


From: 
To: [Sunnica Energy Farm](#)
Subject: Sunnica – EN010106 Unique Ref nos : AFP191
Date: 28 March 2023 16:10:07
Attachments: [image934915.png](#)
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A G Wright & Son Farms Ltd
28th March 2023

Dear Sirs

Sunnica – EN010106
Unique Ref nos : AFP191

Dear Sir/ Madam

Sunnica EN010106

Since Deadline 10 we have received further documents from Natural England. I have attached the documents as appendices and comment as follows:

Appendix 1 – email from Natural England (NE) to Aecom – 6/10/22 – this email is asking for:

- 1/ Explanation of discrepancies between ALC grades identified by the soil core data (Appendix 12B) and the mapped ALC Grades (Figures 12-2 and 12-3 APP 238/239). The applicant has not altered figures 12-2 or 12-3. They are therefore misleading and do not represent what was found on site. They also vary hugely from the ALC grading map at [REP6-051-appendix1] which for example at Sunnica East A shows a large area of grade 2 land and 12-2 only shows grade 3b and 4. This question therefore remains unanswered.
- 2/ Droughtiness Calculations – Daniel Baird Soil Consultants Ltd have at [REP8-057point1.5] provided evidence of just three calculations for droughtiness from over 700 auger borings. The three points chosen do not have moisture balance recordings in [APP-115 annex F]. The calculations that are done are an exact process, they therefore should match exactly NE's results and they don't. Whether they change a grade or not is irrelevant. The information is unreliable. If DBSC wished to prove otherwise they should have provided the full spreadsheet of calculations for every point as requested by NE [REP5-096] but never supplied. This question therefore remains unanswered
- 3/ Soil pits – 6 soil series are identified on detailed soil mapping. The 5 pits that remain within the site are dug on three soil series. All of the proven BMV Sunnica East A West area is ignored. This question therefore remains unanswered.

Appendix 2 email from Aecom – Minutes of Meeting with NE 10/10/22. Using numbering from the Minutes:

- 1/ Point 7 – see point 1 above
- 2/ Point 8 – see point 2 above
- 3/ Point 9 – see point 3 above

Appendix 3 13/10/22

1/ See point 1 above – there are areas of ALC grades which have been identified in the field by DBSC (Appendix 12B) but not mapped accordingly in figure 12-2.

Appendix 4 28/02/23 email from NE to Reading Agricultural Consultants.

- 1/ See point 2 above – the selection of these three points is peculiar as none of them have existing moisture balance calculations. The allowance used is unevicenced and unjustified and when applied does not match NE's calculations. All these calculations should be dismissed as unreliable in the absence of the requested detailed spreadsheet. The spreadsheet has not been provided because it would not stand up to scrutiny. NE having asked for it should have insisted it was provided. The work would have been done to give the information in [APP-115Annexe F] it should therefore have been provided To NE.
- 2/ There is no evidence provided to support the digging of pits (other than the 6 dug in only 3 of the soil series) or hacking of the underlying chalk with a pick. If dug photos should have been taken.

Appendix 5 - table Summary of discussions between NE and the Applicant. The matters that remain unresolved:

- 1/ Figure 12-2 does not reflect the survey results in [APP-115 Annexe F]
- 2/ No spreadsheet of moisture calculations is provided
- 3/ No evidence or justification is provided for the allowance used in the moisture calculations.
- 4/ The calculation of moisture balances is exact. NE'S calculations do not match DBSC's
- 5/ No explanation is given why the soil pits avoid the known areas of BMV and are dug in only 3 soil series when maps show there are 6 soil series
- 6/ No proof of a spade or a pick being used is given.
- 7/ No explanation is given to NE why when their predictive map shows 82% of the Sunnica site is 60% or more likely to be BMV and DBSC can only find less than 4%.

The DBSC soil survey has to be dismissed as largely unconvincing as found in the Ripon Case. Too many questions remain unanswered.

Yours faithfully

Nick Wright

Jan Anderson
Accounts Manager



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Nick Wright

From: Nick Wright
Sent: 28 March 2023 10:34
To: Peter Danks; anne
Subject: FW: Sunnica Energy Farm - soils discussion - 10 October 2022

See you at 12.30 – having asked the right questions I cannot see where the answers are. All v eleventh hour.

From: Walkden, Niall <[REDACTED]@naturalengland.org.uk>
Sent: Thursday, October 6, 2022 11:27 AM
To: Tweedy, Stuart <[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
[REDACTED]

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

Minutes

Meeting name Sunnica - Discussion with Natural England on soils	Subject A meeting to discuss specific issues on soils in the SoCG	Attendees ER JP NW DB MW ST FO	Circulation list Attendees	Apologies 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 6 th 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.

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 11 th of November. An initial draft of the SoCG was sent to NE on the 7 th 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.	

28/2/23

13/10/22

Appendix 3

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.

From: Parfitt, Joanna [redacted]@naturalengland.org.uk>
Sent: 17 March 2023 09:05
To: Peter Danks [redacted]@reading-ag.com>
Subject: RE: NSIP Reference Name / Code: Sunnica Energy Farm, EN010106

Dear Peter,

Thank you for your email. Please see below the contents of the email referred to in our latest 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

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From: Peter Danks [REDACTED] <[\[REDACTED\]@reading-ag.com](mailto:[REDACTED]@reading-ag.com)>
Sent: 16 March 2023 10:56
To: Parfitt, Joanna [REDACTED] <[\[REDACTED\]@naturalengland.org.uk](mailto:[REDACTED]@naturalengland.org.uk)>
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 ORR



Date	Timetable	Ref	Comment	Action
14/10/2022	Deadline 1	REP1-041	NE - Will not attend hearings	
11/11/2022	Deadline 2	REP2-046	Draft statement of Common Ground	
			Matters agreed	
			NE agree the scheme is unlikely to lead to significant permanent loss of of BMV agricultural land	NE - identify that over 50% of the site is BMV. They are basing this statement on the applicants conclusion that less than 4% of the site is BMV
			Matters under discussion	
			NE has requested further clarification on the soil survey methodology which was provided in a meeting dated 10/10/2022 and considers that if the additional informaiton is included in within the report it will provide sufficient clarification	additional information on Methodolgy not provided
		REP2-090	Point 5.3 - ALC is an amber issue- awaiting clarification from the applicant	
22/11/2022	Deadline 3	REP3-028	NE- confrim they will not attend ISH on Agriculture on 8/12/22	
06/12/2022	AS			12-2 and 12-3 have not been altered to reflect DBSC findings neither do they correspond to any publised data
		AS-314	Concerns raised - Discrepancies between ALC grades identified by the soil core data in Appendix 12B [app-115] and the mapped ALC grades in figures 12-2, 12-3 (APP-238-239)	Allowance used has not been justified
			Lack of discussion of assumptions and approach for determining droughtiness	no answer given
			have soil pits been located to reflect the distribution of soil types	no photos of pits taken or subsoil tests done.
			It is not clear as to whether the soil pit data has been used in verifying soil structural and stone descriptors for the wider area	no evidence therefore provided
			we have requested that the Applicant submits a technical note to the examination	Tech Note REP4-032 does not address these issues
16/12/2022	Deadline 4	REP4-017	Draft statement of Common Ground	
			Matters agreed	
			NE agree the scheme is unlikely to lead to significant permanent loss of of BMV agricultural land - whilst still seeking clarification of the methodology of identifying the BMV	Should not be in 'agreed'
			NE has requested further clarification on the soil survey methodology which was provided in a meeting dated 10/10/2022 and considers that if the additional informaiton is included in wihtin the report it will provide sufficient clarification	additional information on Methodolgy not provided
		REP4-032	Technical Note	
			Point 2.1.1 ALC Grading - there is however abrupt variation in the depth of soil for many areas	Not borne out by applicants auger boring readings in APP-115 - Sunnica East A 225 auger borings 87 stopped at a depth of 40cm or less
			Point 2.1.2 photos of Archaeogical trenches are included	No inspection pit photos are included
			Point 2.1.6 description of how Mositure Balance Calculation allownace arrived at	no guideline justification quoted for allowance
				no photographic justification of allowance
				no evidence provided of spade work
				no evidence provided of pick work

				no guidance provided of when allowance used
			Point 2.1.7 - handful of gaps	a professional report should have no gaps
				Conclusion
				Core point is not addressed why does applicants report differ so significantly to NE's own findings
15/12/2022	Deadline 4	REP4-139	Point 2.4 - Irrigation - NE state irrigation is no longer a factor used in ALC	NE are unable to evidence where it has been officially agreed that the 1988 MAFF guidelines have been altered on irrigation matters
				The 1997 Version of PPG7 requires irrigation to be considered as another factor which it is not remain unanswered.
			Point 7 - Concerns raised over the methodology of the soil surveys	
12/01/2023	Deadline 5	REP5-096	Point 2.3.1/2 queried lack of 3a in 12-2	we are unaware that 12-2 has been altered to accurately reflect grade 3a identified in their own survey
			Point 2.4.2 NE would welcome the provision of the Moisture Balance calculations for each point. This could be provided as an excel spreadsheet. This was raised in the meeting held between the applicant and NE on 9/01/23	No spreadsheet provided
30/01/2023	Deadline 6	REP6-041	Statement of Common Ground	
			Matters agreed	
			ALC should be reviewed without irrigation	See above re 1988 MAFF Guidelines
			The scheme is unlikely to lead to significant permanent loss of BMV	NE identify that over 50% of the site is BMV- They are basing the statement of loss of BMV on the applicants conclusion that less than 4% of the site is BMV
			Incomplete ALC survey data - Applicant says survey is robust	No spreadsheet provided
			Matters under discussion	
			NE have requested further clarification of the soil survey methodology	not provided.
		REP6-070	Outstanding concerns on ALC remain	
13/03/2023	Deadline 8	REP8-057	Letter	
			Mositure Balance calculations	
			Point 1.2 DBSC has provided written clarification within Tech Note REP4-032	Not correct see above
			Further clarification in an email 28/02/2023	email not submitted to examination library
			Point 1.4 - DBSC have provided clarification on their assumptions	We see no evidence of clarification see above
			Point1.5-A subset of 6 profiles are presented	6 samples is not the spreadsheet for each point requested above at REP5-096
				the calculations are the calculations they must match

		Statement of Common Ground	
		Irrigation	no evidence provided - see above
		BMV	no reason for difference whith NE's published data
			see above
		NE is satisfied based on the additional information provided by the applicant, that the	no spreadsheet is provided -see above
		methodology and results of the soil survey are reliable	no statement of methodology is provided