

**LAND AT LANGLEY BOTTOM FARM,
EPSOM**

**AGRICULTURAL LAND
CLASSIFICATION
AND CONSIDERATIONS**

December 2025





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*Greenacres Barn, Stoke Common Lane, Purton Stoke, Swindon SN5 4LL
T: 01793 771333 Email: info@kernon.co.uk Website: www.kernon.co.uk*

*Directors - **Tony Kernon** BSc(Hons), MRAC, MRICS, FBIAC **Sarah Kernon**
Consultant - **Ellie Clark** BSc(Hons) **Dan Miller** BSc(Hons)*

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1 INTRODUCTION

1.1 This report considers the agricultural land quality of a parcel of land extending to approximately 10.4 ha at Langley Bottom Farm, Epsom (the Site), and reviews that in the context of relevant policy governing development of agricultural land.

1.2 The Site comprises one field, shown edged in red on the aerial image below.

Insert 1. The Site (boundary approx.) (Google Earth)



1.3 A detailed Agricultural Land Classification (ALC) survey has been carried out over the Site. The Site is recorded as Subgrades 3a and 3b land quality.

1.4 This report:

- (i) reviews the relevant planning policy and Guidance in section 2;
- (ii) describes the Site and the ALC survey findings in section 3;
- (iii) assesses the findings against policy in section 4; and
- (iv) ends with a summary and conclusions in section 5.

1.5 This report has been prepared by Kernon Countryside Consultants Ltd. We specialise in assessing the effects of development proposals on agricultural land and businesses.

2 RELEVANT PLANNING POLICY AND GUIDANCE

National Planning Policy Framework

- 2.1 The National Planning Policy Framework (NPPF) (2024) paragraph 187 notes that planning policies and decisions should contribute to enhance the natural and local environment by, inter alia, recognising **“the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land”**.
- 2.2 The best and most versatile (BMV) agricultural land is defined in Annex 2 of the NPPF as land which is of Grade 1, 2 and Subgrade 3a of the Agricultural Land Classification (ALC)¹.
- 2.3 Paragraph 188 of the NPPF discusses plan making. It requires plans to, inter alia, allocate land with the least environmental or amenity value, where consistent with other policies in the Framework. Footnote 65 of the NPPF identifies that **“where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality”**.
- 2.4 There is no definition of what constitutes “significant” development. However, the “Guide to assessing development proposals on agricultural land” (Natural England, February 2021) (**Appendix KCC1**) advises local planning authorities to **“take account of smaller losses (under 20 ha) if they’re significant when making your decision”**, suggesting that 20 ha is a suitable threshold for defining “significant” in many cases.

Local Plan

- 2.5 The Local Plan comprises policies in the Core Strategy (2007) and the Development Management Policies Document (2015). Page 64 of the Development Management Policies Document identifies that the objectives of agricultural land policy are met by policies DM1, DM2 and national planning policy. Neither DM1 nor DM2 reference agricultural land, so policy is as set out in the NPPF.

¹ Agricultural Land Classification of England and Wales: revised guidelines and criteria for assessing the quality of agricultural land, MAFF (October 1988).

Guidance

- 2.6 Natural England's "Guide to Assessing Development Proposals on Agricultural Land" (February 2021) describes the ALC process and sets out guidance on managing soils. It advises on the consultation process where more than 20 ha of BMV land is involved.
- 2.7 The Institute of Sustainability and Environmental Professionals (ISEP, formerly IEMA) produced a Guide "A New Perspective on Land and Soil in Environment Impact Assessment" in February 2022. Whilst this refers to EA development, it identifies in table 3 (page 49) the magnitude of the impacts on soil resources. Losses of under 5 ha are defined as minor magnitude losses, and losses of 5 – 20 ha as moderate magnitude losses.

3 AGRICULTURAL LAND QUALITY OF THE SITE

The ALC System

- 3.1 The Agricultural Land Classification (ALC) system provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long term limitations on the agricultural use of the site. The ALC system divides agricultural land into five grades. Grade 1 of the ALC is described as being of excellent quality and Grade 5, at the other end of the scale, is described as being of very poor quality. The current guidelines and criteria for the ALC were published by the Ministry of Agriculture, Fisheries and Food (MAFF) in 1988.
- 3.2 The ALC system is further described in Natural England's Technical Information Note TIN049 which is reproduced in **Appendix KCC2**.

Detailed ALC Survey Results

- 3.3 A detailed ALC survey was carried out on the 22nd April 2025 across the Site. 7 auger point inspection sites were examined on a regular 100m grid, using a spade and soil auger to a maximum depth of 120cm where possible.
- 3.4 One soil pit was dug to measure the stoniness and to better describe the soil profiles. Two samples were sent for laboratory analysis for the fractions of sand, silt and clay.
- 3.5 A detailed ALC report is set out in **Appendix KCC3**.
- 3.6 The results of the survey are provided in the table below.

Table 1. ALC Results

ALC Grade	Area (Ha)	Proportion (%)
Subgrade 3a	5.2	50
Subgrade 3b	5.1	49
Non-agricultural	0.1	1
Total	10.4	100

- 3.7 The distribution of grading can be seen on the extract of the ALC plan below. The full plan can be found at the back of the report referenced **Plan KCC3946/02**.

Insert 2. Extract from the ALC Plan



- 3.8 The Site is a mixture of Subgrades 3a and 3b. The distribution of the Subgrade 3a, which is BMV, is complex with the 5.2 ha divided into two parcels on the eastern and western sides of the field, with the central area comprising land of poorer quality.

4 POLICY ASSESSMENT

- 4.1 The NPPF (2024) sets out that the economic and other benefits of BMV land need to be recognised. In plan making terms the NPPF sets out that, where significant development of agricultural land is involved, poorer quality land should be used in preference. Therefore we consider the economic and other benefits then go on to consider the plan-making considerations.

The Economic and Other Benefits of BMV

- 4.2 The NPPF (2024) does not prevent development of BMV land. It requires only that the economic and other benefits of BMV land be recognised.
- 4.3 There is no research available that we are aware of that seeks to analyse the productive economic advantages of BMV to non-BMV land.
- 4.4 In the absence of any empirical data, an economic assessment is inevitably crude. Taking standard budgeting textbooks, such as the Nix Farm Management Pocketbook (extracts which have been reproduced in **Appendix KCC4**), it is possible to show the difference between moderate and high yields as an illustration between crops.
- 4.5 Taking that crude measure and applying it to winter wheat and oilseed rape, the differences are shown below.

Table 2. Assessment of Economic of Farmed Land

Item	Winter Wheat		Oilseed Rape	
	Average	High	Average	High
Yield (t/ha)	8.2t/ha	9.4t/ha	3.5t/ha	4.0t/ha
Output (£)	£1,667/ha	£1,889/ha	£1,435/ha	£1,640/ha
Gross Margin (£)	£988/ha	£1,210/ha	£825/ha	£1,030/ha
Uplift (£)	-	£222/ha	-	£205/ha

Nix Farm Management Pocketbook, September 2025

- 4.6 Based on this, the economic benefits of the 5.2 ha of BMV land to non-BMV land would be around £1,150 per annum (£1,066 - £1,154 based on 2026 budgets). Hence the economic benefits of a land parcel of this size are very limited. They represent an incremental production benefit of 6.2 tonnes per annum of wheat (5.2 ha BMV x 1.2 t/ha) or 2.6 t/annum of oilseed rape.

- 4.7 Therefore, for development management purposes, the economic and other benefits of BMV have been recognised and quantified, and these will need to be considered in the overall planning balance.

Whether this is “Significant” Development

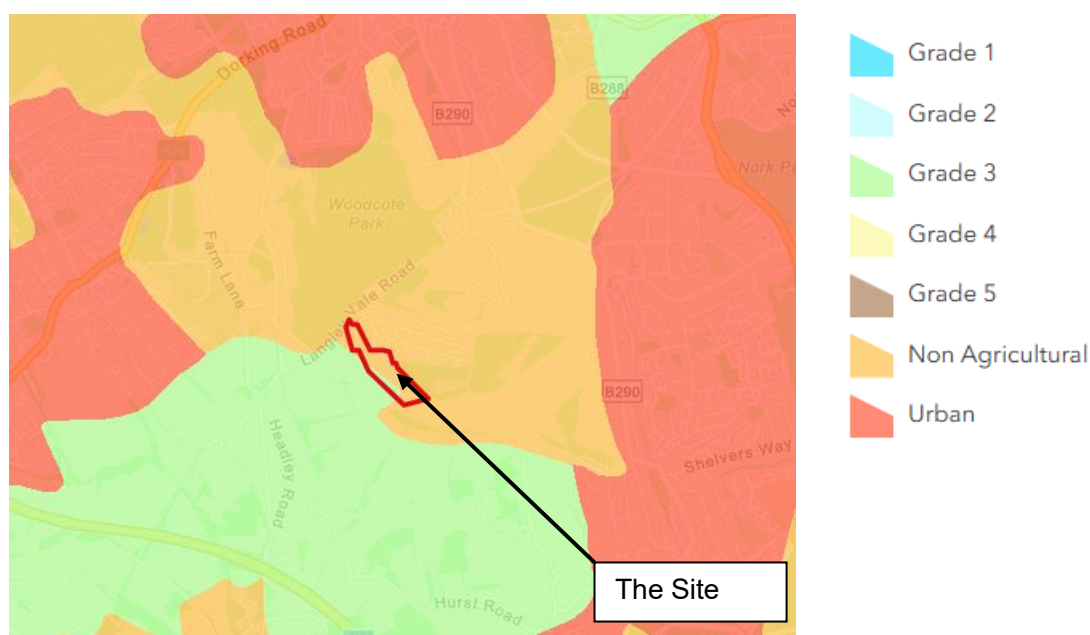
- 4.8 This proposal falls below the threshold for consultation with Natural England and is therefore arguably not “significant” development of agricultural land in the context of the NPPF.
- 4.9 Footnote 65 to paragraph 188 of the NPPF considers whether poorer quality land is available. This footnote is to paragraph 188, which is a plan making policy paragraph. Setting that aside, the trigger for an assessment of poorer quality land is that the proposal involves “**significant development of agricultural land**”. “**Significant Development**” is not defined in the NPPF. One threshold for determination of what is significant is the threshold for consultation with Natural England, which is set at the loss of 20ha or more of BMV land (as can be seen in the TIN049 in **Appendix KCC2**). This has been the threshold for consultation with MAFF since 1987.
- 4.10 At 5.2 ha the quantum of BMV within the Site is only 26% of the threshold for consultation with Natural England. Therefore, this quantum is not “significant development”.
- 4.11 The “Guide to assessing development proposals on agricultural land” (Natural England, 5th February 2021) (**Appendix KCC1**) does not define a threshold but does provide some guidance. This adds to our view that 20ha is a reasonable threshold for defining what is significant development:
- paragraph 6 states “**you should take account of smaller losses (under 20ha) if they are significant when making your decision**”, which suggests that losses of under 20ha would not be significant unless there are particular local circumstances. What those particular local circumstances are, is not defined but it would be reasonable consider that the loss of 20ha may be significant in an area where BMV land is rare, for example. That is not the case at this Site, where the predictive maps have a large proportion of the area as >60% BMV quality; and
 - paragraph 7.1 states that you can use Natural England’s chargeable discretionary advice system “**if your proposal is large, for example 20ha or more, and requires more detailed advice**”. The definition of large as being more than 20ha suggests that a site under 20ha is considered small, and hence, not significant.

- 4.12 This is not significant development of BMV land. Therefore, the requirement to consider if poorer quality land is available, under footnote 65, is not triggered. For completeness, however, we now turn to assess that.

Land Quality in the Area Generally and Whether Poorer Quality Land is Available

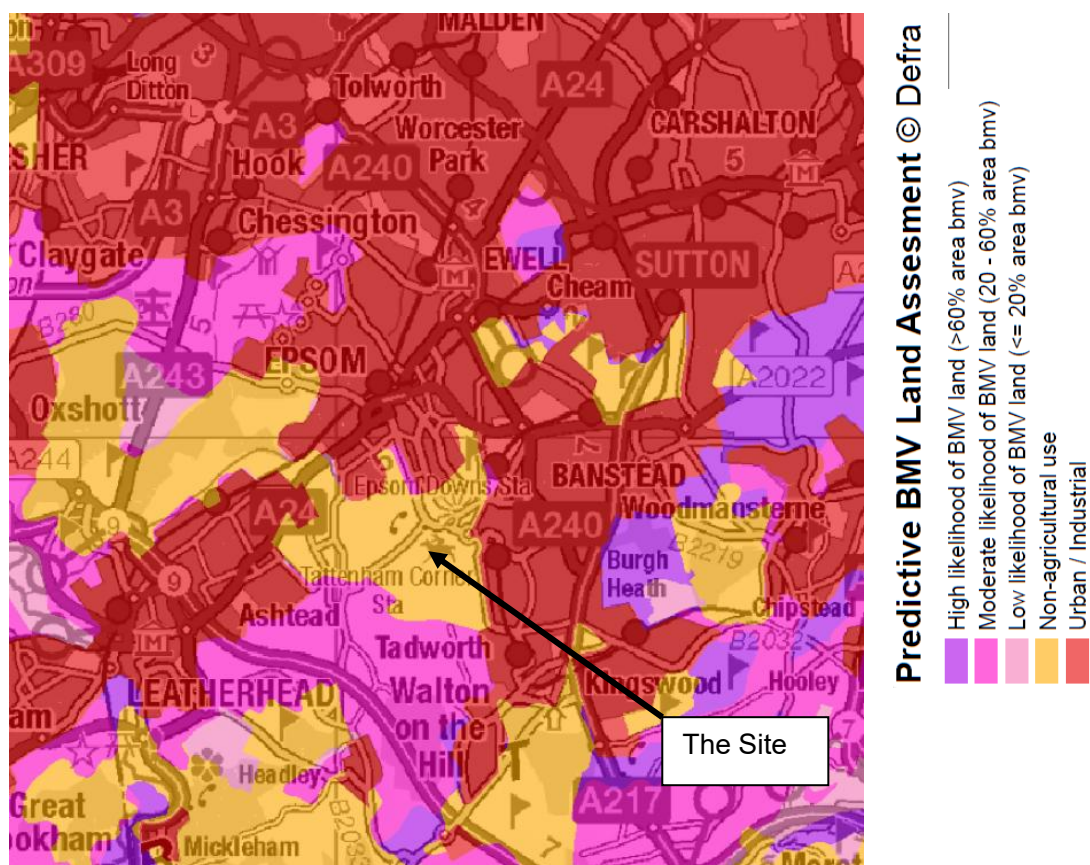
- 4.13 The significance of development involving agricultural land needs to be considered in context. Across England it is estimated that 42% of farmland is of Grade 1, 2 and 3a quality (see TIN049, **Appendix KCC2**).
- 4.14 The Utilised Agricultural Area (UAA) of England, which is less than the total amount of agricultural land, was 8.7 million hectares in June 2024 (Agricultural Land Use in England on 1 June 2024, DEFRA, 26 September 2024). This suggests that about 3.7 million hectares of BMV land is in active agricultural use.
- 4.15 Statistically about 40% of Grade 3 land falls within Subgrade 3a. However, in parts of the country the proportion of Subgrade 3a is expected to be much higher.
- 4.16 Therefore, it is not considered that BMV quality is a rare resource.
- 4.17 On the published “provisional” ALC maps from the 1970s the land is shown as undifferentiated Grade 3 and non-agricultural land, as is most of the land around the settlement.

Insert 3. Provisional ALC Map



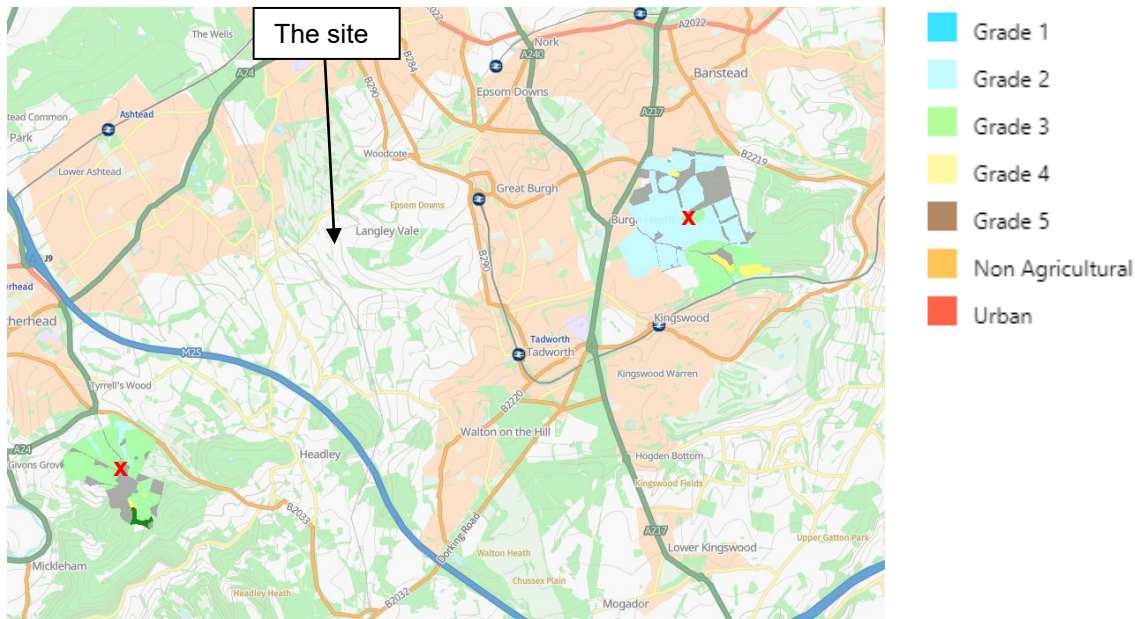
- 4.18 The provisional maps were published at a scale of 1:250,000 and can only be used for strategic purposes, as described in TIN049 (**Appendix KCC2**). In 2017 Natural England produced predictive best and most versatile maps. These estimate the proportion of land within an area that is of BMV quality. There are three categories which are low (<20% area BMV), moderate (20-60% area BMV), and high (>60% area BMV).
- 4.19 The predictive BMV likelihood maps predict that the land is non-agricultural land. This can be seen on the predictive map below.

Insert 4. Predictive BMV Map



- 4.20 The provisional maps do not identify any land of lower agricultural quality in the area.
- 4.21 Where sites have been surveyed in the past, mostly by MAFF or its agencies between 1989 and 1995, the results are available on www.magic.gov.uk. As shown below, no sites nearby have been surveyed.

Insert 5. Surveyed Land in the Area



4.22 Therefore there is no evidence of sites of lower quality in the locality.

4.23 Based on this, it can be concluded that, in terms of land quality in the local area:

- (i) the land is shown on provisional mapping as undifferentiated Grade 3 and non-agricultural;
- (ii) the predictive likelihood of BMV maps show that the Site to be located within an area of non-agricultural land;
- (iii) land near to the Site is predicted to be undifferentiated Grade 3, and further afield is predicted to be in the 20-60% likelihood of BMV;
- (iv) therefore there is no evidence of poorer quality land in the wider area.

4.24 The Site itself is a mixture of Subgrade 3a and 3b land quality. In the event that there was a need to consider whether poorer quality land is available, it is evident from the provisional, predictive and surveyed sites that the land around the Site is considered likely to be of a similar quality to that of the Site.

5 SUMMARY AND CONCLUSIONS

- 5.1 The Proposed Development Site extends to 10.4 ha.
- 5.2 The land has been classified as comprising 5.2 ha (50%) of Subgrade 3a, 5.1 ha (49%) Subgrade 3b and 0.1 ha (1%) Non-agricultural land. Therefore, the Site contains some best and most versatile agricultural land. However this is split into two different patches of land with poorer quality land between. In practical terms the better quality land cannot be farmed differently to the poorer quality land.
- 5.3 The NPPF requires economic and other benefits of BMV to be considered. The economic benefits of this Site are limited at around £1,150 per annum over the BMV land, and the food production benefits are negligible, at circa 6 tonnes per annum of wheat.
- 5.4 In terms of the NPPF, this is not “significant development” of agricultural land. Accordingly, poorer quality land does not need to be considered in preference.
- 5.5 Were poorer quality land to be considered, there is no evidence that poorer quality land exists.
- 5.6 Agricultural land quality should not be a constraint to development. The NPPF requires that it be recognised, but does not constrain development which is not significant development, and in any case, there is no evidence that poorer quality land is available.

Appendix KCC1
Natural England's Guide to Assessing
Development Proposals on Agricultural Land



(<https://www.gov.uk/government/organisations/natural-england>)

Guidance

Guide to assessing development proposals on agricultural land

Updated 5 February 2021

Applies to England

Contents

1. Policies to protect agricultural land and soil
2. LPAs: consult Natural England
3. LPAs: how to use agricultural land classification (ALC)
4. About ALC grades
5. LPAs: carry out ALC assessments to support your planning decisions
6. Use ALC to support your planning decisions
7. Developers: check if your proposal affects agricultural land



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This publication is available at <https://www.gov.uk/government/publications/agricultural-land-assess-proposals-for-development/guide-to-assessing-development-proposals-on-agricultural-land>

1. Policies to protect agricultural land and soil

Developers and local planning authorities (LPAs) should refer to the following government policies and legislation when considering development proposals that affect agricultural land and soils. They aim to protect:

- the best and most versatile (BMV) agricultural land from significant, inappropriate or unsustainable development proposals
- all soils by managing them in a sustainable way

Natural England uses these policies to advise on development proposals as a [statutory consultee](https://www.gov.uk/guidance/consultation-and-pre-decision-matters#Statutory-consultees) (<https://www.gov.uk/guidance/consultation-and-pre-decision-matters#Statutory-consultees>) in the planning process.

1.1 A Green Future: Our 25 Year Plan to improve the Environment 2018

[A Green Future: Our 25 Year Plan to Improve the Environment](https://www.gov.uk/government/publications/25-year-environment-plan) (<https://www.gov.uk/government/publications/25-year-environment-plan>) sets out the government's 25-year plan to improve the health of the environment by using natural resources more sustainably and efficiently. It plans to:

- protect the best agricultural land
- put a value on soils as part of our natural capital
- manage soils in a sustainable way by 2030
- restore and protect peatland

1.2 National Planning Policy Framework (NPPF)

LPAs should use the NPPF to make decisions about the natural and local environment to:

- protect and enhance landscapes, biodiversity, geology and soils
- recognise soils as a natural capital asset that provide important ecosystem services
- consider the economic and other benefits of BMV agricultural land, and try to use areas of poorer quality land instead of higher quality land
- prevent soil, air, water, or noise pollution, or land instability from new and existing development

Read [Chapter 15: Conserving and enhancing the natural environment](https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment) (<https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment>) for full details.

1.3 Town and Country Planning (Development Management Procedure (England) Order) (DMPO) 2015

Planning authorities must consult Natural England on all non-agricultural applications that result in the loss of more than 20 hectares (ha) of BMV land if the land is not included in a [development plan](https://www.gov.uk/guidance/national-planning-policy-framework/3-plan-making) (<https://www.gov.uk/guidance/national-planning-policy-framework/3-plan-making>). For example, this includes the likely cumulative loss of BMV land from the proposed development if it's part of a phased development.

This is required by [schedule 4\(y\) of the Order](http://www.legislation.gov.uk/uksi/2015/595/schedule/4/made) (<http://www.legislation.gov.uk/uksi/2015/595/schedule/4/made>).

1.4 Planning Practice Guidance for the Natural Environment

[Paragraphs 001 and 002: Planning Practice Guidance for the Natural Environment](https://www.gov.uk/guidance/natural-environment#brownfield-land-soils-and-agricultural-land) (<https://www.gov.uk/guidance/natural-environment#brownfield-land-soils-and-agricultural-land>) explain why planning decisions should take account of the value of soils and [agricultural land classification \(ALC\)](#) to enable informed choices on the future use of agricultural land within the planning system.

2. LPAs: consult Natural England

You must consult Natural England for development proposals that are both:

- likely to cause the loss (or likely cumulative loss) of 20ha or more of BMV land
- not in accordance with an approved development plan

Natural England will advise you on the level of impact the proposal may have on BMV agricultural land. Natural England will take into account the type of development and its likely long-term effects.

Email consultations@naturalengland.org.uk or write to:

Natural England consultation service
Hornbeam House
Electra Way
Crewe Business Park
Crewe
Cheshire
CW1 6GJ

3. LPAs: how to use agricultural land classification (ALC)

You can use ALC to help inform decisions on the appropriate sustainable development of land.

ALC uses a grading system to enable you to assess and compare the quality of agricultural land in England and Wales.

A combination of climate, topography and soil characteristics and their unique interaction determines the limitation and grade of the land. These affect the:

- range of crops that can be grown
- yield of crop
- consistency of yield
- cost of producing the crop

4. About ALC grades

ALC is graded from 1 to 5.

The highest grade goes to land that:

- gives a high yield or output
- has the widest range and versatility of use
- produces the most consistent yield
- requires less input

BMV agricultural land is graded 1 to 3a.

4.1 Grade 1 – excellent quality agricultural land

Land with no or very minor limitations. A very wide range of agricultural and horticultural crops can be grown and commonly includes:

- top fruit, for example tree fruit such as apples and pears
- soft fruit, such as raspberries and blackberries
- salad crops
- winter harvested vegetables

Yields are high and less variable than on land of lower quality.

4.2 Grade 2 – very good quality agricultural land

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

4.3 Grade 3 – good to moderate quality agricultural land

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

4.4 Subgrade 3a – good quality agricultural land

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

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

4.5 Subgrade 3b – moderate quality agricultural land

Land capable of producing moderate yields of a narrow range of crops, principally:

- cereals and grass
- lower yields of a wider range of crops
- high yields of grass which can be grazed or harvested over most of the year

4.6 Grade 4 – poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops or level of yields. It is mainly suited to grass with occasional arable crops (for example cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties using the land. The grade also includes arable land that is very dry because of drought.

4.7 Grade 5 – very poor quality agricultural land

Land with very severe limitations that restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

5. LPAs: carry out ALC assessments to support your planning decisions

For an overview of ALC use:

- [1:250,000 scale regional ALC maps](http://publications.naturalengland.org.uk/category/5954148537204736) (<http://publications.naturalengland.org.uk/category/5954148537204736>) (grade 3 land is not divided into subgrades 3a and 3b)
- [1:250,000 scale regional maps predicting the likelihood of BMV agricultural land](http://publications.naturalengland.org.uk/category/5208993007403008) (<http://publications.naturalengland.org.uk/category/5208993007403008>)

These maps are not at a scale suitable or accurate for assessment of individual fields or sites.

You can assess if a development proposal is likely to affect BMV agricultural land by using the [post 1988 ALC Magic map](http://magic.defra.gov.uk/MagicMap.aspx?chosenLayers=dudleystampIndex,backdropDIndex,backdropIndex,europaIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=449447:459357:467834:470294&useDefaultbackgroundMapping=false) (<http://magic.defra.gov.uk/MagicMap.aspx?chosenLayers=dudleystampIndex,backdropDIndex,backdropIndex,europaIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=449447:459357:467834:470294&useDefaultbackgroundMapping=false>) and [detailed site survey reports](http://publications.naturalengland.org.uk/category/6249382855835648) (<http://publications.naturalengland.org.uk/category/6249382855835648>).

If no site survey reports are available, a [new detailed survey](#) may be necessary.

6. Use ALC to support your planning decisions

Use ALC survey data to assess the loss of land or quality of land from a proposed development. You should take account of smaller losses (under 20ha) if they're significant when making your decision. Your decision should avoid unnecessary loss of BMV land.

6.1 Protect soil

You should make sure development proposals include plans to:

- [manage soils in a sustainable way during construction](https://www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites) (<https://www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites>)

- avoid peat extraction
- protect soils from contamination
- [reclaim land after mineral working or landfilling](https://www.gov.uk/government/publications/reclaim-minerals-extraction-and-landfill-sites-to-agriculture)
(<https://www.gov.uk/government/publications/reclaim-minerals-extraction-and-landfill-sites-to-agriculture>)

6.2 Carry out new surveys

If there's not enough information from previous data, you may need to have a new field survey to plan for development or to inform a planning decision. You should use soil scientists or experienced soil specialists to carry out new surveys. They should be:

- members of the British Society of Soil Science, the British Institute of Agricultural Consultants or similar professional body
- knowledgeable about the [ALC 1988 guidelines](http://publications.naturalengland.org.uk/publication/6257050620264448)
(<http://publications.naturalengland.org.uk/publication/6257050620264448>)
- experienced in soil description and ALC assessments

6.3 Survey requirements

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

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

They should:

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

7. Developers: check if your proposal affects agricultural land

Use the [post 1988 ALC Magic map](http://magic.defra.gov.uk/MagicMap.aspx?chosenLayers=dudleystampIndex,backdropDIndex,backdropIndex,europeIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=449447:459357:467834:470294&useDefaultbackgroundMapping=false) (<http://magic.defra.gov.uk/MagicMap.aspx?chosenLayers=dudleystampIndex,backdropDIndex,backdropIndex,europeIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=449447:459357:467834:470294&useDefaultbackgroundMapping=false>) and detailed [site survey reports](http://publications.naturalengland.org.uk/category/6249382855835648) (<http://publications.naturalengland.org.uk/category/6249382855835648>) to help you assess whether a development proposal is likely to affect BMV agricultural land. If no suitable data exists, you may need to carry out a [detailed survey](#) to support your planning application.

7.1 Free and chargeable advice

Natural England offers advice for proposals. Some initial advice is free. More [detailed advice is chargeable](https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals#when-you-can-pay-for-agency-advice) (<https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals#when-you-can-pay-for-agency-advice>), for example if your proposal is 20ha or more and requires more detailed advice.

Email: consultations@naturalengland.org.uk

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OGL

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Appendix KCC2
Natural England's Technical
Information Note TIN049

Agricultural Land Classification: protecting the best and most versatile agricultural land

Most of our land area is in agricultural use. How this important natural resource is used is vital to sustainable development. This includes taking the right decisions about protecting it from inappropriate development.

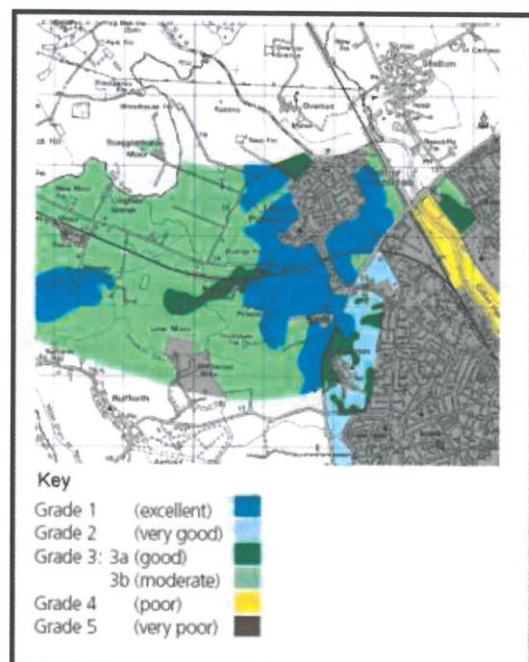
Policy to protect agricultural land

Government policy for England is set out in the National Planning Policy Framework (NPPF) published in March 2012 (paragraph 112). Decisions rest with the relevant planning authorities who should take into account the economic and other benefits of the best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of higher quality. The Government has also re-affirmed the importance of protecting our soils and the services they provide in the Natural Environment White Paper The Natural Choice: securing the value of nature (June 2011), including the protection of best and most versatile agricultural land (paragraph 2.35).

The ALC system: purpose & uses

Land quality varies from place to place. The Agricultural Land Classification (ALC) provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system. It helps

underpin the principles of sustainable development.



Agricultural Land Classification - map and key

Second edition 19 December 2012

www.naturalengland.org.uk



Agricultural Land Classification: protecting the best and most versatile agricultural land

The ALC system classifies land into five grades, with Grade 3 subdivided into Subgrades 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a by policy guidance (see Annex 2 of NPPF). This is the land which is most flexible, productive and efficient in response to inputs and which can best deliver future crops for food and non food uses such as biomass, fibres and pharmaceuticals. Current estimates are that Grades 1 and 2 together form about 21% of all farmland in England; Subgrade 3a also covers about 21%.

The ALC system is used by Natural England and others to give advice to planning authorities, developers and the public if development is proposed on agricultural land or other greenfield sites that could potentially grow crops. The Town and Country Planning (Development Management Procedure) (England) Order 2010 (as amended) refers to the best and most versatile land policy in requiring statutory consultations with Natural England. Natural England is also responsible for Minerals and Waste Consultations where reclamation to agriculture is proposed under Schedule 5 of the Town and Country Planning Act 1990 (as amended). The ALC grading system is also used by commercial consultants to advise clients on land uses and planning issues.

Criteria and guidelines

The Classification is based on the long term physical limitations of land for agricultural use. Factors affecting the grade are climate, site and soil characteristics, and the important interactions between them. Detailed guidance for classifying land can be found in: *Agricultural Land Classification of England and Wales: revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988):

- **Climate:** temperature and rainfall, aspect, exposure and frost risk.
- **Site:** gradient, micro-relief and flood risk.
- **Soil:** texture, structure, depth and stoniness, chemical properties which cannot be corrected.

The combination of climate and soil factors determines soil wetness and droughtiness.

Wetness and droughtiness influence the choice of crops grown and the level and consistency of yields, as well as use of land for grazing livestock. The Classification is concerned with the inherent potential of land under a range of farming systems. The current agricultural use, or intensity of use, does not affect the ALC grade.

Versatility and yield

The physical limitations of land have four main effects on the way land is farmed. These are:

- the range of crops which can be grown;
- the level of yield;
- the consistency of yield; and
- the cost of obtaining the crop.

The ALC gives a high grading to land which allows more flexibility in the range of crops that can be grown (its 'versatility') and which requires lower inputs, but also takes into account ability to produce consistently high yields of a narrower range of crops.

Availability of ALC information

After the introduction of the ALC system in 1966 the whole of England and Wales was mapped from reconnaissance field surveys, to provide general strategic guidance on land quality for planners. This Provisional Series of maps was published on an Ordnance Survey base at a scale of One Inch to One Mile in the period 1967 to 1974. These maps are not sufficiently accurate for use in assessment of individual fields or development sites, and should not be used other than as general guidance. They show only five grades: their preparation preceded the subdivision of Grade 3 and the refinement of criteria, which occurred after 1976. They have not been updated and are out of print. A 1:250 000 scale map series based on the same information is available. These are more appropriate for the strategic use originally intended and can be downloaded from the Natural England [website](http://magic.defra.gov.uk/). This data is also available on 'Magic', an interactive, geographical information website <http://magic.defra.gov.uk/>.

Since 1976, selected areas have been re-surveyed in greater detail and to revised

Agricultural Land Classification: protecting the best and most versatile agricultural land

guidelines and criteria. Information based on detailed ALC field surveys in accordance with current guidelines (MAFF, 1988) is the most definitive source. Data from the former Ministry of Agriculture, Fisheries and Food (MAFF) archive of more detailed ALC survey information (from 1988) is also available on <http://magic.defra.gov.uk/>. Revisions to the ALC guidelines and criteria have been limited and kept to the original principles, but some assessments made prior to the most recent revision in 1988 need to be checked against current criteria. More recently, strategic scale maps showing the likely occurrence of best and most versatile land have been prepared. Mapped information of all types is available from Natural England (see *Further information* below).

New field survey

Digital mapping and geographical information systems have been introduced to facilitate the provision of up-to-date information. ALC surveys are undertaken, according to the published Guidelines, by field surveyors using handheld augers to examine soils to a depth of 1.2 metres, at a frequency of one boring per hectare for a detailed assessment. This is usually supplemented by digging occasional small pits (usually by hand) to inspect the soil profile. Information obtained by these methods is combined with climatic and other data to produce an ALC map and report. ALC maps are normally produced on an Ordnance Survey base at varying scales from 1:10,000 for detailed work to 1:50 000 for reconnaissance survey.

There is no comprehensive programme to survey all areas in detail. Private consultants may survey land where it is under consideration for development, especially around the edge of towns, to allow comparisons between areas and to inform environmental assessments. ALC field surveys are usually time consuming and should be initiated well in advance of planning decisions. Planning authorities should ensure that sufficient detailed site specific ALC survey data is available to inform decision making.

Consultations

Natural England is consulted by planning authorities on the preparation of all development

plans as part of its remit for the natural environment. For planning applications, specific consultations with Natural England are required under the Development Management Procedure Order in relation to best and most versatile agricultural land. These are for non agricultural development proposals that are not consistent with an adopted local plan and involve the loss of twenty hectares or more of the best and most versatile land. The land protection policy is relevant to all planning applications, including those on smaller areas, but it is for the planning authority to decide how significant the agricultural land issues are, and the need for field information. The planning authority may contact Natural England if it needs technical information or advice.

Consultations with Natural England are required on all applications for mineral working or waste disposal if the proposed afteruse is for agriculture or where the loss of best and most versatile agricultural land will be 20 ha or more. Non-agricultural afteruse, for example for nature conservation or amenity, can be acceptable even on better quality land if soil resources are conserved and the long term potential of best and most versatile land is safeguarded by careful land restoration and aftercare.

Other factors

The ALC is a basis for assessing how development proposals affect agricultural land within the planning system, but it is not the sole consideration. Planning authorities are guided by the National Planning Policy Framework to protect and enhance soils more widely. This could include, for example, conserving soil resources during mineral working or construction, not granting permission for peat extraction from new or extended mineral sites, or preventing soil from being adversely affected by pollution. For information on the application of ALC in Wales, please see below.

Agricultural Land Classification: protecting the best and most versatile agricultural land

Further information

Details of the system of grading can be found in: *Agricultural Land Classification of England and Wales: revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988).

Please note that planning authorities should send all planning related consultations and enquiries to Natural England by e-mail to consultations@naturalengland.org.uk. If it is not possible to consult us electronically then consultations should be sent to the following postal address:

Natural England
Consultation Service
Hornbeam House
Electra Way
Crewe Business Park
CREWE
Cheshire
CW1 6GJ

ALC information for Wales is held by Welsh Government. Detailed information and advice is available on request from Ian Rugg (ian.rugg@wales.gsi.gov.uk) or David Martyn (david.martyn@wales.gsi.gov.uk). If it is not possible to consult us electronically then consultations should be sent to the following postal address:

Welsh Government
Rhodfa Padarn
Llanbadarn Fawr
Aberystwyth
Ceredigion
SY23 3UR

Natural England publications are available to download from the Natural England website: www.naturalengland.org.uk.

For further information contact the Natural England Enquiry Service on 0300 060 0863 or e-mail enquiries@naturalengland.org.uk.

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Appendix KCC3
Agricultural Land Classification Report

AGRICULTURAL LAND CLASSIFICATION

1. This section of the report provides the findings of a detailed Agricultural Land Classification (ALC). It is based on a desktop study of relevant published information on climate, topography, geology, and soil, in conjunction with a soil survey. The approximately 10.4-hectare (ha) Study Area is shown in **Plan KCC3946/01**.

Methodology

2. The work has been carried out by a Chartered Scientist (CSci), who is a Fellow (F. I. Soil Sci) of the British Society of Soil Science (BSSS). This ALC survey has been carried out by a soil scientist who meets the BSSS Professional Competency Standard (PSC) scheme requirements for ALC (see BSSS PCS Document 2 '*Agricultural Land Classification of England and Wales*'²). The BSSS PSC scheme is endorsed, amongst others, by the Department for Environment, Food and Rural Affairs (Defra), Natural England, the Science Council, and the Institute of Environmental Assessment and Management (IEMA).
3. This assessment is based upon the findings of a study of published information on climate, geology and soil in combination with a soil investigation carried out in accordance with the Ministry of Agriculture, Fisheries and Food (MAFF)³ '*Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land*', October 1988 (henceforth referred to as the 'the ALC Guidelines').
4. The ALC system provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. The ALC system divides agricultural land into five grades (Grade 1 'Excellent' to Grade 5 'Very Poor'), with Grade 3 subdivided into Subgrade 3a 'Good' and Subgrade 3b 'Moderate'. Agricultural land classified as Grade 1, 2 and Subgrade 3a falls in the '*best and most versatile*' category in Paragraphs 187 and 188 of the National Planning Policy Framework (NPPF), revised on the 12th of December 2024. Further details of the ALC system and national planning policy implications are set out in Natural England's '*Guide to assessing development proposals on agricultural land*' online⁴.

² British Society of Soil Science. Professional Competency Scheme Document 2 '*Agricultural Land Classification of England and Wales*'. Available online @ <https://www.soils.org.uk/sites/default/files/events/flyers/ipss-competency-doc2.pdf> Last accessed December 2025

³ The Ministry of Agriculture, Fisheries and Food (MAFF) was incorporated within the Department for Environment, Food and Rural Affairs (Defra) in June 2001

⁴ Natural England (2022) '*Guide to assessing development proposals on agricultural land*'. Available online at <https://www.gov.uk/government/publications/agricultural-land-assess-proposals-for-development/guide-to-assessing-development-proposals-on-agricultural-land> Last accessed December 2025

5. A detailed ALC survey of the Study Area was carried out on the 22nd April 2025 and 1st December 2025. The ALC survey involved examination of the soil's physical properties at 11 auger bores within the Study Area at a density of one auger bore per hectare (ha). One soil pit, i.e., Pit 1 located near auger bore location 6, was excavated with a spade to examine certain soil physical properties, such as stone content and subsoil structure, in more detail. See **Plan KCC3946/01** for the location of auger bores and soil pits.
6. The sample locations were located using a hand-held Garmin E-Trec Geographic Information System (GIS) to enable the sample locations to be relocated for verification, if necessary.
7. The soil profile at each sample location was examined to a maximum depth of approximately 1.2 m by hand using a 5 cm diameter Dutch (Edleman) soil auger. The soil profile at each sample location was described using the '*Soil Survey Field Handbook: Describing and Sampling Soil Profiles*' (Ed. J.M. Hodgson, Cranfield University, 1997). Each soil profile was ascribed a grade following the ALC Guidelines. A log of the soil profiles examined and described on-site is given in **Attachment 1**, and a description of the soil pit is given in **Attachment 2**.
8. A topsoil sample was collected at auger bore locations 2 and 6, as shown in **Plan KCC3946/01**. The samples were sent to an accredited laboratory for particle size analysis, i.e., sand, silt, and clay proportions. This is to determine the definitive texture class of the topsoil, especially regarding distinguishing between medium clay loams (i.e., <27% clay) and heavy clay loams (27% to 35% clay). The results of the laboratory particle size (texture) analysis are given in Section 3.0, and a laboratory report is given in **Attachment 3**.
9. As described in the ALC Guidelines, the main physical factors influencing agricultural land quality are:
 - climate;
 - site;
 - soil; and
 - interactive limitations.
10. These factors are considered in turn below.

Climate

11. Interpolated climate data relevant to determining the ALC grade of land at the Site is given in Table 1 below.

Table 1: ALC Climate Data

Climate Parameter	Grid Ref: TQ207576
Average Altitude (m)	87
Average Annual Rainfall (mm)	719
Accumulated Temperature above 0°C (January – June)	1419
Field Capacity Days (FCD)	152
Moisture Deficit (mm) Wheat	106
Moisture Deficit (mm) Potatoes	98
Grade according to climate	1

12. Parameters used for assessing overall climate are accumulated temperature, a measure of relative warmth, and average annual rainfall, a measure of overall wetness. Regarding Figure 1 '*Grade according to climate*' on page 6 of the ALC Guidelines, there is no overall climatic limitation to the quality of agricultural land at the Site. This means that agricultural land at the Site could be graded as ALC Grade 1 in overall climatic terms without any other limiting factor, i.e., site, soil, and/or interactive limitations.
13. The soil profiles across the Study Area are predicted to be at field capacity (i.e., the amount of soil moisture or water content held in the soil after excess water has drained away) for approximately 152 Field Capacity Days (FCD) per year, mainly over the late autumn, winter and early spring. The climate interacts with soil physical properties, i.e., soil texture and wetness class, and can limit agricultural land quality due to soil wetness as per Table 6 of the ALC Guideline '*Grade according to soil wetness*'. It should be noted that the number of FCD at this Site falls in the FCD category 151-175 for determining the grade according to wetness.

Site

14. As shown in **Plan KCC3946/01**, the Study Area is located on the south-western edge of Langley Vale, Epsom. The approximate centre of the Site is located at British National Grid (BNG) reference TQ208576. The Study Area is bordered by Langley Vale Road to the north, by residential development and woodland to the east, and by agricultural land to the south and west.
15. With regard to the ALC Guidelines, agricultural land quality can be limited by one or more of three main site factors as follows:
 - gradient;
 - micro-relief (i.e., complex change in slope angle over short distances); and
 - risk of flooding.

Gradient and Micro-Relief

- 16 The Study Area is located on a gentle, northwest-facing slope at approximately 111 metres (m) Above Ordnance Datum (AOD) at the highest point in the southeast at auger bore 11 and approximately 85m AOD at the lowest elevation in the north near auger bore 1.
17. The quality of agricultural land within the Study Area is not limited by gradient, which does not exceed 7° (refer to Table 1 of ALC Guidelines). Likewise, the quality of agricultural land in the Study Area is not limited by micro-relief, i.e., where complex changes in slope angle and direction over short distances, or the presence of boulders or rock outcrops, even on level ground or gentle slopes, can severely limit the use of agricultural machinery.

Risk of Flooding

- 18 According to the Government Flood Map for Planning website⁵, the land in the Study Area is in Flood Zone 1 at a low risk of flooding. The MAFF ALC Guidelines (1988) take account of the frequency, duration, and timing of flooding in the summer and winter (re Table 2 '*Grade according to flood risk in summer*' and/or Table 3 '*Grade according to flood risk in winter*'). There is no evidence the grade of agricultural land in the Study Area is limited by flood risk during the summer or winter following the ALC Guidelines.

Soil

- 19 **Geology/Soil Parent Material.** British Geological Survey (BGS) online⁶ information has been utilised to identify the Bedrock underlying the Study Area and any Superficial (Drift) Deposits over the Bedrock. This information helps to determine the parent material⁷ from and within which a soil has formed.
- 20 From the BGS information, the Study Area is underlain by Chalk of the Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation. The bedrock is not covered by any superficial deposits.
- 21 **Published Information on Soil.** Soil information on the National Soil Map⁸ indicates that land at the Site is covered by soils grouped in the Newmarket 2 Association. As

⁵ Government/Environment Agency. 'Get flood risk information for planning in England'. Available online at <https://flood-map-for-planning.service.gov.uk/> Last accessed December 2025

⁶ British Geological Survey 'Geology of Britain Viewer'. Available online @ <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html> Last accessed December 2025

⁷ British Geological Survey. A 'parent material' is a soil-science name for a weathered rock or deposit from and within which a soil has formed. In the UK, parent materials provide the basic foundations and building blocks of the soil, influencing their texture, structure, drainage and chemistry. Available online @ [Soil Parent Material Model - British Geological Survey \(bgs.ac.uk\)](http://www.bgs.ac.uk/SoilParentMaterialModel) Last accessed December 2025

⁸ Cranfield University (2025) Soil site report, Soil Report for location 520933E, 157549N, 1km x 1km, Cranfield University.

described by the Soil Survey of England and Wales (SSEW)⁹, the association comprises well-drained soils formed in chalk and chalky drift that are mainly shallow or moderately deep calcareous coarse loamy soils, but there are also some non-calcareous, generally deeper, coarse loamy soils. The characteristic soil is the coarse loamy Newmarket series, which belongs to the brown rendzinas and lies directly on chalk rubble. The main associate soils are the fine loamy Rudham series, also brown rendzinas. Deeper, coarse loamy and fine loamy typical brown calcareous earths, Swaffham Prior and Soham series respectively, with chalky rubble in the lower subsoil are nearly as widespread as the rendzinas. Together all these soils cover about two-thirds of the association. Coarse loamy typical argillic brown earths of the Moulton series also occur and are recognized by a thin brown clay-enriched layer immediately above the irregular surface of the chalky substratum. Deep sandy Newport soils, typical brown sands, occasionally occur in Norfolk and Suffolk in glaciofluvial drift capping hills and in river terrace drift. In South East England, the association is found mainly on moderate slopes on the dipslope of the Downs between Leatherhead and Guildford, on the Chilterns near Marlow and near Newbury. There is some steep land locally, especially in the Chilterns. Newmarket and Rudham series cover about half the land and, in the Chilterns, they are associated with Andover series. Soham, Swaffham Prior and Moulton soils occur with small patches of fine loamy Frilsham soils on the floors of dry valleys and on flat crests or benches. All the soils are permeable and well-drained (Wetness Class I). They readily absorb excess winter rainfall with little run-off, although there is a slight risk of water erosion if fields are left bare on slopes. Rooting is restricted to some degree depending on the depth and compactness of the underlying chalk rubble.

- 22 **Soil Survey.** The soil profiles recorded at each auger-bore location are given in **Attachment 1**. A detailed description of Soil Pit 1 is given in **Attachment 2**.
- 23 The soil survey determined predominantly brown (Munsell colour 10YR5/3 and 7.5YR4/3) medium clay loam topsoil over pale brown (10YR6/3) or strong brown (7.5YR4/6) medium clay loam upper subsoil, over weathered chalk. The profiles are very calcareous and are moderately stony. These profiles are similar to those in the Newmarket 2 Association described above.
- 24 **Topsoil Particle Size Analysis.** To substantiate topsoil texture determined during the ALC survey by hand-texturing, two topsoil samples were collected over the Study Area, i.e., from auger bore locations 2 and 6, see **Plan KCC3946/01**. The topsoil samples were sent to an accredited laboratory for analysis of particle size distribution (PSD), based on

⁹ Soil Survey of England and Wales, National Soil Resource Institute, Cranfield University (2023). *The Soils Guide*. Available online at https://www.landis.org.uk/soilsguide/mapunit_list.cfm Last accessed December 2025

the British Standard Institution particle size grades. The certificate of analysis is provided as **Attachment 3**. The findings of the PSD analysis are shown in Table 2 below.

Table 2: Topsoil Particle Size Analysis

Topsoil Sample Location	% sand 0.063-2.0 mm	% silt 0.002-0.063 mm	% clay <0.002 mm	ALC Soil Texture Class
2	42	34	24	Medium Clay Loam
6 (Pit 1)	37	38	25	Medium Clay Loam

Interactive Limitations

25 From the information above, together with the findings of the detailed soil survey (see Soil Profile Log given in **Attachment 1**), it has been determined that the quality of agricultural land at the Site is limited by soil droughtiness, as described below.

26 **Soil Droughtiness.** From the ALC Guidelines, a soil droughtiness limitation exists '*in areas with relatively low rainfall or high evapotranspiration, or where the soil holds only small reserves of moisture available to plant roots.*' The ALC grade according to soil droughtiness is shown in Table 3 below (based on Table 8 'Grade According to Droughtiness' in the ALC Guidelines). To be eligible for Grades 1 to 3b the moisture balances (MBs) must be equal to, or exceed, the stated minimum values for both wheat and potatoes. If the MB for either crop is less (i.e., more negative) than that shown for Subgrade 3b, the soil is Grade 4 on droughtiness).

Table 3: ALC Grade According to Soil Droughtiness

Grade/Subgrade	Moisture Balance (MB) Limits (mm)	
	Wheat	Potatoes
1	+30	+10
2	+5	-10
3a	-20	-30
3b	-50	-55
4	<-50	<-55

27 The Moisture Balance (MB) values and ALC grade according to soil droughtiness per auger-bore are shown in **Attachment 1**. It has been determined that soil droughtiness is sufficient to limit the quality of agricultural land within the Study Area to Subgrade 3a or Subgrade 3b on shallower soils over the chalk.

ALC Grading at the Site

- 28 By detailed ALC survey, it has been determined that the quality of agricultural land at the Site is limited by soil droughtiness to Subgrade 3a, or Subgrade 3b where the soils are shallow over chalk.
- 29 A residential house and garden in the northeastern corner is classified as 'other/non-agricultural land'.
- 30 The area and proportion of agricultural land in each ALC grade have been measured from an ALC map given in **Plan KCC3946/02**. The findings are reported in Table 4 below.

Table 4: Agricultural Land Classification

ALC Grade	Area (Ha)	Area (% of Total Site)
Grade 1 (Excellent)	0	0
Grade 2 (Very Good)	0	0
Subgrade 3a (Good)	5.2	50.0
Subgrade 3b (Moderate)	5.1	49.0
Grade 4 (Poor)	0	0
Grade 5 (Very Poor)	0	0
Non-agricultural / Other land	0.1	1.0
Total	10.4	100

Attachment 1
Soil Pit Log

Point	Grid ref.			Alt (m)	Slope °	Aspect	Land use	Depth (cm)			Matrix	Ochreous Mottles		Grey Mottles		Gley	Texture	Stones - type 1				Stones - type 2				Ped			SUBS STR	CaCO3	Mn C	SPL	Drought			Wet		Final ALC			Grade	
	NGR	X	Y					Top	Bttm	Thick	Munsell colour	Form	Munsell colour	Form	Munsell colour			% > 2cm	> 6cm	Type	% > 2cm	> 6cm	Type	Strength	Size	Shape	MBw	MBp					Gd	WC	Gw	Limitation 1	Limitation 2	Limitation 3				
1	TQ 20620 57800	520620	157800	83	≤7	Level	CER	0	26	26	7.5YR4/3					No	MCL - Clay loam (medium)	20	10	5	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	-16	-15	3a	WC I 1	Droughtiness				3a		
								26	50	24	7.5YR4/6					No	MCL - Clay loam (medium)	20			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								50	80	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
2	TQ 20700 57700	520700	157700	87	≤7	Level	CER	0	26	26	7.5YR4/3					No	MCL - Clay loam (medium)	20	10	4	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	4	1	3a	WC I 1	Droughtiness				3a		
								26	40	14	7.5YR4/6					No	MCL - Clay loam (medium)	8			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)	7		CH - Chalk or chalk stones				Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								40	70	30	10YR6/3					No	MCL - Clay loam (medium)	40			CH - Chalk or chalk stones							Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								70	100	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
3	TQ 20700 57600	520700	157600	87	≤7	Level	CER	0	26	26	7.5YR4/3					No	MCL - Clay loam (medium)	20	10	4	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	4	1	3a	WC I 1	Droughtiness				3a		
								26	50	24	7.5YR4/6					No	MCL - Clay loam (medium)	10			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)	5		CH - Chalk or chalk stones				Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								50	70	20	10YR6/3					No	MCL - Clay loam (medium)	40			CH - Chalk or chalk stones							Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								70	100	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
4	TQ 20800 57600	520800	157600	99	≤7	Level	CER	0	22	22	10YR5/3					No	MCL - Clay loam (medium)	20	10	5	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	-30	-22	3b	WC I 1	Droughtiness				3b		
								22	40	18						No	MCL - Clay loam (medium)	50			CH - Chalk or chalk stones							Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								40	70	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
5	TQ 20900 57600	520900	157600	99	≤7	Level	CER	0	26	26	7.5YR4/3					No	MCL - Clay loam (medium)	20	10	5	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	-16	-15	3a	WC I 1	Droughtiness				3a		
								26	50	24	7.5YR4/6					No	MCL - Clay loam (medium)	20			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)	20						Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								50	80	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
6	TQ 20800 57500	520800	157500	95	≤7	Level	CER	0	22	22	10YR5/3					No	MCL - Clay loam (medium)	20	10	5	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)				Firm	M - Medium	SAB - Subangular Blocky	Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	-23	-19	3b	WC I 1	Droughtiness				3b		
								22	45	23						No	MCL - Clay loam (medium)	50			CH - Chalk or chalk stones				Firm	M - Medium	AB - Angular Blocky	Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								45	75	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
7	TQ 20900 57500	520900	157500	95	≤7	Level	CER	0	22	22	10YR5/3					No	MCL - Clay loam (medium)	20	10	5	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	-36	-28	3b	WC I 1	Droughtiness				3b		
								22	35	13						No	MCL - Clay loam (medium)	50			CH - Chalk or chalk stones							Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								35	65	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
8	TQ 20900 57400	520900	157400	95	≤7	Level	CER	0	22	22	10YR5/3					No	MCL - Clay loam (medium)	20	10	5	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	-23	-19	3b	WC I 1	Droughtiness				3b		
								22	45	23						No	MCL - Clay loam (medium)	50			CH - Chalk or chalk stones							Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								45	75	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
9	TQ 21000 57400	521000	157400	108	≤7	Level	CER	0	26	26	7.5YR4/3					No	MCL - Clay loam (medium)	20	10	4	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	4	1	3a	WC I 1	Droughtiness				3a		
								26	50	24	7.5YR4/6					No	MCL - Clay loam (medium)	10			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)	5		CH - Chalk or chalk stones				Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								50	70	20	10YR6/3					No	MCL - Clay loam (medium)	40			CH - Chalk or chalk stones							Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								70	100	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
10	TQ 21000 57300	521000	157300	100	≤7	Level	CER	0	22	22	10YR5/3					No	MCL - Clay loam (medium)	20	10	5	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	-23	-19	3b		Droughtiness				3b		
								22	45	23						No	MCL - Clay loam (medium)	50			CH - Chalk or chalk stones							Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								45	75	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
11	TQ 21100 57300	521100	157300	111	≤7	Level	CER	0	26	26	7.5YR4/3					No	MCL - Clay loam (medium)	20	10	4	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	VC - Very calcareous (>10% CaCO3)	No	No	4	1	3a	WC I 1	Droughtiness				3a		
								26	50	24	7.5YR4/6					No	MCL - Clay loam (medium)	10			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)	5		CH - Chalk or chalk stones				Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								50	70	20	10YR6/3					No	MCL - Clay loam (medium)	40			CH - Chalk or chalk stones							Moderate	VC - Very calcareous (>10% CaCO3)	No	No											
								70	100	30						No	CHK - Chalk	2			HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Poor	VC - Very calcareous (>10% CaCO3)	No	No											
END																																										

Attachment 2
Soil Pit Description

Soil Survey				Surveyor	RWA
Easting (X)	520800	Northing (Y)	157500	Alt (m)	95
Land Use	CER	Reference	6 (Pit 1)	Slope °	≤7
Bedrock	Lewes Seaford Newhaven Chalk	Superficial	None recorded	Aspect	Level
				Grid Reference	TQ 20800 57500
				Date	23/04/2025

Layer	Topsoil	2	3	4	5	6	7
Lower Depth (cm)	22	45	75				
Texture	MCL - Clay loam	MCL - Clay loam (medium)	CHK - Chalk				
Matrix Colour	10YR5/3						
Gley (Y/N)	No	No	No				
Ochreous Mottles	Form						
	Munsell Colour						
Grey Mottles	Form						
	Munsell Colour						
Manganese (Y/N)	No	No	No				
% Stones (type 1)	20	50	2				
Stones > 2cm	10						
Stones > 6cm	5						
Stone Type	HR - All hard roc	CH - Chalk or chalk stones	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger)				
% Stones (type 2)							
Stones > 2cm							
Stones > 6cm							
Stone Type							
CaCO ₃	VC - Very calcare	VC - Very calcareous (>10%	VC - Very calcareous (>10% CaCO ₃)				
Shape of Peds.	SAB - Subangular	AB - Angular Blocky					
Size of Peds.	M - Medium	M - Medium					
Subsoil Structure	Not Applicable	Moderate	Poor				
Soil or Ped. Strength	Firm	Firm					
Degree of Ped. Development	M - Moderate						
Slowly Permeable Layer (Y/N)	No	No	No				

MDw	MDp	FCD
106	98	152

Wetness	Class (WC)	WC I
	Grade (WE)	1

Notes	Moisture Balance (MB): Wheat = -23mm; Poatoes = -19mm (Subgrade 3b according to soil droughtiness)
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Attachment 3
Laboratory Analysis

ANALYTICAL REPORT											
Report Number	90256-25		P248	SARAH KERNON							
Date Received	24-APR-2025			KERNON COUNTRYSIDE							
Date Reported	06-MAY-2025			CONSULTANTS LTD							
Project	KCC 3946			GREENACRES BARN							
Reference	LANGLEY BOTTOM FARM			PURTON STOKE							
Order Number	KCC 3946			WILTSHIRE SN5 4LL							
Laboratory Reference			SOIL748033	SOIL748034							
Sample Reference			AB2	AB6							
Determinand	Unit	SOIL	SOIL								
Sand 2.00-0.063mm	% w/w	42	37								
Silt 0.063-0.002mm	% w/w	34	38								
Clay <0.002mm	% w/w	24	25								
Textural Class **		MCL	MCL								
Notes											
Analysis Notes		The sample submitted was of adequate size to complete all analysis requested. The results as reported relate only to the item(s) submitted for testing. The results are presented on a dry matter basis unless otherwise stipulated.									
Document Control		This test report shall not be reproduced, except in full, without the written approval of the laboratory.									
Reported by		** Please see the attached document for the definition of textural classes. <i>Teresa Clyne</i> Natural Resource Management, a trading division of Cawood Scientific Ltd. Coopers Bridge, Braziers Lane, Bracknell, Berkshire, RG42 6NS Tel: 01344 886338 Fax: 01344 890972 email: enquiries@nrm.uk.com									

ADAS (UK) Textural Class Abbreviations

The texture classes are denoted by the following abbreviations:

Class	Code
Sand	S
Loamy sand	LS
Sandy loam	SL
Sandy Silt loam	SZL
Silt loam	ZL
Sandy clay loam	SCL
Clay loam	CL
Silt clay loam	ZCL
Clay	C
Silty clay	ZC
Sandy clay	SC

For the *sand*, *loamy sand*, *sandy loam* and *sandy silt loam* classes the predominant size of sand fraction may be indicated by the use of prefixes, thus:

vf	Very Fine (more than 2/3's of sand less than 0.106 mm)
f	Fine (more than 2/3's of sand less than 0.212 mm)
c	Coarse (more than 1/3 of sand greater than 0.6 mm)
m	Medium (less than 2/3's fine sand and less than 1/3 coarse sand).

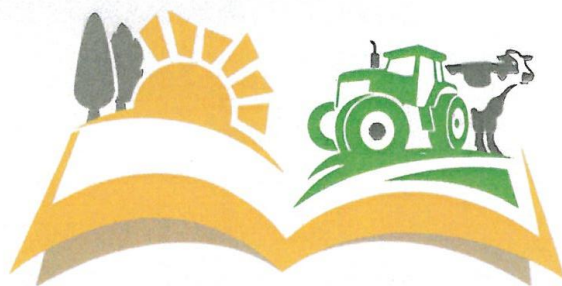
The subdivisions of *clay loam* and *silty clay loam* classes according to clay content are indicated as follows:

M	medium (less than 27% clay)
H	heavy (27-35% clay)

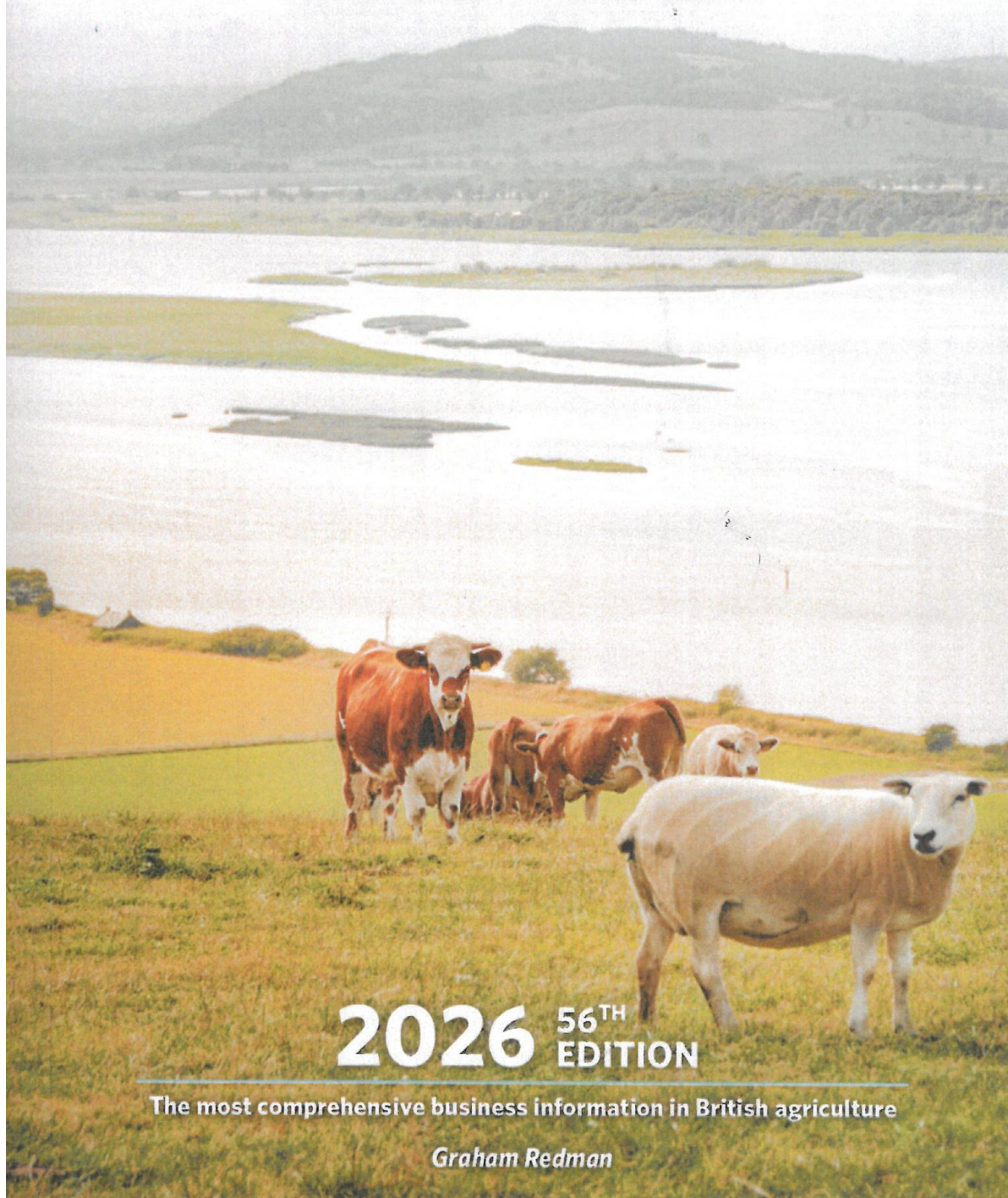
Organic soils i.e. those with an organic matter greater than 10% will be preceded with a letter O.

Peaty soils i.e. those with an organic matter greater than 20% will be preceded with a letter P.

Appendix KCC4
Extracts from the Nix Farm
Management Pocketbook



NIX FARM MANAGEMENT POCKETBOOK



2026 56TH
EDITION

The most comprehensive business information in British agriculture

Graham Redman

WHEAT

Feed Winter Wheat

Production level	Low	Average	High	
Yield: t/ha (t/ac)	7.0 (2.8)	8.2 (3.3)	9.4 (3.8)	
	£/ha (ac)	£/ha (ac)	£/ha (ac)	£/t
Grain at £185/t	1,295 (524)	1,517 (614)	1,739 (704)	
Straw in Swath	150 (61)	150 (61)	150 (61)	
Total Output	1,445 (585)	1,667 (675)	1,889 (765)	203
Variable Costs £/ha (£/ac):				
Seed.....		81 (33)		10
Fertiliser.....		297 (120)		36
Sprays.....		301 (122)		37
Total Variable Costs		679 (275)		83
Gross Margin £/ha (ac)	766 (310)	988 (400)	1,210 (490)	120

Fertiliser Basis 8.2t/ha				Seed:	Sprays £/ha:	
Nutrient	Kg/t	Kg/Ha	£/Ha	£/t C2	£510	Herbicides £131
N	23	190	£187	Kg/Ha	175	Fungicides £115
P	7.0	57	£60	% HSS	30%	Insecticides £4
K	10.5	86	£49	£/t HSS	£353	PGRs £19
						Other £33

1. *Yields.* The average yield is for all winter feed wheat, i.e. all varieties and 1st and subsequent wheats. See over for First and Second Wheats. The whole wheat yield including feed and milling, winter and spring crops is 8.06t/ha (10-year average Defra).

The table below offers a weighted estimate of yield variations according to wheat type based on a national 10-year average yield of 8.06t/ha. Percentages compare yield categories with 'all wheat'. These yields are used in the gross margins.

Calculation of spread of 'average yields depending on wheat type –

	Yield					
	Adjustment	Winter	1st WW	2nd WW	spring	Total
t/ha		101%	102%	93%	85%	100%
Total	100%	8.14	8.27	7.49		8.06
Feed	101%	8.22	8.35	7.57		8.14
Bread	93%	7.57	7.69	6.97	5.92	7.49
Biscuit	99%	8.06	8.19	7.42		7.98

2. *Straw* is sold in the swath. Assume half the baled value is swath value £70/tonne at 4.2t/Ha winter and 3.8t/ha spring wheat (rounded up).
3. *Seed* is costed with a single purpose dressing. Up to a third of growers require additional seed treatments, specifically to suppress BYDV. This can add £175/t of seed (£31/ha) or more. This has not been added in the gross margins.
4. This schedule does not account for severe *grass weed infestations* such as Black Grass or Sterile Brome. Costs associated with managing such problems can amount to up to £200/hectare additional agrochemical costs. Yield losses increase as infestation rises:

OILSEED RAPE

Winter Oilseed Rape

Production level	Low	Average	High	
Yield: t/ha (t/ac)	3.0 (1.2)	3.50 (1.4)	4.0 (1.6)	
	£/ha (ac)	£/ha (ac)	£/ha (ac)	£/t
Output at £410/t	1230 (498)	1,435 (581)	1,640 (664)	410
Variable Costs £/ha (£/ac):				
Seed.....		73 (29)		21
Fertiliser.....		261 (106)		75
Sprays.....		277 (112)		79
Total Variable Costs		610 (247)		174
Gross Margin £/ha (ac)	620 (251)	825 (334)	1,030 (417)	236

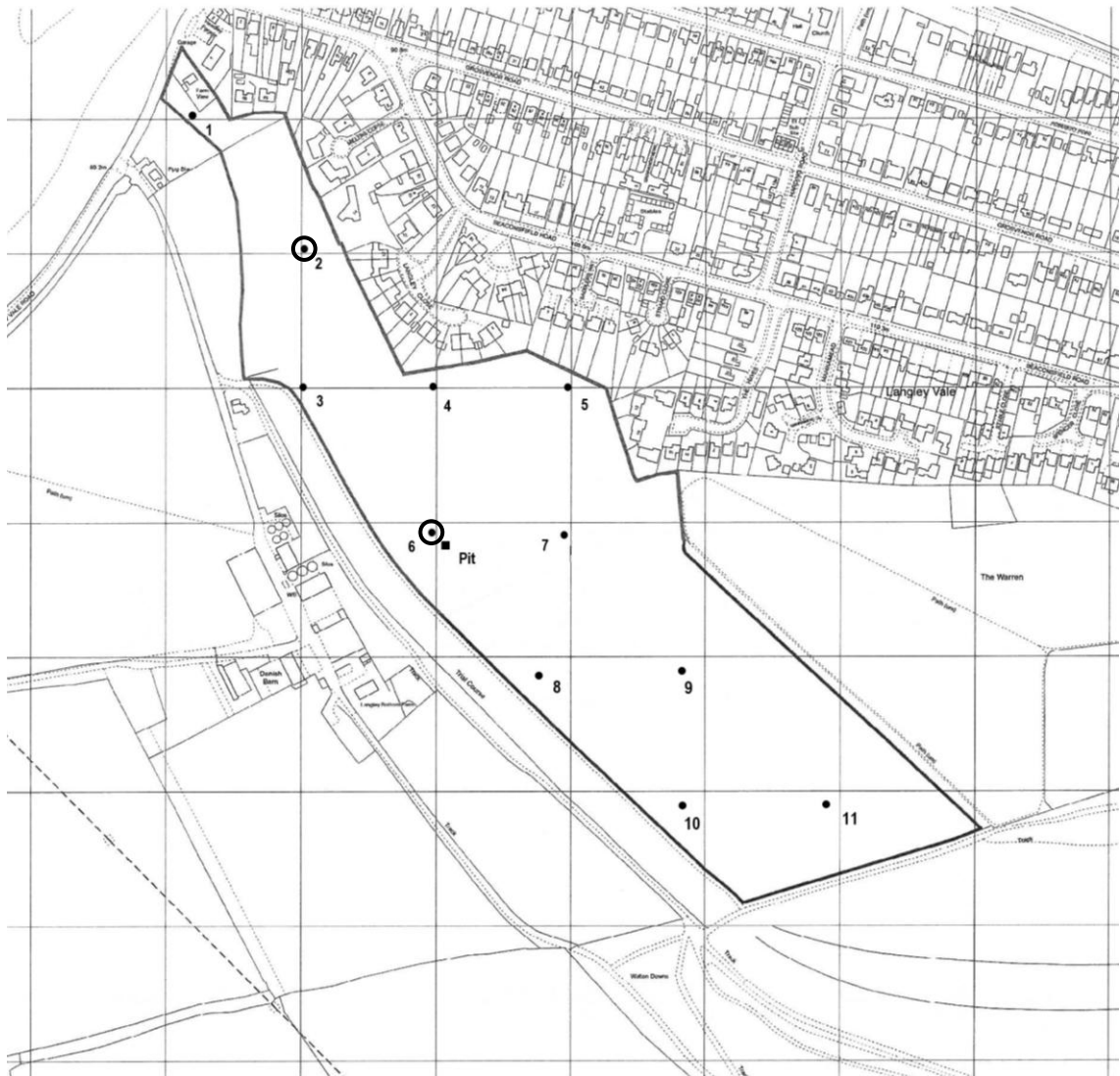
Fertiliser Basis 3.5t/ha				Seed:		Sprays £/ha:	
Nutrient	Kg/t	Kg/Ha	£/Ha	£/Ha C	43	Herbicides	£135
N	54	190	£187	£/Ha Hy	88	Fungicides	£71
P	14	49	£52	£/Ha HSS	29	Insecticides	£18
K	11	39	£22	C:Hy:HSS	20:20:60	PGRs	£0
	Seed write-off	8%		Kg/Ha	5.5	Other	£53

Spring Oilseed Rape

Production level	Low	Average	High	
Yield: t/ha (t/ac)	1.9 (0.8)	2.25 (0.9)	2.6 (1.1)	
	£/ha (ac)	£/ha (ac)	£/ha (ac)	£/t
Output at £410/t	779 (315)	923 (374)	1,066 (432)	410
Variable Costs £/ha (£/ac):				
Seed.....		69 (28)		31
Fertiliser.....		117 (47)		52
Sprays.....		145 (59)		64
Total Variable Costs		331 (134)		147
Gross Margin £/ha (ac)	448 (181)	592 (240)	735 (298)	263

1. *Prices.* The price used is £390/t plus oil bonuses at 44% oil content making £410/. The bonus is paid on the percentage of oil over 40%, at 1.5 times the sale value of the crop and an equal but opposite penalty below 40%. For example, in this case, the bonus is on 4% oil $\times$ £410 $\times$ 1.5 = £25.
2. *Spring OSR Inputs:* Seed as per WOSR, but 35% conventional, 5% HSS, 60% hybrid. Fertiliser: N/P/K at 70/32/25 kg/ha. Sprays, Herbicides. £55, Fungicides, £43, Insecticides £14, and Others £33/ha
3. *Winter Versus Spring:* As little as 6,000 hectares of spring OSR are grown in the UK which is 2.5% of the entire crop. The financial reward is slim compared with other combinable crops.

Plan KCC3946/01
Auger Point Plan



KEY

- Auger sample location
- Topsoil sample
- Soil Pit

PLAN	KCC3946/01		
TITLE	Auger Points Plan		
SITE	Land at Langley Bottom Farm, Epsom		
CLIENT	Fairfax Properties		
NUMBER	KCC3946/01 12/25hr		
DATE	December 2025	SCALE	NTS

KERNON COUNTRYSIDE CONSULTANTS LTD
GREENACRES BARN, PURTON STOKE, SWINDON,
WILTSHIRE SN5 4LL

Tel 01793 771 333 Email: info@kernon.co.uk

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Plan KCC3946/02
Agricultural Land Classification Plan



KEY		Ha	%	PLAN	KCC3946/02			
	Grade 1			TITLE	Agricultural Land Classification Plan			
	Grade 2			SITE	Land at Langley Bottom Farm, Epsom			
	Grade 3a	5.2	50	CLIENT	Fairfax Properties			
	Grade 3b	5.1	49	NUMBER	KCC3946/02 12/25hr			
	Grade 4			DATE	December 2025	SCALE	NTS	
	Grade 5			KERNON COUNTRYSIDE CONSULTANTS LTD GREENACRES BARN, PURTON STOKE, SWINDON, WILTSHIRE, SN5 4LL Tel 01793 771 333 Email: info@kernon.co.uk This plan is reproduced from the Ordnance Survey under copyright license 100015226				
	Non-agricultural	0.1	1					
	Urban							
	Not surveyed							
	TOTAL	10.4	100					



Greenacres Barn, Stoke Common Lane, Purton Stoke, Swindon, Wiltshire SN5 4LL
Telephone: 01793 771333 • Email: info@kernon.co.uk • Website: www.kernon.co.uk

