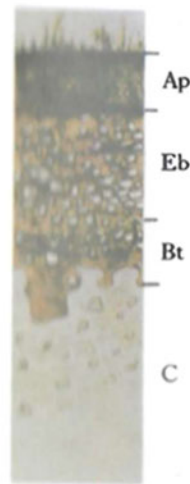


### Swaffham Prior series

These calcareous soils are permeable and well drained with chalky drift and/or rubbly chalk as substrate. The chalk is described as rubble as it is shattered by periglacial frost action and mass movement. Ground patterning means the depth to the substrate is variable over short distances but, generally, roots can penetrate to 80 cm or more, where they can extract moisture from the porous chalk (see the representative soil profile below) . They are easy to cultivate in spring and autumn and give good yields of combinable and root crops. Sugar beet is a very profitable crop on this type of land and sheep are often brought in after harvest to graze the remnants.

The main limitation to these deep, well drained soils on gentle slopes is droughtiness which is related to rooting depth and depth to chalk, as well as the dry climate. Below is a representative profile of the Swaffham Prior series described by Hodge and Seale and an image of a similar profile.

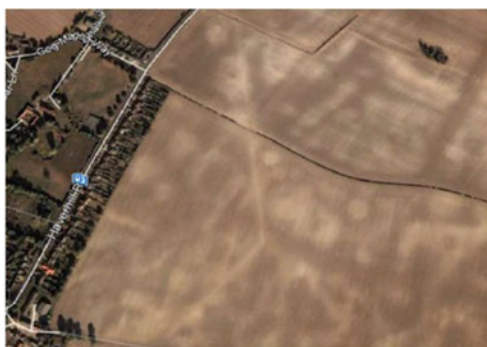
Horizons:	
cm	
0-23	Dark greyish brown (10 YR 4/2) friable sandy loam to loam; slightly stony with flint and chalk stones; weak granular or very fine to medium sub-angular blocky clods; rare fine fibrous roots; some earthworms; sharp even boundary.
Ap	
23-46/48	Yellowish brown (10 YR 5/4) friable to very friable loam with a few dark grey-brown vertical tubes of topsoil up to 1 cm wide surrounding earthworm holes; very rare chalk stones; weak fine granular or very fine to medium subangular blocky structure; few to common very fine fibrous roots; some small molluscan shell fragments; sharp undulating boundary.
B	
46/48-64/69	White (10 YR 8/1) very hard rubbly chalk with soil in the interstices; above 53 cm stripes of yellow-brown loam from the horizon above; below 58 cm white to very pale brown (10 YR 8/2 and 7/3) friable very fine loam in irregular patches, often connected, up to 5 cm across and with common fine yellowish brown (10 YR 5/4) mottles; the whole horizon without other stones; rare very fine fibrous dead roots; narrow undulating boundary.
B/C	
64/69-84+	White merging to very pale brown (10 YR 8/1 and 7/3) very hard rubbly chalk (silt loam) with some friable yellow-brown and grey-brown loam in the interstices; roots rare.
C	



In the 1960s, when the Cambridge map was made, the physics of soil moisture availability was not understood and droughtiness calculations could not be carried out.

An Environmental Statement is currently being prepared by the author of this review for the proposed Cambridge South East Transport Scheme between Babraham and Addenbrookes, which has the same soils of the Swaffham Prior series over chalky drift and rubbly Zig Zag Chalk. The moisture deficits are identical at around 120 mm for winter wheat and 117 mm for potatoes.

The periglacial soil patterning is similar to that of Lee Farm.



All 56 auger bores on this site achieved depths of between 65 cm and 120 cm. Droughtiness calculations in accordance with MAFF revised guidelines place all but one of these soils in Grades 2 or 3a.

### **Summary of the quality of the Swaffham Prior series**

These chalkland soils, “the Red lands” of the Cambridgeshire farmer, are renowned, for their versatility and high yields of autumn and spring sown combinable crops and root crops, notably sugar beet. Available information from published and unpublished sources indicate that the Swaffham Prior series falls within Grade 2 ad Subgrade 3a which is BMV land.

### **Assessment of DBSC’s soil report**

The DBSC report places the soils of the Swaffham Prior series in Grades 3b and 4.

His para 2.1 6 states that additional guidance is provided by the British Society of Soil Science Guidance Document 1: *Working with Soils Guidance Note on Assessing Agricultural Land Classification Surveys in England and Wales*

His report is assessed here according to this Guidance Document

### Use of reference material

The BSSS Guidance Document asks whether The ALC grading is at odds with background checks and have published soil maps been mentioned?

DB does not refer to the one inch to one mile Cambridge soil map and the provisional ALC map which indicate that this is agricultural land of good quality. Instead, he relies on the 1:250,000 National Soil Map which is inadequately detailed for work at field scale. This readily available background information should have caused him to consider whether his assessment of this land as 3b and 4 was accurate.

The Guidance document checklist would mark this as **Concern**

### Soil description

The Guidance Document asks the following

- *Have topsoils and subsoils been field surveyed?*
- *Has detailed soil pit information been provided in the report?*

Sunnica East has 225 auger bores of which 81 do not extend below 50 cm and 40 others do not extend below the topsoil, and yet DB assigns an ALC grades of 3b and 4 to these, despite the lack of information of the subsoil.

In the whole of this 225 ha site, despite the range of soil textures, depths and degrees of stoniness he describes in the area, there is only one pit (Pit 1) in the eastern part, but none in the west. Pit 1 is only to 55 cm depth.

The lack of subsoil information from 36% of the site and only one pit over 225 hectares would make this as **Fail** in the Guidance Note.

As a point of information, the correct procedure, when stones in the soil prevent augering, is to make three to five attempts in the close vicinity. A narrow screw should be used where a Dutch auger cannot penetrate to the required depth, and in the Soil Survey it was common practice to carry these two augers on this type of land. If the soil is too dry to auger effectively, then the survey should be abandoned until the ground wets up. Pits in dry soils can be dug with an excavator. There is no value in persevering with a soil survey when the work cannot be carried out the required standard. Similarly, ecologists would not carry out surveys at a time of year when their target species cannot be seen.

## **Overall conclusions**

The DBSC ALC assessment of Sunnica East contradicts what is known about the agricultural quality of the Swaffham Prior series. The shallowness of many of the auger bores and lack of pits means the soil descriptions in the ES are inadequate for the purposes of assessing the ALC. DBSC's calculations of droughtiness are based largely on assumptions and guesswork.

It would be my strong advice that to ensure good governance Natural England should ask for a review of the DBSC report by an independent expert. The DBSC report differs so extensively from all the evidence of earlier soil mapping and local knowledge, that to counter criticism and further scrutiny in the future Natural England must be able to protect their position of support for DBSC's report and rely on the opinion of an independent expert.

