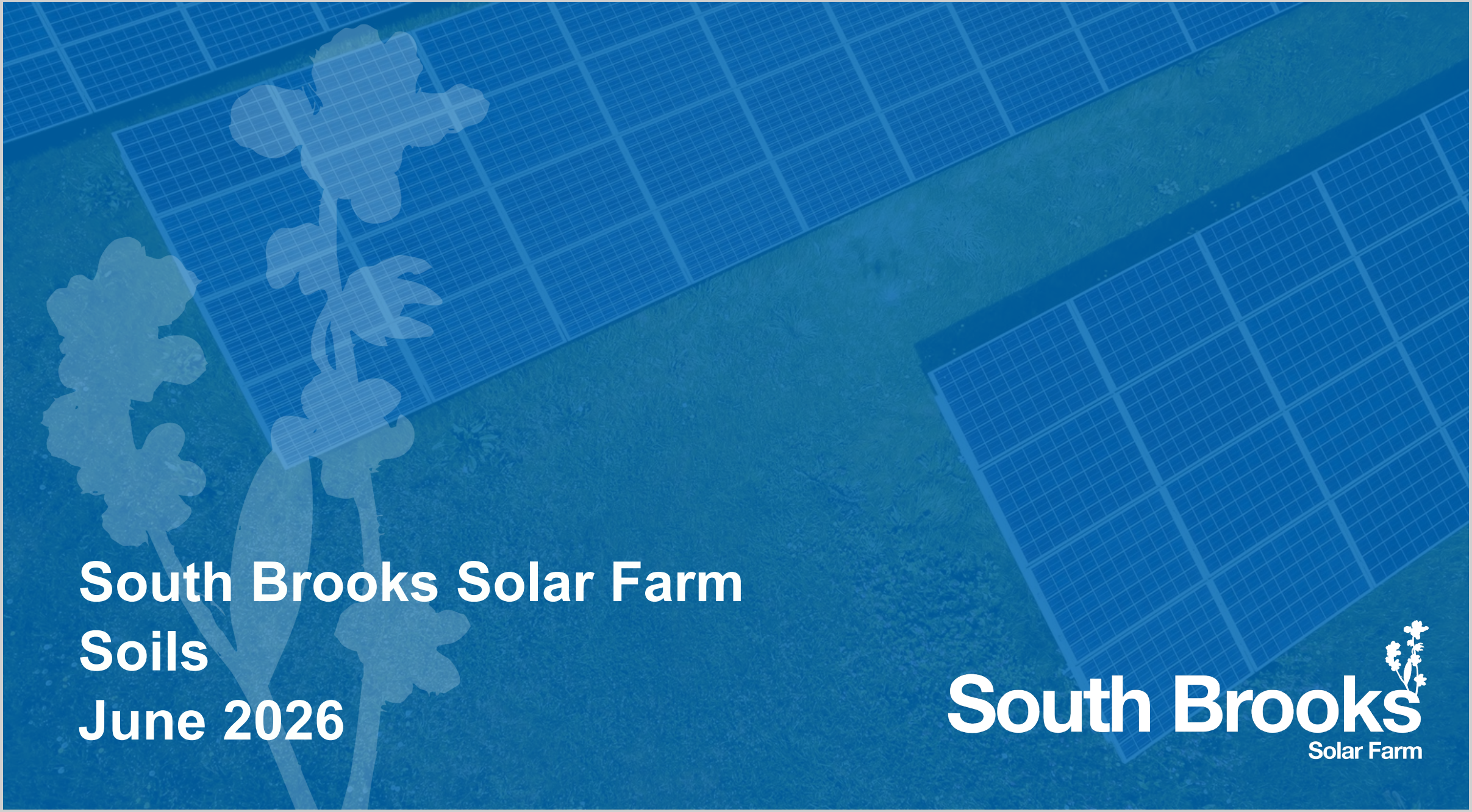

South Brooks Solar Farm
Soils
June 2026

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Agenda

- Introduction and housekeeping
- Feedback received to date and common misconceptions
- Approach to the assessment
- Outcomes of the assessment
- Further work needed for the Environmental Statement
- Q&A

Introduction

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Housekeeping

- All questions should be submitted via Q&A function of this webinar.
- Unless asking for a clarification, questions will be taken following the presentation in the dedicated Q&A part of the webinar. However, you are welcome to submit questions during the presentation.
- This webinar is being recorded for the purposes of a recording to be made available on the website, for reporting on the consultation and providing summaries of the Q&A discussion.
- The slides from this webinar will be available on the project website (www.southbrookssolarfarm.co.uk), along with a summary of the Q&A discussion, following the webinar.

How to use the Q&A function to ask a question

1. Click the Q&A button on the bottom toolbar.
2. Submit Question: Type your question into the text box.
3. Anonymity: Check the "Send Anonymously" box if you do not want your name attached.
4. View Answers: The Q&A window will show your question, replies, and if the moderator plans to "answer live."

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Introduction

Jay Ryan

- Bachelors of Soil Ecology
- Honours of Soil Science
- Masters of Environmental Policy and Economics
- UK's representative on the International Soil Classification Group
- 20 DCO Projects completed

Simon McMillan

- British Society of Soil Science Full Member
- Basis Soil and Water and FACTS
- Over 30 years of soil and agriculture experience
- ALC specialist and delivery lead

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What is the South Brooks project?

- Planned solar farm, approximately 1225 ha in size.
- South Brooks would have an operational lifespan of 60 years.
- The land will be returned to agricultural use following decommissioning as a condition of the DCO.
- Agricultural Land Classification surveys undertaken across site.
- Two soils-related receptors: **Agricultural land quality and soil structure** .

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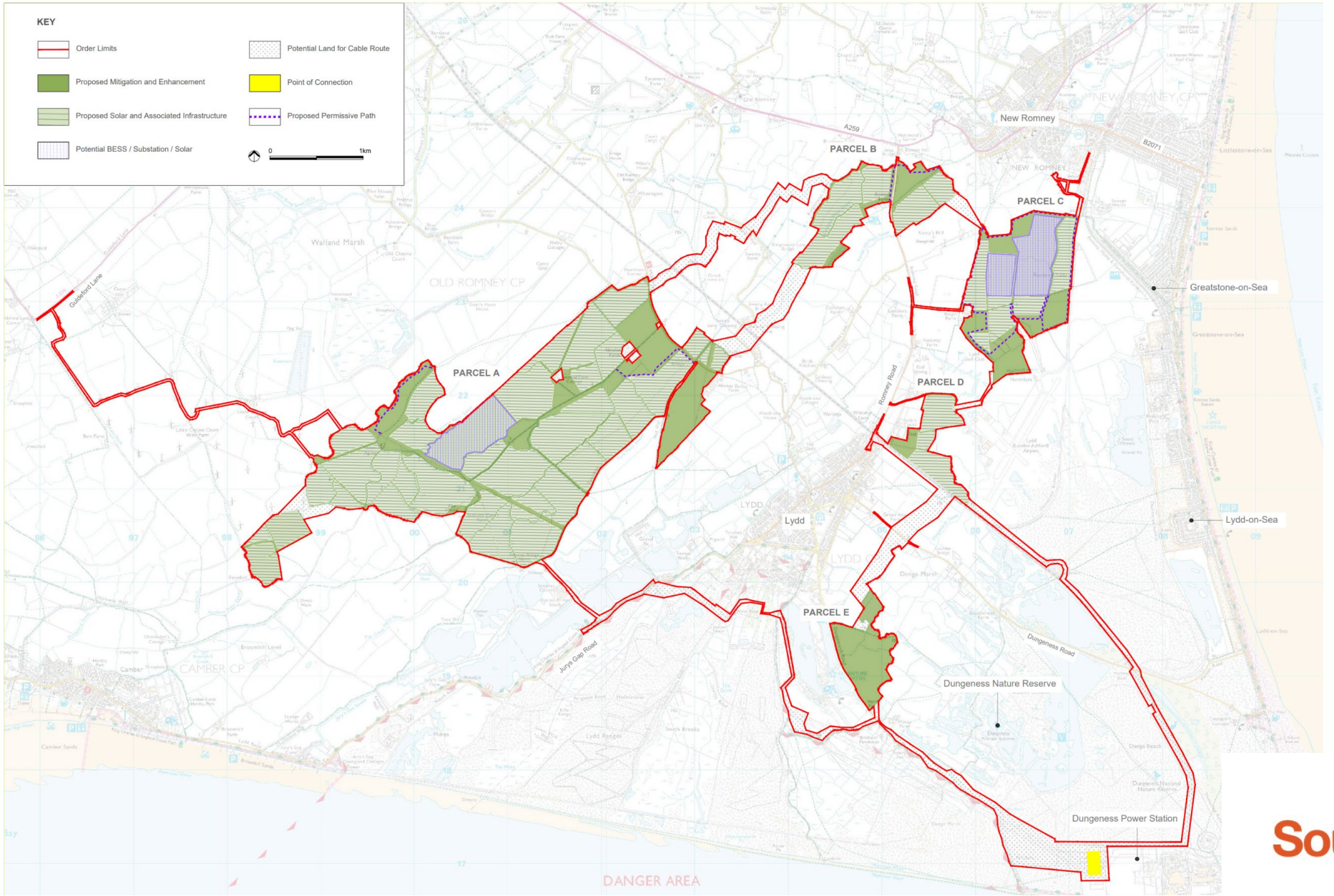
Phase Two Consultation Masterplan



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Feedback received to date and common misconceptions about Soils and Agriculture

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Feedback received to date

- ALC surveys are to be completed following the 2025 Defra ALC guidance with an appropriate collection method.
- Land should be classified as either temporary or permanent and justification for BMV land take should be provided.
- BMV land should be avoided where possible. If land take of BMV is unavoidable then the worst possible land will be used for development e.g. Grade 2 over Grade 1.
- The proximal location to the coast should be considered within the baseline and drainage assessment.
- A soil management plan should be produced, and Natural England should be consulted with.
- Monitoring, mitigation and how these measures will be secured needs to be identified within the ES.
- Impacts of piling during construction should be considered within the ES.

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Common misconceptions about the South Brooks Proposed Development

Misconception 1: Soil Degradation

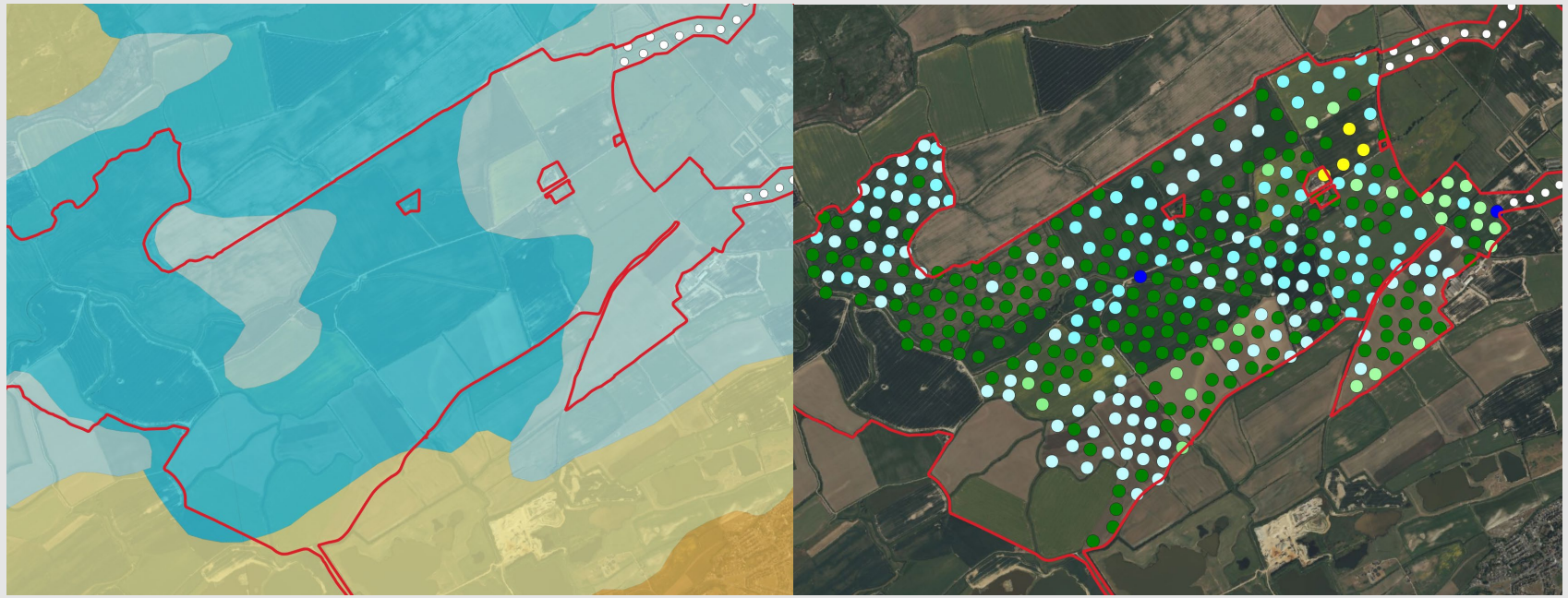
Soil degradation is certain

Misconception 2: Grading

Higher quality grades are harder to manage/develop

Misconception 3: Provisional Mapping

Provisional mapping of the area is always accurate, and should be representative of the study area



Left: Provisional ALC grading, Right: Actual surveyed ALC grades

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Common misconceptions about the South Brooks Proposed Development

Misconception 3

- Provisional ALC mapping inaccuracies – Climate/Soil data
- Independent data collection is more reliable – local variability captured
- Cranfield Environment and Agrifood (2025): “The most detailed survey will usually represent the most definitive ALC grading”
- If provisional ALC was relied upon then BMV land more likely to be utilized for development.

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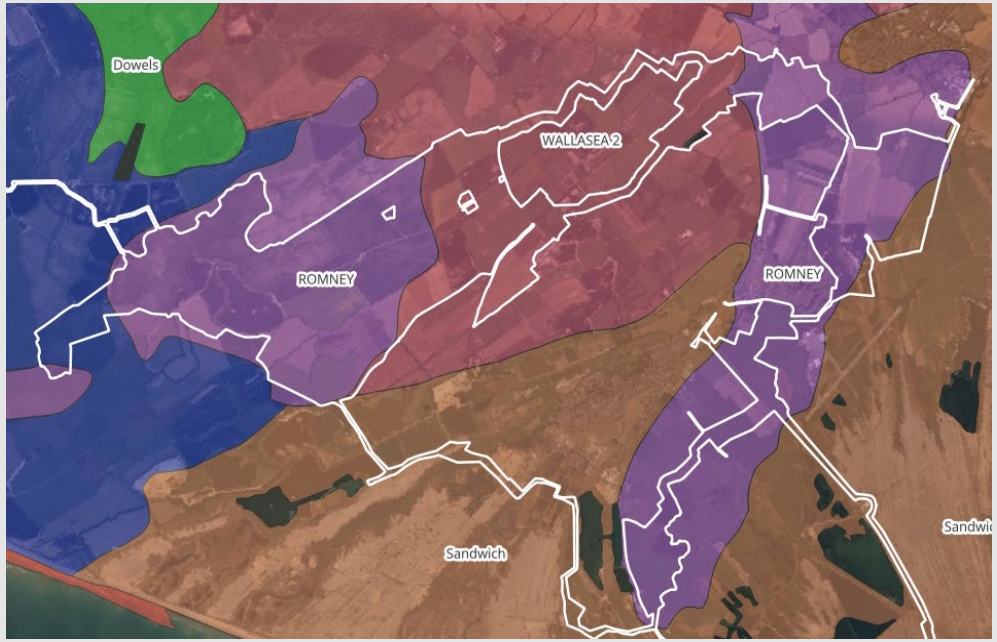

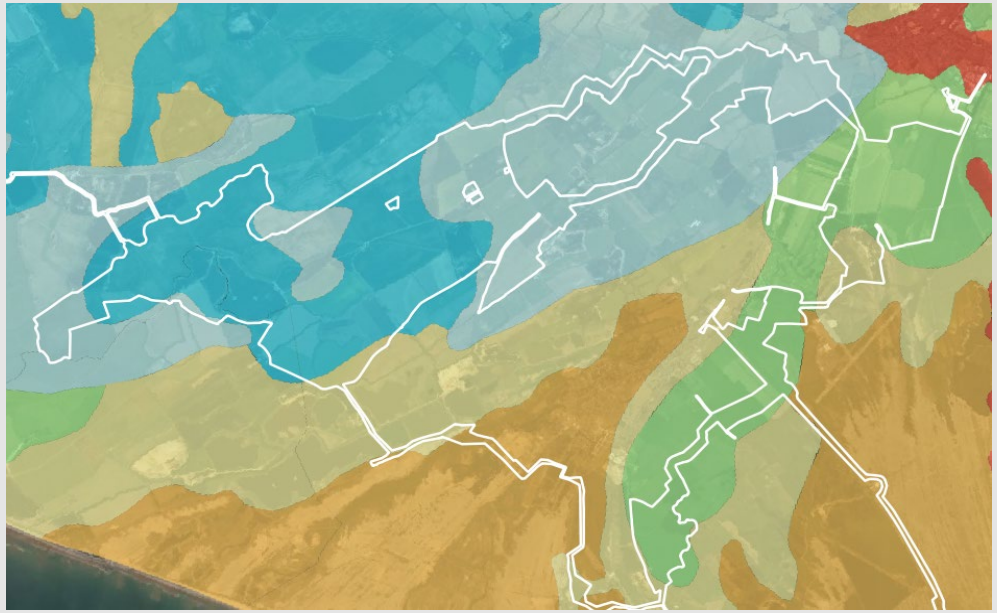

National Soil Map vs Provisional ALC Grading

The Provisional ALC grading of the land closely follows the National Soil Map.

Soils at South Brooks are mostly mapped as Romney Soil Association, typically silt loam or silty clay loam in texture (Landis).

Romney mapped land in Area A is mostly Provisionally mapped as Grade 1 quality.

Any major differences in true soil type at a location can result in a significant difference between Provisional grading and a full ALC survey grading.

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Provisional ALC Inaccuracies

Laboratory PSD results and surveyor hand texturing of topsoil within Romney mapped land at South Brooks Area A shows that the topsoil is mostly heavy clay loam (HCL) or clay (C) textured.

These data show that the soil to the west of Area A is not typical of Romney Association soil.

Table 6 in the *ALC Guidelines of England and Wales,1988*, shows that this land cannot be Grade 1, as there is a soil wetness limitation to at least Grade 2 for all soils at this location (136 FCD) with HCL or clay topsoil.

(FCD = Field Capacity days, a measure of the average number of days annually that soils are at field capacity).

Agricultural Land Classification of England and Wales

Table 6 Grade according to soil wetness - mineral soils

Wetness Class	Texture[1] of the top 25 cm	Field Capacity Days <126	126-150	151-175	176-225	>2
	S^2 LS^3 SL SZL	1	1	1	1	2
	ZL MZCL MCL SCL	1	1	1	2	3a
I	HZCL HCL	2	2	2	3a	3b
	SC ZC C	3a(2)	3a(2)	3a	3b	3b
	S^2 LS^3 SL SZL	1	1	1	2	3a
	ZL MZCL MCL SCL	2	2	2	3a	3b
II	HZCL HCL	3a(2)	3a(2)	3a	3a	3b
	SC ZC C	3a(2)	3b(3a)	3b	3b	3b
	S^2 LS SL SZL	2	2	2	3a	3b
	ZL MZCL MCL SCL	3a(2)	3a(2)	3a	3a	3b
III	HZCL HCL	3b(3a)	3b(3a)	3b	3b	4
	SC ZC C	3b(3a)	3b(3a)	3b	4	4
	S^2 LS SL SZL	3a	3a	3a	3b	3b
	ZL MZCL MCL SCL	3b	3b	3b	3b	3b
IV	HZCL HCL	3b	3b	3b	4	4
	SC ZC C	3b	3b	3b	4	5
	S LS SL SZL	4	4	4	4	4
	ZL MZCL MCL SCL	4	4	4	4	4
V	HZCL HCL	4	4	4	4	4
	SC ZC C	4	4	4	5	5

Soils in Wetness Class VI - Grade 5

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Provisional ALC Inaccuracies

Cranfield Environment and Agrifood (2025):"The most detailed survey will usually represent the most definitive ALC grading".

The Provisional ALC Map relied on 'reconnaissance level' (broad brush) field surveys and the data was never intended for field scale or individual site assessment.

An ALC survey provides a far more detailed assessment of the true quality of the land at a field scale, with a minimum of one survey per hectare. They also provide a far more accurate picture of the soil types within a site and will pick up errors in the original Soil Map of England and Wales for the specific location assessed.

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Approach to assessment

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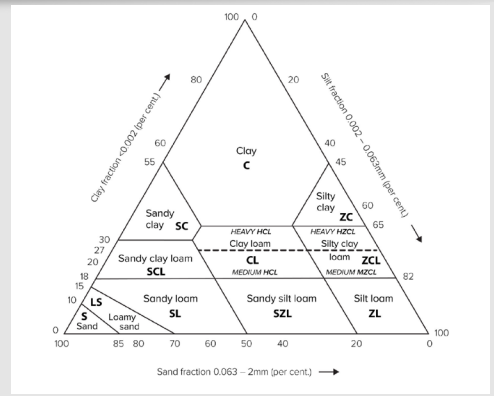
Approach to ALC assessment

In producing an ALC, the following assessments will be undertaken:

- A desk study of published information on geology, soils, any relevant previous ALC surveys undertaken and climatic conditions.
- An assessment of site limitations and soils are examined via a combination of auger borings and soil description pits.
- Survey density is set at 1 auger per ha according to the Agricultural Land Classification guidance.
- Soil pits are dug and topsoil samples from each pit are submitted to NRM laboratories.



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Approach to ALC assessment Continued

Grade	Agricultural Land Quality
1	Excellent
2	Very good
3a	Good
3b	Moderate
4	Poor
5	Very poor

*Grades 1,2 and 3 = BMV (Best and most versatile) land

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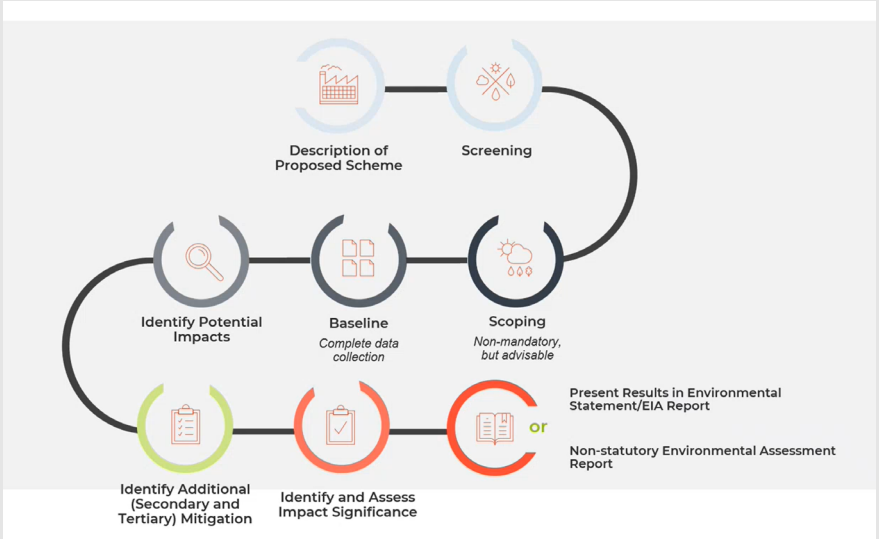
Approach to EIA assessment

In producing an EIA the following assessments will be undertaken:

- Screening – Used to determine whether a full assessment is needed
- Scoping – To identify which impacts are relevant
- Baseline Site conditions are established
- Identifiy potential impacts
- Identification of mitigation relevant (oSMP, CEMP)
- Assessment of significance (see next slide)



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Approach to EIA assessment (Continued)

- Receptors are identified– e.g. soil structure and agricultural land quality
- The receptor sensitivity is identified (e.g. negligible – very high)
- The magnitude of the impact is then quantified (e.g. large-negligible) – Depending on area affected, permanency and potential improvement to soil function.
- Significance – each effect must be characterised as significant/not significant.
- Mitigation, future baseline conditions, planning

Nature of Receptor (sensitivity/value/importance)	Nature of Impact (magnitude/probability/reversibility)				
	No Change	Negligible	Small	Medium	Large
Very High	Negligible	Minor	Moderate or Major	Major	Major
High	Negligible	Minor	Minor or Moderate	Moderate or Major	Major
Medium	Negligible	Negligible	Minor	Moderate	Moderate or Major
Low	Negligible	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
Negligible	Negligible	Negligible	Negligible or Minor	Negligible or Minor	Minor

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Approach to Soil Management Plan

In producing an SMP the following assessments will be undertaken:

- Details of best practice soil handling for construction, operation and decommissioning are outlined within plan
- Mitigation strategies aim to identify the impact on soil from the development and protect soil resources.

Mitigation strategies
Confine traffic movement to designated routes
Store soil for as short a time as possible
Topsoil stripping depth established for areas of hard infrastructure
Maintain access tracks
Add/remove vegetation

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Outcomes of the assessment

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Outcome from the PEIR assessment

Construction: Moderate adverse (significant) effect on higher quality land, slight adverse (not significant) effect on lower quality land and soil structure

Operation: Moderate adverse (significant) effect on higher quality land, slight adverse (not significant) effect on lower quality land, slight beneficial effect on soil structure

Decommissioning: Slight adverse (not significant) effect on all receptors

Key mitigation strategies will be detailed in documents like the Outline Construction Environmental Management Plan and Outline Soil Management Plan submitted as part of the DCO Application.

An early version of the Outline Construction Environmental Management Plan has been published as part of this consultation, and we would welcome your feedback on its contents.

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ALC Results

- At the current time, 1009 augers and 19 soil pits have been completed.
- Surveys were concluded in June 2026 and data are still being assessed and reviewed.
- Auger sampling was originally conducted every 2 ha. A full survey at the rate of 1 per ha is now complete.
- Preliminary grades are mostly Grade 2 and Subgrade 3a.
- Preliminary findings are that over 85% of the site is of BMV quality, although none of the land is of Grade 1 quality.

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Further work needed for the Environmental Statement

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Further work needed for the Environmental Statement

- The ALC survey will be completed in July
- Meetings with Natural England will be scheduled to discuss the ALC grading, and assessment results.
- An Outline Soil Management plan for the Proposed Development will be drafted, and further discussions will take place with Natural England.

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Thank you and Q&A

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Summary of Q&A discussion

Q: Depending on what time of year soil surveys are done on the Marsh, soils will show some level of droughtiness and some level of wetness. This does not seem to prevent the farming of highest quality crops such as milling wheat which can only be grown in certain soils and locations like grade 1 and 2 land on Romney Marsh. Does the ALC metrics used to understand the quality of the land take into account a history of crop types and yields and also field drains and the marsh drainage regime? If not, does that mean that the results are not entirely accurate?'

A: Under the ALC methodology, wetness and droughtiness are not assessed according to the weather conditions on the day or season of the survey. They are intended to represent the long-term physical limitation of the soil, derived from soil profile characteristics and standardised climate datasets. Wetness and droughtiness calculations therefore do not change with the day or season of the survey.

The ALC system does not take into account crop yield history, as explained in the guidance: *"Site specific crop yield data are not regarded as a reliable indication of land quality, because it is not possible to consistently make allowances for variables such as management skill, different levels of input and short-term weather factors"* (Defra, 2025. Agricultural Land Classification of England and Wales: Guidelines for grading the quality of agricultural land, p. 6).

The ALC system was deliberately designed to produce a consistent and nationally comparable assessment of agricultural land quality. To achieve that consistency, it relies on measurable physical factors such as climate, soil texture, soil structure, wetness, droughtiness and flood risk, rather than farm-specific yield records which can be heavily influenced by management, crop choice, cultivations, fertiliser inputs and annual weather conditions.

In regards to drainage, the ALC system *"assumes that soils have an appropriate underdrainage system and that there are satisfactory outfalls."* (Defra, 2025. Agricultural Land Classification of England and Wales: Guidelines for grading the quality of agricultural land, p. 41).

The fact that high-value crops such as milling wheat are successfully grown on parts of Romney Marsh is consistent with the presence of substantial areas of high-quality agricultural land. However, the ALC grade of a particular field is determined using the nationally prescribed methodology and reflects the long-term physical characteristics of the land rather than its recent cropping history or recorded yields. The methodology is designed to provide a consistent and objective assessment of agricultural land quality across England and Wales.

For more information on ALC methodology, see: https://publications.naturalengland.org.uk/publication/6257050620264444

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Summary of Q&A discussion

Q: 'What measures must be taken to manage the soils over the 60 year lifetime of the project to ensure soil compaction is avoided throughout the site, existing soil health is enhanced from its current levels and that the soil does not suffer from chemical leaching? Do soil surveys include setting a baseline for current pH type, organic matter, microbial biomass, structure, drainage, electrical conductivity (salinity), and nutrient levels to ensure these are monitored and improved over the decades?'

A: Soil protection measures would be secured through the Soil Management Plan, and are expected to include controls such as the use of designated access routes, temporary trackways or matting where required, the use of appropriate low ground-pressure vehicles and plant, and restrictions on soil handling or vehicle movements during periods when soils are excessively wet and therefore most susceptible to structural damage and compaction.

Following construction, the Project would generally maintain a permanent grass sward beneath and around the solar arrays. Subject to the final land management strategy, this may also include grazing. Such management typically results in substantially reduced soil disturbance compared with intensive arable cultivation and may benefit certain soil health indicators, including soil structure, soil organic matter and biological activity.

The principal soil risks associated with solar development relate to physical disturbance of the soil resource during construction, rather than chemical contamination during operation. There is no routine operational process associated with the solar PV arrays that would be expected to result in significant chemical leaching to soils.

Baseline soil surveys undertaken for Agricultural Land Classification (ALC) purposes focus on soil and site characteristics relevant to agricultural land quality, including soil texture, structure, depth, stoniness, drainage characteristics, wetness and droughtiness.

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Summary of Q&A discussion

Q: Do you have any examples of how land under solar panels or energy infrastructure for more than a decade or more has been returned successfully to its original quality and use?

A: There are currently limited examples in the UK of large modern solar farms that have operated for more than a decade, been decommissioned and then returned to agricultural production for an extended period. This is because most large-scale solar developments have only been constructed within the last 10–15 years.

However, on a typical solar farm, agricultural land is not permanently sealed beneath solar panels, and the underlying soil resource generally remains in place throughout the operational life of the project. Restoration measures include the removal of infrastructure, the remediation of any compaction, and a return to agricultural management.

While long-term post-decommissioning evidence is inevitably limited, there is also no established body of evidence demonstrating that appropriately constructed and managed solar farms result in permanent degradation of soil quality such that land cannot subsequently be restored to agriculture. Where soil resources are protected in accordance with a Soil Management Plan and restored appropriately, the effects are generally regarded as reversible. Furthermore, it is worth considering that reduced cultivation, in conjunction with measures such as the establishment of grass wards and grazing, can lessen the disturbance of soil structure, increase organic matter inputs and improve biological activity.

Summary of Q&A discussion

Q: How can you justify putting solar panels on best and most versatile agricultural land?

A: Site selection for solar developments requires a balance of factors, including proximity to suitable grid infrastructure, environmental constraints, land availability and technical feasibility. Agricultural land quality is an important consideration within this process, but it is not the only determining factor. Furthermore, national policy does not prohibit solar development on BMV land. The National Policy Statement for Renewable Energy Infrastructure (EN-3) states that, where agricultural land is required, poorer quality land should be preferred to higher quality land, but the policy also recognises the urgent national need for renewable energy infrastructure.

The Project would represent a temporary (because it is time limited) and reversible use of the land. Unlike permanent built development, the underlying soil resource would remain in place and, following decommissioning, the land would be restored to agriculture in accordance with the soil management measures to be outlined in the Soil Management Plan.

In considering the significance of effects on agricultural land resources, it is also relevant that BMV agricultural land is widespread within Romney Marsh. While BMV land is an important resource, it is not locally scarce, and this context is taken into account when considering the sensitivity of the agricultural land resource and the significance of any effects.

Webinars

Webinar	Date
Taking part in the consultation	28 May
Water	4 June
Transport	10 June
Landscape and visual	17 June
Battery safety	18 June
Soils	25 June
Ecology	1 July

All webinars take place between 6-7pm on the above dates.
To register, please visit the project website: www.southbrookssolarfarm.co.uk.
All recordings of previous webinars are now on the above website.

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