Sunnica Energy Farm (EN010106)

March 28 2023

Peter Danks – Reading Agricultural Consultants:

Commentary on Communications between Natural England and Sunnica Ltd

Instructions

1. Reading Agricultural Consultants Ltd (RAC) is instructed by Say No To Sunnica Action Group Ltd (SNTS) to prepare a commentary on minutes of meetings between Sunnica and Natural England (NE) to discuss soils matters, specifically with regard to the Statement of Common Ground in respect of Sunnica Ltd's application for a Development Consent Order (DCO) for the construction, operation and decommissioning of Sunnica Energy Farm.

2. This commentary has been prepared by Peter W Danks, Senior Director of RAC.

Issues

3. At the end of the Examination process, many issues relevant to the application concerning agriculture and soils remain, including the:

    - acquisition and analysis of evidence relied on by the Applicant in its baseline assessment:
    - taking into account irrigation in grading agricultural land; and
    - failure to consider the productive value of agricultural land.

4. Since Deadline 9, NE has disclosed in email correspondence, minutes of meetings and the contents of email correspondence between its officers and Sunnica Ltd's soil and EIA specialists. This material is attached at Appendix 1 to this commentary.

5. It has become apparent since the end of the Examination with the publication of material at Deadline 8 **[REP8-057]** and as a result of consequent investigations by SNTS, that the concerns of SNTS and NE regarding the application of fundamental scientific principles to the grading of agricultural land remain unaddressed.

6. On October 6th 2022, in advance of a meeting with Sunnica Ltd, NE asked for the following matters to be addressed **[Appendix 1 p8]**:

- "***ALC Mapping****. The discrepancies between the ALC Grades identified by the soil core data (Appendix 12B) and the mapped ALC Grades (Figures 12-2* **[APP-238]** *and 12-3* **[APP-239]***).*
- ***Droughtiness Calculations****. Explain assumptions and approach for determining droughtiness. e.g. There is no discussion as to whether the chalk is rootable and at what depth the chalk becomes impenetrable. How has available water been considered (chalk and flint).*
- ***Soil Pits****. There is no discussion with regards to soil types and whether the soil pits have been located to reflect the distribution of soil types. It is not clear as to whether the Soil Pit data has been used in verifying soil structural and stone descriptions for the wider area.*"

7. These concerns echo strongly the concerns of SNTS as set out in its written representations **[REP2-240d]**.

ALC Mapping [Ref 08 – meeting minutes Appendix 1 p9]

8. The minutes of the meeting between NE and AECOM (for Sunnica) **[Appendix 1 p9]** indicate that following a presentation regarding the scheme in general and the production of a Statement of Common Ground (SoCG) NE pointed out significant errors in the mapping of ALC across the scheme area **[Appendix 1 p11]** and omissions of data from the baseline assessment **[APP-115]**. This information was sent to Sunnica's soils specialist (DBSC) in order that they could be investigated.

9. DBSC also presented and discussed images of selected archaeological trenches included in the baseline assessment **[APP115 p82 & 83]** to demonstrate the extreme variability of soils over short distances, indicating the localised nature of soil types. These characteristics are typical of soils affected by periglacial conditions as seen in Appendix 1 **[REP4-032 p43 & 44]** to the Technical Note prepared by DBSC as response to NE's requests at the meeting. The light and dark patterns seen in the images reflect relatively shallow and much deeper chalky soils typical of this part of the scheme area. These are the distinctive, highly productive, versatile soils known as the Cambridgeshire 'Redlands' that have not been identified as a distinct unit in the baseline assessment.

10. In its technical note to NE, DBSC addresses the gaps in observation data with a statement that they were omitted in transfer from field notes to spreadsheets. Failure to identify missing data points, which were not shown on DBSC own mapping attests to the low level of attention to detail that is apparent at many stages of the baseline assessment. In its submission at Deadline 8 **[REP8-057],** NE fails to pursue this matter further, accepting that the missing data would not be

incorporated into the baseline assessment and so not be shown on baseline mapping or taken into account in the impact assessment, despite its requests for this to be done.

Droughtiness calculations [Ref 08 – meeting minutes Appendix 1 p10]

11. With regard to droughtiness calculations, Daniel Baird (DB) of DBSC, the soil surveyor and author of the baseline report opened by demonstrating that ALC would be limited to Grade 3b even with access to full rooting depth. The assumptions regarding soil texture and stoniness underlying this demonstration are not given and appear to be wrong given the soil textures to be expected in the soils of the area as mapped in detail by the Soil Survey and Defra **[REP4-121 pp 130 – 132 & 137 – 141]**. DB explained that his "*normal practice in sites such as this would be to dig as far as possible, put pits in to see what can be loosened and for what cannot be dug past to give an extra 20cm with an additional 20% of the stone type*". This is not standard practice in ALC, which sets out strict guidelines as to how Moisture Balances (MB) should be calculated and sets precise allowances for shallow and stony soils **[REP2-240n p47]**; ALC does not allow for the random introduction of allowances. Calculations should be carried out for each observation point and blanket 'allowances' are not accepted.

12. There is no evidence of DB digging any pits as part of the original survey, the only pit descriptions having been prepared more than a year after the original soil survey. The Deadline 10 submission states that pits were dug across the site during lengthy ALC surveys – why this has not been disclosed before is unclear, but it is clear that no evidence of these pits or the findings from them has been put before the Examination.

13. NE asked that this detail be added to the appendix including where Flint and Chalk have been identified, highlighting that both of the stones have been considered with regards to their impact on the available water content within the soil profile. This has not been done.

14. Following the publication of the Technical Note **[REP4-032]** NE evidently remained sceptical and DBSC issued an email on 28th February 2023 **[Appendix 1 p17]** setting out its response to unminuted comments justifying retrospectively the use of allowances in the calculation of MB. The three examples used (CP104, CPa7 and BF100) **[Appendix 1 p14]** all lack grade calculations in the relevant part of the Appendix to the baseline **[APP-115 Annexe F]**. The grade result using the allowance was verified by RAC for CP104, but not for any other point. NE has analysed a further three points using the 'allowance' **[REP8-057]** (BF113, LF4 and EL14) and found the calculated MB values to vary from those produced by DBSC.

15. Given the rigid framework within which the ALC calculation system works, there should be no variation in the calculation of MB using observed data or incorporating a standard 'allowance'. This highlights the lack of transparency in the recording of observations from the auger survey, clarification of which was sought by NE at an early stage.

16. Thus, these requests for explanation or clarification from NE have never been fulfilled as required and no justification has been made for the assumptions applied to observations generally, or for the observations themselves justified by supporting observations from suitable located soil observation pits, discussed below.

Soil Pits [Ref 09 – meeting minutes Appendix 1 p10]

17. NE's requested clarification of the distribution and characteristics of the six soil pits excavated by DBSC, that the locations of the pits were included on the map of farming circumstances in the baseline assessment **[APP115- p79]**, that clarification be given regarding the use of soil pit data to adjust manual texture assessments carried out in the field and that areas of peat in the scheme area be identified.

18. The baseline survey fails to identify extensive areas of peat in the northern part of Sunnica East identified in trenches excavated by Oxford Archaeology as part of the Sunnica EA **[APP-075 pp272-274]** even though hand auger observations were made in these areas.

19. Regarding the suggested use of soil pit data to inform and adjust manual auger observations, there has been no attempt to link the two sources. The soil pits were dug retrospectively in September 2021 with the results of analyses being produced in October 2021. The bulk of the original auger surveys were carried out in 2015, with surveys of additional land in 2019 and 2021. The baseline report was published as part of the ES in November 2021. Soil pit data could not have been used to inform the findings of the auger survey, which should therefore treated as unconfirmed by laboratory measurement.

20. Further, the distribution of soil pits is not representative of the soils of the scheme area. Close examination of the 1:250,000 scale mapping used by DBSC shows that there are six soil associations mapped in the scheme area. Whilst five pits were excavated retrospectively, these represent only three of the mapped associations. Examination of more detailed (1:63,360 scale) soil series and soil association mapping confirm that the location of pits appears to have been selective, representative only of soils likely to be more droughty in nature than other significant soils of the area.

21. The pits have not been mapped by DBSC in the context of the soils of the area, the texture of subsoils has not been verified by laboratory analysis and there is no photographic evidence of the findings of the excavations. Furthermore, it is stated by DBSC that he would normally dig pits in areas where augering was limited by stones or rock. This procedure does not appear to have been followed at any stage of the auger survey, despite the large proportion of auger observations that were stopped at less than 50cm by stone or rock.

22. None of NE's requests for clarification of the use of soil pit data or justification for the location of the pits excavated have been provided by Sunnica. This implies that standard procedures normally implemented during soil surveys, and identified by DBSC were not implemented as part of the baseline survey.

Natural England's understanding of SNTS position

23. Throughout the examination process, NE appears to have misunderstood the basis for SNTS conclusion that the baseline assessment of ALC should be verified. NE and the Applicant have consistently expressed the opinion that the discrepancy between RAC's assessment and that of the Applicant is due to the fact that the 'Provisional' ALC maps used by SNTS, are only intended to be used as a strategic guide and are not accurate at the field scale. This fact is not in dispute and has been acknowledged and accepted by RAC throughout the Examination and significantly misrepresents what is the case. The opinion that SNTS has used only the strategic guide whereas DBSC did a detailed survey in line with best practice is wrong.

24. Further, NE's understanding regarding the role of productivity as affected by irrigation is wrong. Whilst it is of the mistaken opinion that the 1988 Guidance has been rewritten and thus irrigation has been discounted from consideration in the ALC system, even in its own words it stresses that irrigation affects productivity, which itself should be taken into account. The responsibility of NE extends only to the protection of soils and it has no concern for productivity in the planning balance so its lack of a position in this area is understandable.

25. However, this misrepresentation of the source of the discrepancy as expressed by the Applicant is a source of significant concern to SNTS.

26. SNTS relies on NE's own predictive ALC map, which is based on the Provisional ALC 1:250,000 mapping, for an indicator that there is potential for a significant difference between DBSC's baseline and what can be found on the ground.

27. Given this hypothesis, it is tested using memoirs and detailed mapping of soil series carried out by the Soil Survey of England and Wales and MAFF at a scale of 1:10,560, a more detailed scale than the 1:18,000 used by the Applicant in its assessment. The detailed mapping and the associated detailed descriptions of the soils of the area confirm the hypothesis that there is a significant difference in the two surveys that should be verified by an independent third party as recommended by the results of using the British Society of Soil Science's test for a robust ALC assessment.

Summary

28. Despite repeated requests for data and procedures to be described, clarified or provided, the Applicant has failed to provide satisfactory resolutions to those requests. Disclosure of NE correspondence and meeting minutes strongly suggests that NE had reasonable grounds to question the findings of the baseline survey and there remains no justification from the Applicant for the failure to excavate representative observation pits contemporary with the baseline auger survey in order that the auger observations could be verified across all of the soil types mapped by Authority as being present in the scheme area.

29. The Applicant has frequently resorted to invalid comparisons with earlier survey work in the area but has failed to verify those surveys and reflect their findings spatially, in the context of readily available detailed mapping of the spoils of the area.

30. These failures call into question the veracity of the baseline survey and the weight which should be given to its conclusions, despite NE's apparent satisfaction with them.

31. The site should be surveyed by an independent third party in order to verify the conclusions of the Applicant's baseline assessment of soils and ALC.

Solution

32. At Deadline 7 the four host local authorities, Cambridgeshire CC, East Cambridgeshire DC, Suffolk CC, and West Suffolk C, have identified the dispute that remains between the Applicant and SNTS, stating that "*it would appear that the soil science experts reporting to the SNTS Group have identified anomalies that seem to raise reasonable and significant doubts about the assessment undertaken by Sunnica's experts*". The Councils go on to suggest that the 'Rochdale' envelope approach should be used in this case.

33. This would mean that, given that significant doubts exist about the Applicant's analysis, a 'reasonable worst case' approach should be applied to the assessment of the evidence. This permits the ExA to be confident that any eventual scheme will fall within the 'Rochdale' envelope and that all the information necessary has been provided for the Environmental Statement. This would extend to the assessment of best and most versatile agricultural land included within the scheme.

34. In this case, the reasonable worst case should be based on the strategic scale Natural England (NE) Predictive BMV map **[Appendix 5 & REP2-097u]** which shows that 82% of the scheme area is 60% or more likely to be BMV. Detailed soil mapping and associated memoirs also show that the soils of the area are generally accepted by soils scientists to have physical and locational characteristics that make them BMV **[REP2-240d pp21-26 & pp139-140, REP2-097f pp4-5, APP115 p10 & REP4-121 pp130-131 & 137-141]**.

Email Natural England to AECOM (for Sunnica) adding agenda items to meeting 10/10/2022

From: [redacted]
Sent: Thursday, October 6, 2022 11:27 AM
To: [redacted]
Cc: [redacted]
Subject: RE: Sunnica Energy Farm - soils discussion - 10 October 2022

Hi Stuart,

Thanks you for the powerpoint, if we could also add a few agenda items suggested by our specialist to give your consultants some time to look into them.

- **ALC Mapping.** The discrepancies between the ALC Grades identified by the soil core data (Appendix 12B) and the mapped ALC Grades (Figures 12-2 and 12-3).
- **Droughtiness Calculations.** Explain assumptions and approach for determining droughtiness. e.g. There is no discussion as to whether the chalk is rootable and at what depth the chalk becomes impenetrable. How has available water been considered (chalk and flint).
- **Soil Pits.** There is no discussion with regards to soil types and whether the soil pits have been located to reflect the distribution of soil types. It is not clear as to whether the Soil Pit data has been used in verifying soil structural and stone descriptions for the wider area.

Many Thanks,

Niall Walkden
Senior Adviser | Sustainable Development | Norfolk & Suffolk
Dragonfly House, 2 Gilders Way, Norwich NR3 1UB
Phone: [redacted]
www.gov.uk/natural-england

Thriving Nature for people and planet

These need to be addressed to determine the robustness of the survey output.

Minutes of meeting held between Natural England and Sunnica Ltd 10th October 2022

AECOM

Minutes

Meeting name	Subject	Attendees	Circulation list	Apologies
Sunnica - Discussion with Natural England on soils	A meeting to discuss specific issues on soils in the SoCG	ER JP NW DB MW ST FO	Attendees	None
Meeting date 10th October 2022	**Time** 14:00-15:00			
Location MS Teams	**Project name** Sunnica Energy Farm			
Project number 60589004	**Prepared by** FO			

Ref	Action	Responsible
01	After introductions, DB began the meeting with the agenda and followed with an overview of the Scheme and soils baseline. The Site is predominantly light and droughty arable land with rotations including high margin crops highly dependent on irrigation. The land is mostly flat with ALC Grades 3b and 4. There are some small areas of Grade 3a land including one on south eastern side of the Site which is at the base of a hill. There is a particularly low lying piece of rough pasture in the western part of the Site.	
02	DB presented figures showing the agricultural land classification across the Scheme and highlighted areas of Grade 3a land.	
03	DB presented a slide on soil disturbance and explained that the extent and depth of soil disturbance would be very limited. This would be mostly limited to access tracks where the topsoil would be stripped and stored as well as cable trenches, security posts, easements, compound and switchgear housings.	
04	DB presented a slide on land take and agreed with NE that it is unlikely to result in significant loss of BMV land. The Scheme would result in the suspension of arable production for 40 years but not any loss of agricultural land resource.	
05	DB presented a slide on standards of restoration. Defra R&D showed considerable success in landfill restoration to the same ALC grade demonstrating that we can restore land to a high quality on sites which are far more challenging. A Soil Management Plan (SMP) will be incorporated into the relevant management plans and will cover suitable plant, work practice, monitoring of soil consistence and supervision by a suitably qualified scientist.	
06	DB presented a slide on soil resources and soil health and explained that ALC system does not recognise the standard of management to ensure that there is no incentive for the landowner to degrade their site for better access to planning permission. Permanent green cover will be provided which will protect against water and wind erosion.	
07	DB moved onto the three points that had been raised by Natural England in an email on 6th October 2022. The first of these was regarding ALC mapping and discrepancies between ALC Grades identified by the soil core data (Appendix 12B of the Environmental Statement) and the mapped ALC Grades (Figures 12-2 and 12-3 of the Environmental Statement). ER pointed to specific areas on the figures where NE had noticed the land had not been surveyed and in other areas where grades in the figures were different to those provided in the appendix. ER	ER sent annotated figures on 13/10.

1

Minutes of meeting held between Natural England and Sunnica Ltd 10/10/2022 (continued)

Minutes
Sunnica - Discussion with Natural England on soils

Ref	Action	Responsible
	agreed to send annotated figures where these discrepancies had been identified for DB to investigate.	
	DB discussed photographs within Appendix 12B of the Environmental Statement that were taken on site of trenches dug by the archaeology team which showed large areas of chalk with abrupt changes to deeper subsoil demonstrating the localised nature of the soil types. ER requested that this detail be included within the ALC reports and followed through into the SMP.	DB.
08	DB moved onto the next point raised by NE on the assumptions made within droughtiness calculations. DB provided an example that if you made an assumption in the chalky soils that a potato crop would be able to access its full 70cm of rooting for that material the calculation still results in a very strong limitation to Grade 3b or worse for the potato moisture balance. DB explained that his normal practice in sites such as this would be to dig as far as possible, put pits in to see what can be loosened and for what cannot be dug past to give an extra 20cm with an additional 20% of the stone type. ER requested that this detail be added to the appendix including where Flint and Chalk have been identified, highlighting that both of the stones have been considered with regards to their impact on the available water content within the soil profile.	DB
09	DB moved onto the final point raised by NE on soil pits and clarified that six soil pits were taken along with soil samples for lab analysis. DB described the locations and characteristics of the soil pits on a map included on page 79 of Appendix 12B of the Environmental Statement. ER requested that the soil pit locations were added to the soil data points figure and explained that soil pits were important in understanding soil structure and stone content.	DB.
	ER requested that the relevant report include clarification as to whether the soil pit data has been extrapolated and used to adjust the data presented in Appendix 12B of the Environmental Statement and whether the lab particle size distribution had been used to adjust any texture assessment that had been done by hand in the field. ER commented that NE would expect for detail be included within the ES and SMP where there are soils that may be more at risk during handling as well as any areas of peat.	DB.
	DB clarified that the pipette method was used to determine particle size distribution and loss on ignition for organic matter.	
10	ST presented a slide on the Statement of Common Ground (SoCG) and explained that there will be four deadlines throughout examination where it will be submitted. The first of these is Deadline 2 which is the 11th of November. An initial draft of the SoCG was sent to NE on the 7th October. ST suggested that once NE have had a chance to review that another meeting is arranged to discuss the SoCG specifically.	
	JP stated that they would be able to provide some initial comments on the SoCG by Friday and then they would look into whether it would be worth having an additional meeting to discuss any comments. MW agreed with this.	JP provided the reviewed SoCG on 14/10.
11	AOB	
	NW requested that during Examination, if there is a specific document submitted that is relevant to NE that they are informed of this so that they have more time to provide feedback. ST agreed.	
	NW questioned whether there was a programme of reports to be submitted at various deadlines. ST explained that this was available for Deadline 1 and 2 currently and would evolve throughout examination.	

AECOM 2

Document prepared by Natural England for Sunnica Ltd after meeting of 10/10/2022

Sunnica Proposed Solar Development

Natural England ALC mapping request for clarification regarding ALC Grade mapping discrepancies (10/10/2022)

Comparison of Figure 12-2 and the roughly mapped ALC Grades according to the auger bore data provided in Appendix 12B. *The attached photo above assumes the ALC Grades provided in Appendix 12B are correct.*

Please note, the hand drafted map on the right hand side is only a rough sketch of ALC Grades presented in Appendix 12B, and boundaries (where marked) are only approximate. This was drafted for use by Eleanor Reed prior to the call with Aecom and Daniel Baird on the 10th October 2022 as an aid to inform my assessment of the ALC data and only and should not be used for any other purpose.

This hand drawn map was prepared simply by colouring each borehole location with the identified ALC Grade. Where obvious areas of continuous ALC Grades were identified, a boundary was crudely drawn in. Where isolated pockets of different Grades were identified, no boundaries were provided. This figure should not be used as a definitive mapping of the land. It is acknowledged that you should not map each individual identified ALC Grade for each

boring (as this can result in a patchwork of differing ALC Grades, which can't meaningfully inform agricultural land quality at the field scale), but rather map areas of ALC which could reasonably be managed. The above map was just prepared to get an idea of the ALC distribution of the borehole data and consistency with the ALC Figures provided with the ES.

There are areas of ALC grades which have been identified in the field by Daniel Baird (Appendix 12B), but not mapped accordingly in Figure 12-2.

Of particular note:

Two areas of no ALC data marked by the question marks in the photo (Bay Farm). In figure 12-2, this unsurveyed land is graded a mix of ALC Grade 3a, 3b and 4. How was this grading determined? Would this land be subject to ALC survey prior to construction?

Lee Farm (Sunnica East): an area of Subgrade 3a is not mapped (points LF45, LF60, LF78, LF77, LF89, LF90, LF91, LF102).

Bay Farm (Sunnica East): an area of Subgrade 3a is not mapped (points BF18, BF35, BF54, BF55, BF72, BF87, BF89)

Elms Road (Sunnica East): an area of Subgrade 3a is not mapped (Points ER47, ER48, ER55, ER56, ER63, ER64, ER65, ER73, ER74, ER75, ER85, ER90, ER91)

Likewise, areas of Grade 4 have not been mapped (Lee Farm)

Actions:

The borehole data should be reviewed and the ALC Mapping across the full site updated where appropriate. If there is a reason why these areas (or any other areas of discrepancy between the ALC grade mapped and the borehole data) have not been mapped, justification needs to be provided.

If the ALC Figures are updated, the areas of each ALC grade should also be updated in the Environmental Statement and ALC Report.

Copy of letter from Natural England to ExA dated 13th March 2023 [REP8-057]

Date: 13 March 2023
Our ref: 424748
Your ref: EN010106

Sunnica@planninginspectorate.gov.uk

BY EMAIL ONLY

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

Dear Mr Kean

NSIP Reference Name / Code: Sunnica Energy Farm, EN010106
Natural England's comments in respect of Sunnica Energy Farm Project, promoted by Sunnica Ltd

Examining authority's submission deadline 8, 13 March 2023

Natural England is a non-departmental public body. Our statutory purpose 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.

The following constitutes Natural England's formal statutory response for Examination Deadline 8.

1. **Comments on moisture balance calculations**

1.1. Clarification has been sought by Natural England on the assumptions and calculations used in the Sunnica Solar Development Agricultural Land Classification (ALC) Droughtiness calculations originally provided within Appendix 12B of the Environmental Statement [APP-115].

1.2. Daniel Baird Soil Consultants (DBSC) have provided written clarification within the Technical Note: '*Clarification Requested by Natural England on Agricultural Land Classification*' [REP4-030] with further clarifications provided in an email (28/02/2023).

1.3. Droughtiness is the dominant limiting factor across the Proposed Development site, as presented by DBSC and in previous ALC surveys[1]

1.4. DBSC have provided clarification on their assumptions; including the contingency of an extra 20cm depth with an additional 20% volume of stone made for material below where roots were found. This contingency was applied across all drought limited land surveyed. With the

[1] [redacted] - Reading Agricultural Consultants (RAC) survey for a consented minerals development

contingencies included in the assessment, the Droughtiness limitation is often reduced from Grade 4 to Subgrade 3b.

1.5. A subset of 6 profiles presented in Appendix 12B have been checked against the Moisture Balance calculations provided by DBSC. As the table below shows, there are some small discrepancies between the presented data and the Natural England calculated values (largely occurring for the moisture balance calculated for potatoes), however these discrepancies are small and do not result in differing ALC grades. Therefore Natural England remains satisfied that the results of the ALC surveys are reliable.

	DBSC Presented data			**Natural England calculations**			
Sample	**MB Wheat**	**MB Potato**	**Droughtiness limitation**	**MB Wheat**	**MB Potato**	**Droughtiness limitation**	**Notes (NE Assumptions)**
CP104	-22	-23	3b	-22	-15	3b	MDW=119; MDP=115 (Climate data point 6)
CPa7	-43	-46	3b	-43	-36	3b	MDW=119; MDP=115 hard stone (Climate data point 6)
BF100	-34	-30	3b	-35	-27	3b	MDW=117; MDP=113 (Climate data point 7) H1 and H2 assumed to be all hard stone, although both hard stone and chalk noted
BF113	-56	-52	4	-60	-53	4	MDW=117; MDP=113 (Climate data point 7) H1 and H2 assumed to be all hard stone, although both hard sRtone and chalk noted
LF4	-28	-24	3b	-28	-18	3b	MDW=121; MDP=118 (Climate data point 1) hard stone
EL14	-75	-71	4	-75	-71	4	MDW=118; MDP=114 (Climate data point 2) hard stone

2. Comments on the Framework Decomissioning Environmental Management Plan (DEMP)

2.1. Natural England is now satisfied with the measures set out in the Framework DEMP [REP7-034] regarding impacts on soil and recognises that agricultural soils will be managed, preserved, retained and reinstated in accordance with Department for Environment Food and Rural Affairs (Defra) guidance.

3. Comments on the Report on the Implications for European Sites (RIES)

Natural England notes that there are issues the examining authority considers to be outstanding regarding impacts to European Sites. We wish to make the following comments on those issues to clarify Natural England's position.

3.1. Potential for LSE on drainage and hydrology at Chippenham Fen from grid connection route B

3.1.1. Natural England is satisfied with the conclusion that there will be no likely significant effect on Chippenham Fen as a result of hydrological impacts from the cabling route.

3.2. Potential for LSE from light spill on Chippenham Fen

3.2.1. Following the removal of panels from the land directly adjacent to Chippenham Fen and based on the information provided by the applicant within the examination, Natural England is satisfied that there will be no likely significant effect on Chippenham Fen from light spill and noise disturbance.

3.3. Evidence from NE used to determine to functional linkage

3.3.1. The full document is still in draft and not ready for external publication. We are, therefore, unable to share it in its entirety at this time. However, a summary has now been provided at deadline 7 [REP7-104].

3.4. Likely consequences in the event stone curlew mitigation is not successful or sub-optimal

3.4.1. The Framework Operation Environmental Management Plan [REP7-036] sets out the monitoring requirements for the stone curlew offsetting areas. This includes annual monitoring of the offsetting areas with reports being provided to the Ecology Advisory Group. The Ecology Advisory Group, as set out within the Landscape and Ecology Management Plan (LEMP) [REP7-015], will be able to advise on measures required to improve the provision should it be found to be inadequate. These monitoring measures are also within the applicants Report to Inform an Appropriate Assessment [REP5-045]. Natural England is, therefore, satisfied that suitable required offsetting habitat will continue to be provided throughout the scheme.

3.5. Potential for LSE from air-quality in-combination effects at Breckland SPA

3.5.1. Although Breckland SPA was mentioned as being vulnerable to air quality in our response at Deadline 2 [REP2-009], this was an error. None of the interest features of Breckland SPA are sensitive to air pollution. Natural England is therefore satisfied that the in-combination assessment provided by the applicant in [REP5-045] considers all relevant designated sites and interest features.

3.6. Level of detail on dust management in CEMP

3.6.1. Natural England has no comments to make related to this issue.

3.7. In addition to the above, it is noted that table 3.1 discusses the presence of an additional record for great crested newst (GCN) at Chippenham Fen. Natural England were made aware of this record. However, on further inspection it was found that this record was an error in the dataset and there have been no valid records of GCN at Chippenham Fen. Natural England, therefore, remain satisfied that there will be no likely significant effect on this interest feature of Fenland SAC.

This concludes Natural England's advice at this time, which we hope you will find helpful.

Yours sincerely

Joanna Parfitt
Norfolk and Suffolk Area Team

Copy of email correspondence between Natural England and Reading Agricultural Consultants (17/03/2023)

RE: NSIP Reference Name / Code: Sunnica Energy Farm, EN010106

Reply | Reply All | Forward

PJ [redacted]

Fri 17/03/2023 09:05

You replied to this message on 17/03/2023 09:53.

Dear Peter,

Thank you for you email. Please see below the contents of the email referred to in our lates response to the Sunnica Examination.

Further to the last meeting I have gone back to have a look at the Moisture Deficits in the Appendix B [APP-115] annex F.
The majority of points without Moisture Balances given in the data tables are in the Snailwell area. Points 4, 5, 6, 12, 33, 43, 44, 51, 52, and 53 have a flood risk limitation to Grade 3b so no drought calculation was carried out. Likewise point 66 has a wetness limitation so no drought calculation was carried out.
For sample points still in the scheme, Point LF24 is limited to Grade 3b by topsoil texture (sand) and point LF103 is limited to grade by flood risk. No drought calculation was done for these two points as other limitations already excluded them from BMV land.
I found three points where Moisture Balance figures are needed.

CP104 (page 125 of the appendix 12B document) is closest to climate point number 6, with Moisture Deficits of 119mm for Winter Wheat and 115mm for main crop Potato. Applying these to the soils data given results in Moisture Deficits of -42 and -38mm. Adding the contingency of an additional 20cm with an extra 20% stone volume (and assuming all the stone for this extra hypothetical depth is chalk, not the flint found in the soil above) gives MDs of -22 and -23. A drought limit to Grade 3b as mapped on the ALC Grade Distribution plans (Figures 12.2 and 12.3 [APP-238 APP-239]).

CPa7 (page 132 of the document) is again close to climate data point no. 6 with MDs of 119 and 115. The MBs are -58 and -54 (drought grade 4) dropping to -43 and -46 with the added contingency giving a drought grade of 3b, as mapped.

BF100 (page 142) is close to climate point 7, MD of 117 and 113. MB are -55 and -51 for the soil observed (grade 4), and -34/-30 with the contingency added giving drought grade 3b. This area is mapped as Grade 4 however point BF100 is surrounded by points BF84, 85, 99, 114, and 115 which all are Grade 4. My interpretation is that point BF100 should be included within the wider area of Grade 4 rather than sit as a single hectare of Grade 3b land.

Please note that for all of these calculations, the depth of soil given is what could be observed when digging an inspection pit, including hacking into the underlying chalk with a pick. If there was rootable material present at a depth it is recorded on the data table. The contingency of an extra 20cm depth with an additional 20% volume of stone is made for material below where roots were found. With this contingency applied across all drought limited land I surveyed (the vast majority of the Sites) the resulting MBs and drought grade limitations are generous, edging some grade 4 land to Grade 3b.

Many thanks

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

Thriving Nature for people and planet

NATURAL ENGLAND

Copy of email correspondence between Reading Agricultural Consultants and Natural England (16/03/2023)

RE: NSIP Reference Name / Code: Sunnica Energy Farm, EN010106

[redacted]

Reply | Reply All | Forward

Fri 17/03/2023 09:05

You replied to this message on 17/03/2023 09:53.

From: [redacted]
Sent: 16 March 2023 10:56
To: [redacted]
Subject: NSIP Reference Name / Code: Sunnica Energy Farm, EN010106

Dear Joanna,

I write further to Natural England's formal statutory response for Examination Deadline 8, which sets out to clarify and finalise Natural England's position on the Agricultural Land Classification of the proposed development area.

RAC is agreed that droughtiness is the dominant limiting factor across the Proposed Development site but it is still not entirely clear how Daniel Baird Soil Consultants (DBSC) has arrived at or justifies the application of an allowance of an extra 20cm depth with an additional 20% volume of stone made for material below where roots were found. This contingency was applied across all drought limited land surveyed, "*where permeable parent material was found with the 1.2m appraisal depth and could not be penetrated by hand auger or spade*" **[para 2.1.6 of DBSC's Technical Note @ REP4-032]**. This is a considerable number of observation points where pits have been dug by spade but of which there are no records to confirm that the assumptions are correct.

It is apparent that Natural England has had the benefit of email correspondence with DBSC, dated 28th February 2023, which clarifies this. Please could you supply me with a copy of the relevant email string in order to assist my, and colleagues, understanding of this complex process beyond the already public Technical Note?

I look forward to hearing from you in due course.

Peter

Peter W Danks
Director
Reading Agricultural Consultants,
Beechwood Court, Long Toll, Woodcote, Reading, RG8 0RR

[redacted]

READING AGRICULTURAL CONSULTANTS

[redacted]

Registered company number: 3282982