

**LAND NORTH OF
CAMER ROAD,
MEOPHAM**

**AGRICULTURAL LAND
CLASSIFICATION AND
CONSIDERATIONS**

February 2026





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1 INTRODUCTION

1.1 This report considers the agricultural land quality of a parcel of agricultural land extending to approximately 43.1 ha north of Camer Road, Meopham (the 'Site').

1.2 The area is shown outlined in red on the aerial image below.

Insert 1. The Site (boundary approx.)



1.3 A detailed Agricultural Land Classification has been carried out over the Site. This has identified that the Site contains Grade 2 and non-agricultural land. Therefore, the Site contains Best and Most Versatile agricultural (BMV) land, as defined in the National Planning Policy Framework (NPPF 2024). Consequently the policy implications of its inclusion are considered.

1.5 This report:

- (i) reviews the relevant planning policy 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.

1.6 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 PLANNING POLICY OF RELEVANCE

National Planning Policy Framework

- 2.1 The National Planning Policy Framework (NPPF) (2024), paragraph 187 notes that planning policies and decisions should contribute to and 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).
- 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 20ha is a suitable threshold for defining “significant” in many cases.

Local Plan

- 2.5 The Gravesham Local Plan Core Strategy (adopted 2014) has no specific policies relating to agricultural land. The local plan states in paragraph 4.2.22 that **“The green belt designation has assisted in protecting the best and most versatile agricultural land”**. However, there are no specific policies that govern the use of BMV land.

Guidance

- 2.6 Natural England’s “Guide to Assessing Development Proposals on Agricultural Land” (February 2021) (**Appendix KCC1**) describes the ALC process and sets out guidance on managing soils. It advises on the consultation process where more than 20ha of BMV land is involved.

- 2.7 The Institute of Environmental Management and Assessment (IEMA) (now the Institute of Sustainability and Environmental Professionals) 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. Losses of between 5 – 20 ha are classified as moderate losses. Losses of over 20 ha are considered to be major 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, and updated in December 2025 to provide clarity. ALC results from prior to the ALC update remain valid.
- 3.2 The ALC system is further described in Natural England's Technical Information Note TIN049 which can be found reproduced in **Appendix KCC2**.

Detailed ALC Survey Results

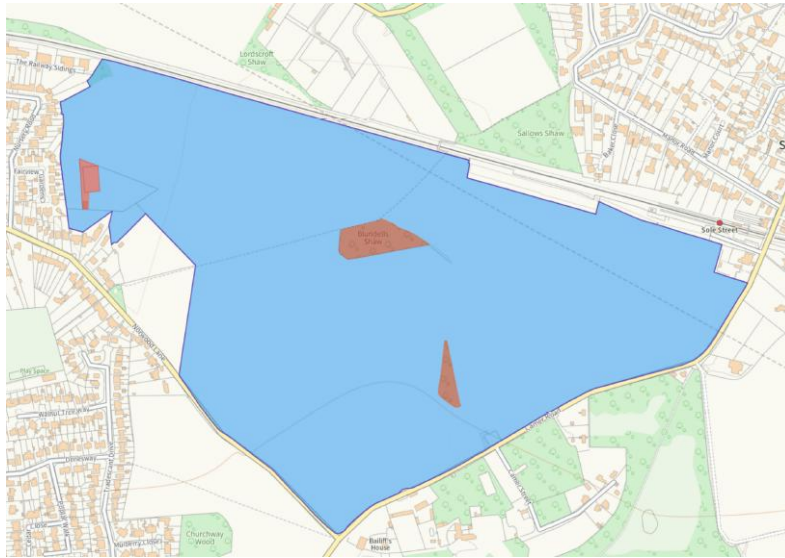
- 3.3 A detailed ALC survey was carried out on 17th October 2025 across the Site. Forty-three auger point inspection sites were examined on a regular 100m grid, using a spade and soil auger to a maximum depth of 120cm where possible.
- 3.4 One soil pit was dug to measure the stoniness and to better describe the soil profiles. Four soil samples were sent for laboratory testing.
- 3.5 A detailed ALC report is contained in **Appendix KCC3**.
- 3.6 The results of the survey are set out in the table below.

Table 1. ALC Results

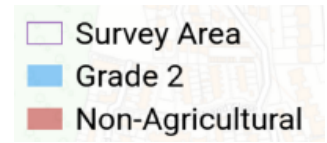
ALC Grade	Description	Area (Ha)	Proportion (%)
Grade 2	Good	42.1	98
Non-agricultural	-	1.0	2
Total	-	43.1	100

- 3.7 The distribution of grading is shown on the extract of the ALC plan below. The full plan can be found at the back of the report in **Appendix KCC3**.

Insert 2. Extract of the ALC Plan



Key



4 POLICY ASSESSMENT

- 4.1 The NPPF (2024) requires that the economic and other benefits of BMV land be recognised. In plan-making terms the NPPF requires 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 and then go on to consider the plan-making considerations.

Economic Benefits

- 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 budging 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 Farmed Land

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

John Nix Pocketbook for Farm Management, September 2025

- 4.6 Based on this crude assessment, the economic benefit of the 42.1 ha of BMV land as compared with non-BMV land would be £9,346 per annum (£8,630 - £9,346 based on 2025 budgets). Hence the economic benefits of a land parcel of this size are limited. Other benefits can be seen in terms of food production. Across the BMV land an increase of 49 tonnes per annum of wheat over non BMV land would be seen. In terms of oilseed rape the uplift would be 21 tonnes per annum.

- 4.7 The possible food production benefits should be seen in the context of the total food production of the UK in 2024. The UK produced an estimated 20 million tonnes of cereals and oilseeds (Cereal and Oilseed production in the United Kingdom 2024, DEFRA (7 January 2025)).
- 4.8 Therefore, for development management purposes, the economic benefits of BMV land have been recognised and quantified, and these will need to be considered in the overall planning balance.

Whether this is “Significant” Development

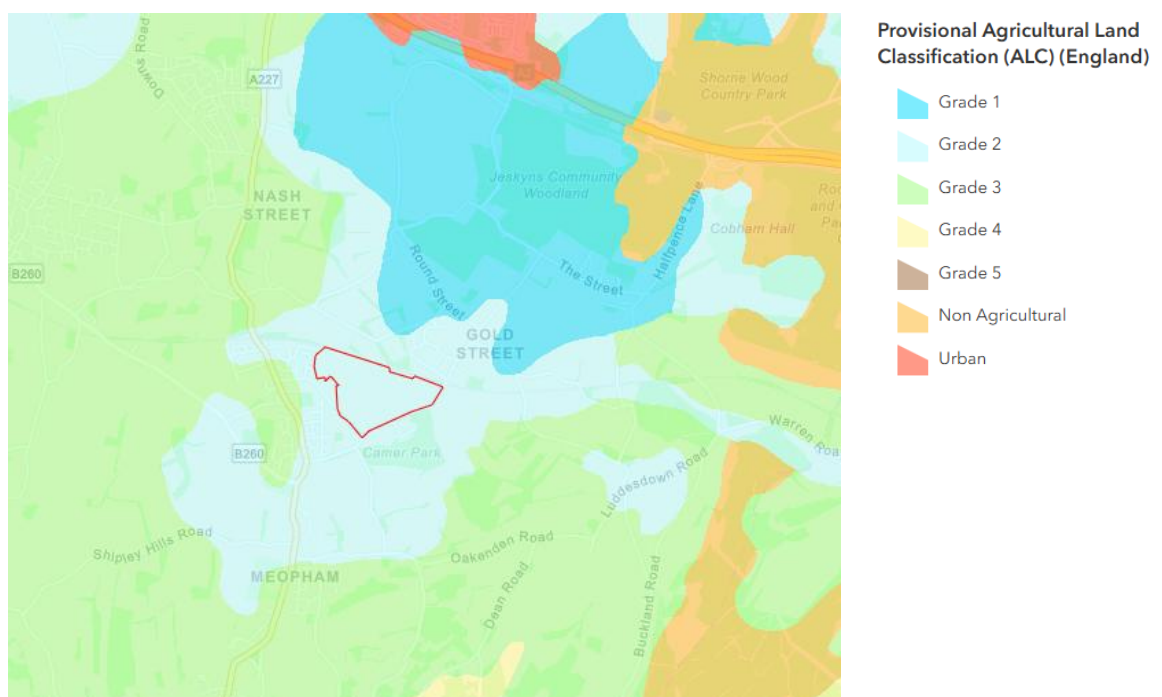
- 4.9 Paragraph 188 of the NPPF, and the related footnote 65, refer to plan making. Therefore, they are directed at local authorities rather than Applicants. The following is therefore intended to assist in the plan making by considering which alternative sites may be available.
- 4.10 This proposal would be considered “significant development” of agricultural land in the context of the NPPF. Paragraphs 187 and 188 of the NPPF consider whether poorer quality land is available with the trigger for an assessment being that the proposal involved **“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 a loss of 20 ha 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.
- 4.11 The loss of above 20 ha of BMV agricultural land triggers Footnote 65 of the NPPF which states **“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”**.
- 4.12 Therefore, an assessment of land in the area is undertaken which takes into account predictive and provisional maps and Agricultural Land Classification Surveys within the area.

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 Grades 1, 2 and 3a quality (see TIN049, **Appendix KCC2**).

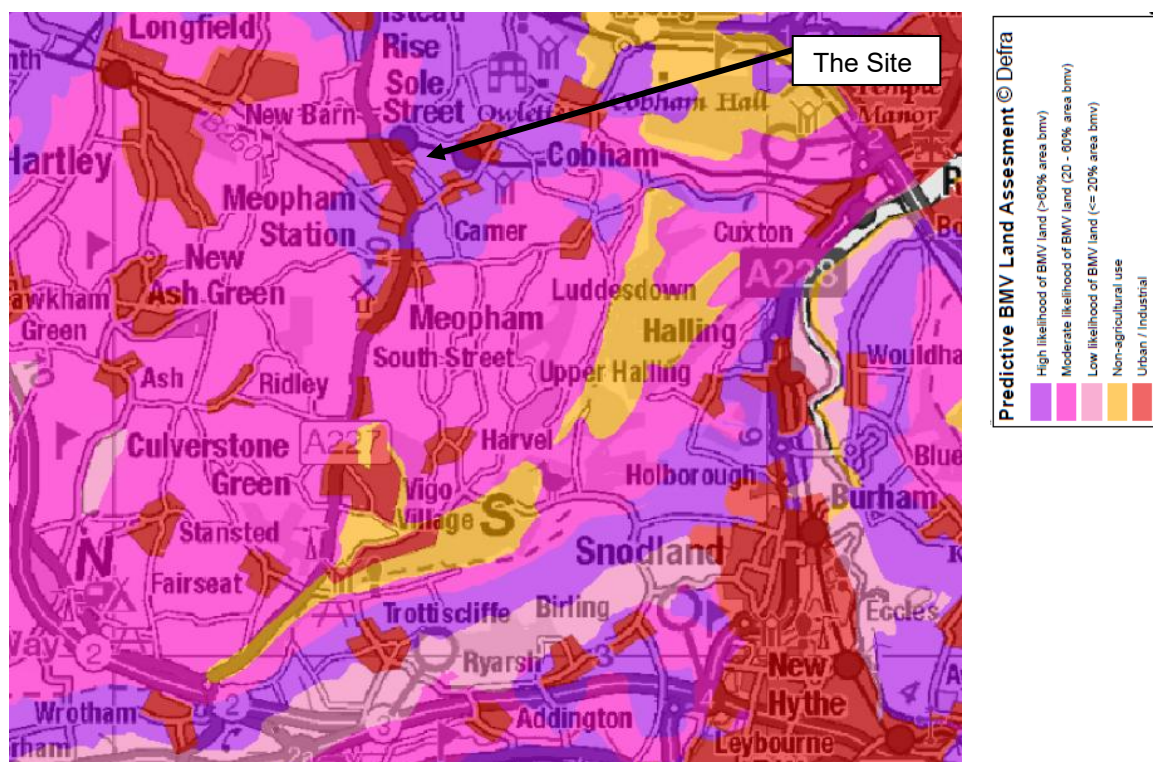
- 4.14 The Utilised Agricultural Area (UAA) of England, which is less than the total amount of agricultural land, was 8.7 million hectares in June 2024 (Agricultural Land Use in England on 1 June 2024, DEFRA, 26 September 2024). This suggests that about 3.7 million hectares of BMV land is in active agricultural use.
- 4.15 Statistically about 40% of Grade 3 land falls within Grade 3a. However, in parts of the country the proportion of Grade 3a is expected to be much higher, as there are large areas of the country where land is poor (eg Lake District, Pennines, Dartmoor etc).
- 4.16 Therefore BMV quality land is not a rare resource.
- 4.17 On the published “provisional” ALC maps from the 1970’s the land is shown mapped as undifferentiated Grade 2. This can be seen on the insert below with the site approximately outlined in red.
- 4.18 In the wider area surrounding the Site there is an area of Grade 1 agricultural land to the north of the Site. Surrounding the area of Grade 2 agricultural land where the Site is situated, there are areas of undifferentiated Grade 3. These areas of undifferentiated Grade 3 land have areas of dense woodland and as such may not be suitable for development. Many areas have dwellings and businesses situated on them.

Insert 3. Provisional ALC Map (boundary approx.)



- 4.19 As identified in TIN049, these maps are not suitable for site specific analysis. However, the results for this Site show that the Site is the quality that would be expected from the provisional ALC maps.
- 4.20 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).
- 4.21 The predictive BMV likelihood maps predict that the Site is of high likelihood of BMV (>60% area BMV), there is a small area moderate likelihood of BMV to the west of Meopham. Much of the area surrounding Meopham is made up of moderate likelihood of BMV. Land to the north of the Site is predicted to be of high likelihood of BMV.

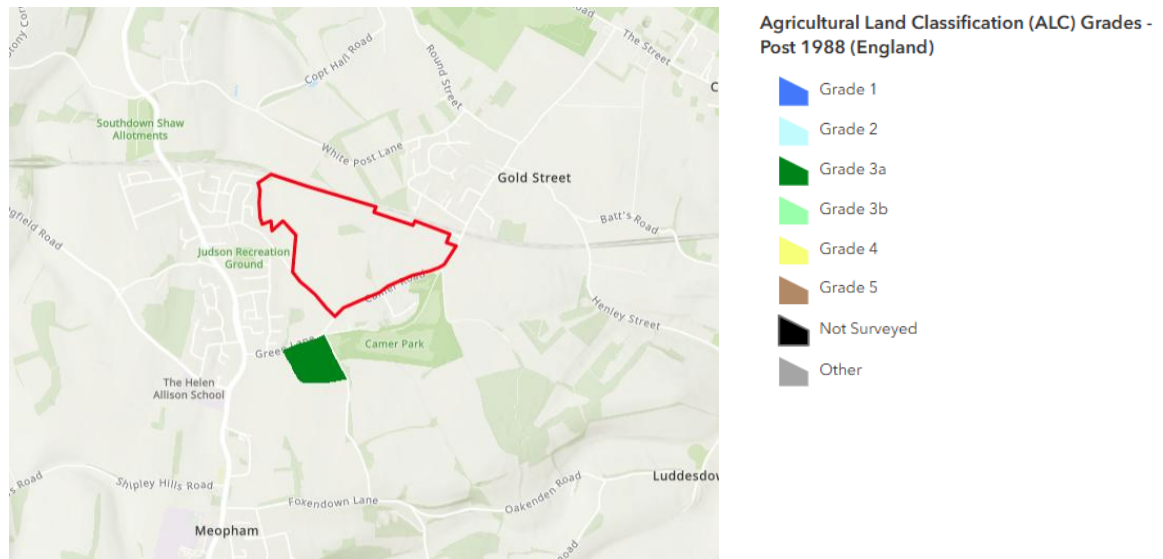
Insert 4. Predictive BMV Map



- 4.22 From the above maps it is clear that much of the land to the north of the Site has a high likelihood of BMV land quality. To the south of the Site land is of a lower likelihood of BMV to the Site. However, the moderate likelihood of BMV area is not adjoining the settlement nor within the vicinity of the Site. There is no clear evidence that land in the vicinity of the Site will not be of BMV quality.
- 4.23 The Proposed Site has not been previously surveyed. Survey results for sites in proximity of the Site have been searched for as published on www.magic.gov.uk. A survey

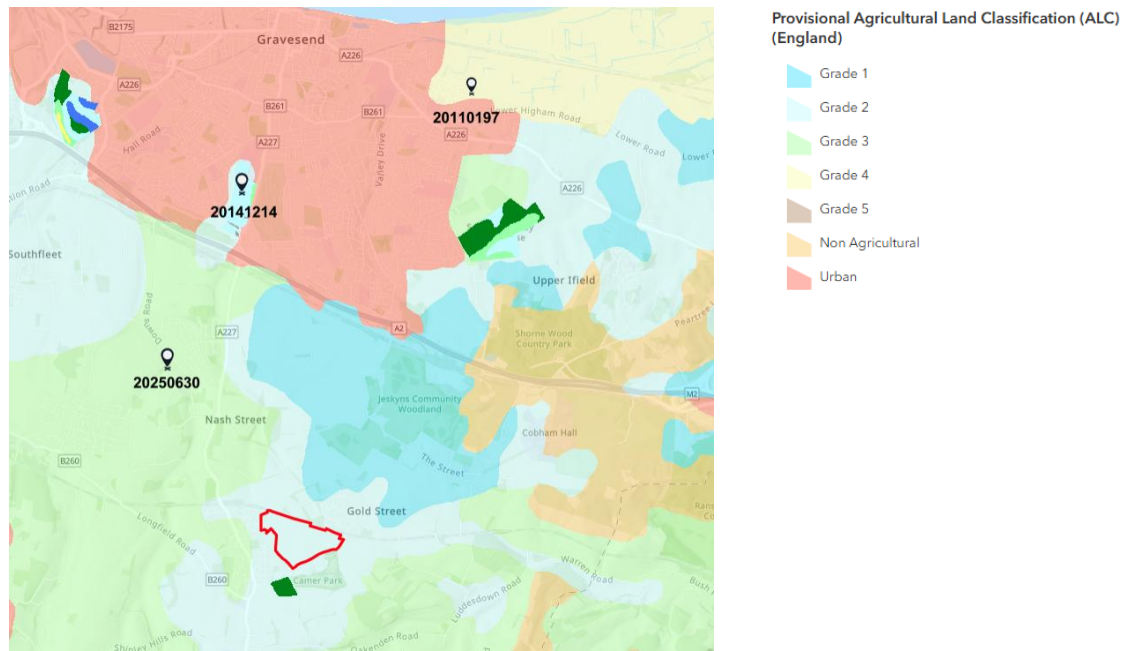
immediately south of the Site was completed in 1997 and found that site to be wholly of Subgrade 3a BMV. This further reinforces the theory of the majority of land surrounding the Site to be of BMV quality.

Insert 5. Past ALC Surveys



- 4.24 There has been development in the surrounding settlements of the Site that has taken place on agricultural land. To the north of the Site application 20141214 for the development of up to 400 dwellings was approved on land of Grade 2 quality. There were no concerns over the loss of BMV quality land.
- 4.25 To the west of the Site an EIA screening request has been submitted for the development of 160 dwellings on undifferentiated Grade 3 agricultural land, 20250630. The LPA have not requested that further ALC work be undertaken.
- 4.26 To the north of the Site a development for up to 130 dwellings, 20110197, was approved on agricultural land provisionally mapped as undifferentiated Grade 3. There was no mention of the loss of agricultural land in the committee report, and the development was recommended for approval.

Insert 5: Provisional ALC Map



Conclusions

- 4.27 Overall, it can be concluded that, in terms of land quality in the local area:
- (i) land is shown on the provisional mapping as and Grade 2 land quality;
 - (ii) the predictive likelihood of BMV maps shows that the site is located in an area of high likelihood of BMV;
 - (iii) the survey results in close proximity to the Site all show areas of BMV; and
 - (iv) development of BMV agricultural land has been permitted in the past. 20141214 in Gravesend was approved in 2018 on Grade 2 agricultural land.
- 4.28 There is no evidence to indicate that other land nearby is expected to not be of BMV quality or to be of a similar quality to the Site.

5 SUMMARY AND CONCLUSIONS

- 5.1 The Proposed Development Site extends to approximately 43.1 ha.
- 5.2 The land has been classified as comprising of 42.1 ha (98%) Grade 2, and 1 ha (2%) Non-agricultural land.
- 5.3 The NPPF requires economic benefits of BMV to be considered. The economic benefits of this Site are limited at £9,346 per annum over the BMV land, and the food production benefits of the area of BMV are 50.5 tonnes per annum of wheat per annum.
- 5.4 In terms of the NPPF, this is significant development of BMV agricultural land. Accordingly, poorer quality land does need to be considered in preference. There is no evidence, from the predictive and provisional mapping, to suggest a site with a lesser percentage of BMV is likely to be found that could support this development.
- 5.5 Development of agricultural land of BMV quality has been permitted in the past and will continue to need to be permitted to meet the housing requirements of the borough.
- 5.6 Based on the above, it is concluded that limited weight should be given to this loss of agricultural land.

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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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/ukxi/2015/595/schedule/4/made) (<http://www.legislation.gov.uk/ukxi/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,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>).

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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Appendix KCC2
Natural England's Technical
Information Note TIN 049

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.

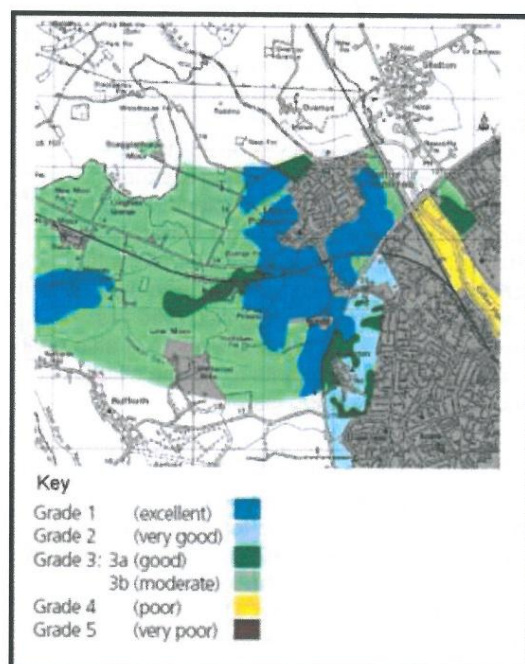
Policy to protect agricultural land

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 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
HOOK GREEN, MEOPHAM**

CLIENT: KERNON COUNTRYSIDE CONSULTANTS
PROJECT: HOOK GREEN, MEOPHAM
DATE: 7th NOVEMBER 2025 – ISSUE 1
ISSUED BY: JAMES FULTON MRICS FAAV

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2. INTRODUCTION
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APPENDIX 6 – MAP OF LAND GRADING

1. EXECUTIVE SUMMARY

- 1.1 This report assesses the Agricultural Land Classification (ALC) grading of 43.1Ha, of agricultural land at Meopham.
- 1.2 The limiting factor found to be soil droughtiness and where there is a higher proportion of stone in the topsoil stoniness is an equally limiting factor.
- 1.3 The land is graded as follows:

Grade 2:	42.1 Ha
Non-Agricultural:	1 Ha

2. INTRODUCTION

- 2.1 Amet Property Ltd have been instructed by Kernon Countryside Consultants to produce an Agricultural Land Classification (ALC) report on a 43.1-hectare site on land to the east of Meopham. The ALC report is being prepared to accompany a planning application.
- 2.2 The report's author is James Fulton BSc (Hons) MRICS FAAV who has worked as a chartered surveyor, agricultural valuer, and agricultural consultant since 2004, has a degree in agriculture which included modules on soils and over 10 years' experience in advising farmers on soil structure and cultivation methods and in producing agricultural land classification reports. Additional information on authors experience is found at **appendix 1**.
- 2.3 The report is based on a site visit conducted by James Fulton and an assistant surveyor on the 17th of October 2025 during which the conditions were sunny, and soils were slightly drier than ideal but with enough moisture to determine soil structure.
- 2.4 During the inspection 1 trial pit was dug to a depth of 120cm. In addition to the trial pits an auger was used to take approximately one sample per hectare on the proposed development site to a depth of 120cm with smaller trial pits at some of these locations to confirm soil structure and colour where it was not clear from the auger samples. A plan of auger points and trial pit locations can be found at **appendix 2**. The trial pit locations were selected as they were representative of the soils found on site. Where subsoils were inspected with a spade, descriptions of structure have been recorded based on the soil survey field handbook¹; where an auger has been used the structure is described as good, moderate or poor based on figure 9,10 and 11 in the MAFF² guidance. Colours are described using Munsell Colours³.
- 2.5 The site is described in literature as likely to be calcareous and so hydrochloric acid was used to test in field for a reaction that would indicate calcareous soils.
- 2.6 The surveyed area extends to 43.1Ha of arable/grassland land spread across 1 field. The site is located to the east of Meopham.
- 2.7 Further information has been obtained from the MAGIC website, the Soil Survey of England and Wales, the British Geological Survey, the Meteorological Office and 1:250,000 series Agricultural Land Classification maps.
- 2.8 The collected information has been judged against the Ministry of Agriculture Fisheries and Food Agricultural Land Classification of England and Wales revised guidelines and criteria for grading the quality of agricultural land.

¹ Hodgson, JM (1997) Soil Survey Field Handbook

² MAFF (1988) - *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications

³ Munsell Color (2009) Munsell Soil Color Charts

- 2.9 The principal factors influencing agricultural production are climate, site and soil and the interaction between them MAFF (1988) & Natural England (2012)⁴.
- 2.10 The report is prepared and formatted considering the latest BSSS guidance⁵.

3. PUBLISHED INFORMATION

- 3.1 The British Geological Survey 1:50,000 scale map shows the bedrock geology to be Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation – Chalk. In the northeast and northwest corners of the site superficial deposits of Head – clay, silt, sand and gravel are shown. There is a large patch of Thanet Formation – Sand, bedrock geology shown along the southeast border of the site.
- 3.2 The soils on most of the site are identified as being largely 582s BATCOMBE Association, fine silty over clayey and fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging. The northwest corner of the site is identified as being 343h ANDOVER 1 Association, shallow well drained calcareous silty soils over chalk on slopes and crests.
- 3.3 The 1:250,000 series Agricultural Land Classification maps show the land to be Grade 2. These plans are of strictly limited value, using an out-of-date methodology at a very small scale (low detail) level of survey. Further information on the limits of their use can be found in TIN049.

⁴ MAFF (1988) - *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications

Natural England (2012) - *Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land*, Second Edition

⁵ BSSS (2022) Working with Soil Guidance Note on Assessing Agricultural Land Classification Surveys in England and Wales

4. CLIMATE

- 4.1 Climate has a major, and in places overriding, influence on land quality affecting both the range of potential agricultural uses and the cost and level of production.
- 4.2 There is published agro-climatic data for England and Wales provided by the Meteorological Office, such data for the subject site is listed in the table below.

Agro-Climatic Data – Full details can be found at *appendix 3*

Grid Reference	565100,167500
Altitude (ALT)	93
Average Annual Rainfall (AAR)	659
Accumulated Temperature - Jan to June (ATO)	1398
Duration of Field Capacity (FCD)	131
Moisture Deficit Wheat	110
Moisture Deficit Potatoes	104

- 4.3 The main parameters used in assessing the climatic limitation are average annual rainfall (AAR), as a measure of overall wetness; and accumulated temperature (ATO), as a measure of the relative warmth of a locality.
- 4.4 The AAR and ATO provide climatic limitation to Grade 1.
- 4.5 The site is shown to be in flood zone 1 – areas with a less than 1 in 1000 annual chance of flooding. There was no evidence of flooding seen during the site visit and it is considered that will not result in a limitation to land grade.

5. STONINESS

- 5.1 The stones in the topsoil are usually between 2 and 6cm subrounded to angular and range from 3% to 8% either providing no limit to land grade or limiting areas to grade 2.

6. GRADIENT AND MICRORELIEF

- 6.1 The site is gently sloping with no gradient or microrelief that limits land grade.

7. SOILS

- 7.1 Full information on the sample points along with trial pit descriptions and photographs and lab test results can be found at **appendix 4**.
- 7.2 The soils are very consistent across the site with the topsoil being usually a medium clay loam, occasionally a heavy clay loam with stone content varying from 3% to 5%.
- 7.3 The subsoil is again either medium clay loam or heavy clay loam, consistently 10% hard stone and moderately structured.

INTERACTIVE FACTORS

8. WETNESS

- 8.1 An assessment of the wetness class of each sample point was made based on the flow chart at Figure 6 and the graphs at figure 7 and 8 in the MAFF guidance.

Wetness class Assessment

Depth to gley	Depth to SPL	Coarse subsoil	Wetness Class
No gley	No SPL	N/A	I
40-70	No SPL	Yes	I
<40	No SPL	Yes	I
<40	No SPL	No	II
40-70	No SPL	No	I
40-70	>44	N/A	II
40-70	<44	N/A	III
<40	>62	N/A	II
<40	35-62	N/A	III

- 8.2 The wetness class and topsoil texture were then assessed against Table 6 of the MAFF guidance to determine the ALC grade according to wetness. The wetness assessment can be found at **appendix 4**.
- 8.3 There is no gleying of slowly permeable layer identified in any of the subsoils and so all survey points are assessed to be wetness class I, resulting in a limit of grade 2 where the topsoil is heavy clay loam and no limit where topsoil is medium clay loam

9. DROUGHTINESS

- 9.1 Droughtiness limits are defined in terms of moisture balance for wheat and potatoes using the formula:

$$MB \text{ (Wheat)} = AP \text{ (Wheat)} - MD \text{ (Wheat)}$$

and

$$MB \text{ (Potatoes)} = AP \text{ (Potatoes)} - MD \text{ (Potatoes)}$$

Where:

MB = Moisture Balance

AP = Crop Adjusted available water capacity

MD = Moisture deficit

- 9.2 Moisture deficit for wheat and potatoes can be found in the agro-climatic data and are as follows:

$$MD \text{ (Wheat)} = 110$$

$$MD \text{ (Potatoes)} = 104$$

- 9.3 Crop adjusted available water is calculated by reference to the total available water and easily available water which is calculated by reference to soil texture and structural condition and the stone content.
- 9.4 The moisture balance was calculated for all survey points; this assessment can be found at **appendix 4**.
- 9.5 All survey points are limited to grade 2 by droughtiness.

10. AGRICULTURAL LAND CLASSIFICATION

- 10.1 The Agricultural Land Classification provides a framework for classifying land according to which its physical or chemical characteristics impose long-term limitations on agricultural use. The limitations can operate in one or more of four principal ways: they may affect the range of crops that can be grown, the level of yield, the consistency of yield and the cost of obtaining it.
- 10.2 The principal physical factors influencing agricultural production are climate, site and soil and the interactions between them which together form the basis for classifying land into one of 5 grades; grade 1 being of excellent quality and grade 5 being land of very poor quality. Grade 3 land, which constitutes approximately half of all agricultural land in the United Kingdom is divided into 2 subgrades – 3a and 3b. A full definition of all of the grades can be found at **appendix 5**.
- 10.3 This assessment sets out that the site is limited by droughtiness and equally by stoniness at some survey points.
- 10.4 The breakdown of land by classification is:
- | | |
|-------------------|---------|
| Grade 2: | 42.1 Ha |
| Non-Agricultural: | 1 Ha |
- 10.5 A plan of the land grading can be found at **appendix 6**.

Appendix 1 – Details of the Authors Experience

James Fulton

Professional Education and Qualifications

BSc (Hons) Agriculture, University of Nottingham (2004)

Member of the Royal Institution of Chartered Surveyors (MRICS) (2008)

Fellow of the Central Association of Agricultural Valuers (FAAV) (2009)

Relevant Work Experience

While working for a regional firm from 2004 until 2016 as part of my work I provided advice to farmers on soils, cultivation techniques and cropping and was involved in field trials which assessed cropping and cultivation techniques and how they impacted soil structure. At the same time I worked alongside an experienced surveyor who produced Agricultural Land Classification reports and I received training in field survey techniques and the ALC process to the point where I was able to produce ALC reports.

In 2016 I left my employer and formed Amet Property Ltd providing development consultancy and other rural practice surveying services. Of all of the services that we provide Agricultural Land Classification reports is the single largest area of work accounting for approximately 70% of all of my working time.

While I am not a member of the BSSS I meet the minimum competencies set out by the BSSS in Document 1 *Foundation skills in field soil investigation, description and interpretation* and Document 2 *Agricultural Land Classification (England and Wales)*

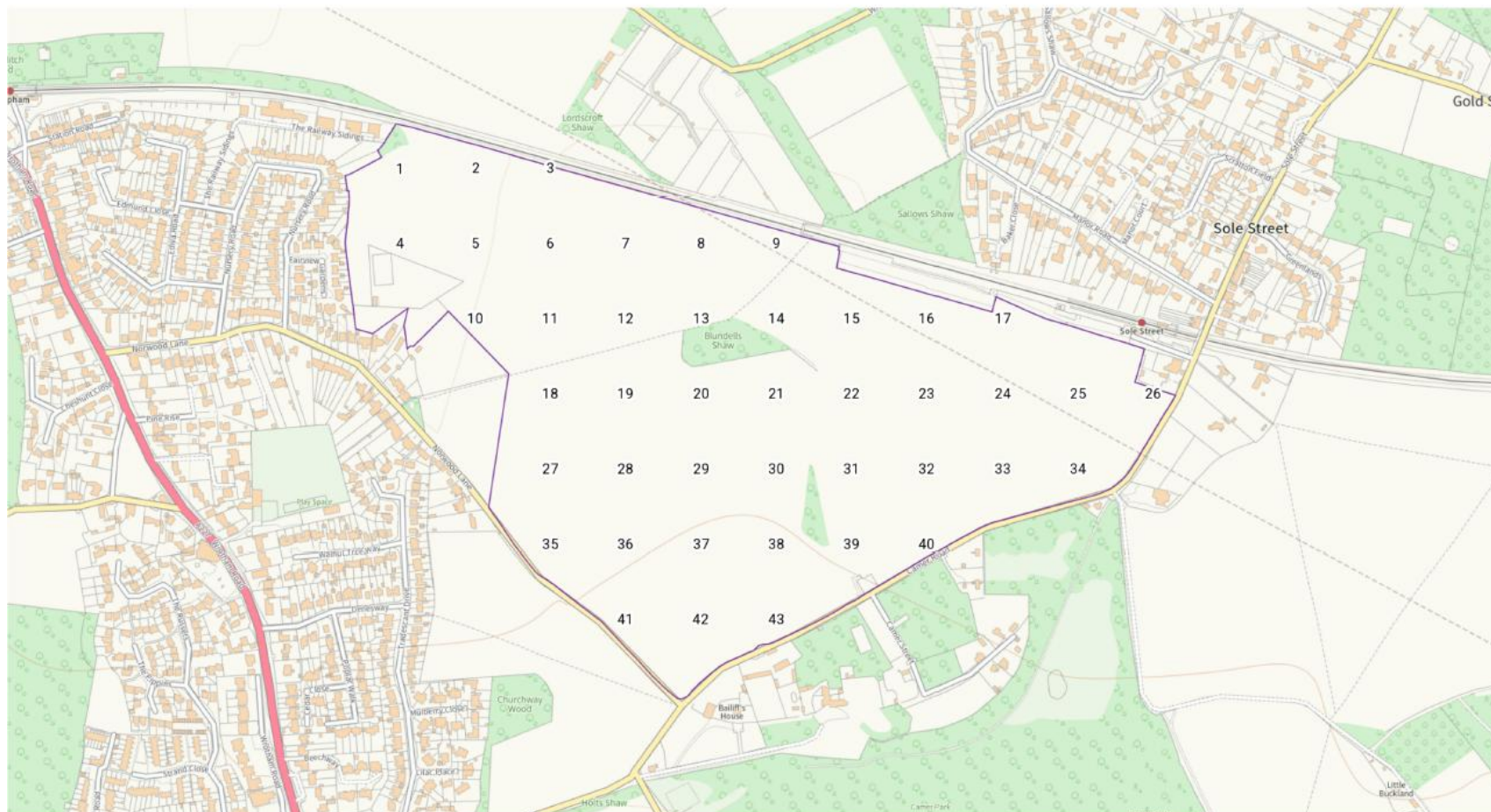
Professional Standards

As a member of the Royal Institution of Chartered Surveyors and Fellow of the Central Association of Agricultural Valuers I am bound by their professional standards and am only able to carry out work where I am suitably qualified and experienced to do so. Due to the formal and practical training that I have received I am able to competently produce Agricultural Land Classification reports.

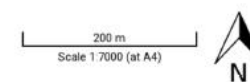
Assistant Surveyors

All assistant surveyors have completed the BSSS working with soil course and have been trained to meet the requirements of BSSS Document 1 *Foundation skills in field soil investigation, description, and interpretation*.

Appendix 2 - Map of Survey Points



Produced on Land App, Oct 14, 2025.
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Appendix 3 – Climatic Data

Site Details: Meopham

Grid reference (centre of site): 381365,251829

Altitude: Mean 35.01 AOD

Climatic data from surrounding locations:

Grid Reference	ALT	AAR	LR_AAR	ASR	ATO	ATS	MDW	MDP	FCD
56501650	126	694	0.4	345	1362	2360	103	94	141
56501700	69	620	0.3	310	1424	2429	116	111	121
57001650	29	683	0.5	320	1471	2483	118	114	139
57001700	75	640	0.5	310	1416	2422	115	110	125

Altitude Adjusted

Grid Reference	AAR	ATO	FCD	MDW	MDP	Proximity Adjustment
56501650	680.72	1399.84	139.08	107.33	99.74	41.43%
56501700	627.14	1396.86	122.03	113.06	107.10	41.43%
57001650	714.91	1398.26	143.61	109.22	102.40	8.57%
57001700	648.91	1395.70	126.29	112.55	106.76	8.57%
	659	1398	131	110	104	

Appendix 4a - Survey Point Assessment

Sample No	Topsoil			Calc	Colour	Stoniness		Upper Subsoil			Calc	Colour	Stoniness	Mottles	Structure	Gleyed	Lower Subsoil			Calc	Colour	Stoniness	Mottles	Structure	Gleyed	SPL	Grade limit by Stoniness	Wetness Assessment		Grade limit by Wetness	Droughtiness Assessment		Grade limit by Droughtiness
	Altitude	Depth	Texture			<2cm	2-6cm >6cm	Depth	Texture	Depth							Texture	Depth to Gleyed	SPL									Wetness Class	Wheat		Potato		
1	86	0 - 30	MCL	N	10YR 4 / 3	8%		30 - 50	MCL	Y	10YR 5 / 4	10%			Moderate	N	N	50 - 120	C	N	10YR 6 / 4					N	2	I	1	24.61	7.30	2	
2	86	0 - 35	MCL	N	10YR 4 / 3	8%		35 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					2	I	1	37.48	8.00	2	
3	87	0 - 35	MCL	N	10YR 4 / 3	8%		35 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					2	I	1	37.48	8.00	2	
4	84	0 - 30	MCL	N	10YR 4 / 3	8%		30 - 120	MCL	Y	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	31.96	4.30	2	
5	86	0 - 30	HCL	N	10YR 4 / 3	8%		30 - 120	HCL	Y	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	2	31.96	4.30	2	
6	89	0 - 30	HCL	N	10YR 4 / 3	8%		30 - 120	HCL	Y	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	2	31.96	4.30	2	
7	91	0 - 35	MCL	N	10YR 4 / 3	5%		35 - 120	MCL	Y	10YR 5 / 4	10%			Moderate	N	N	-				/					1	I	1	34.81	7.16	2	
8	91	0 - 30	MCL	Y	10YR 4 / 3	6%	4%	30 - 60	MCL	Y	10YR 6 / 4	10%			Moderate	N	N	60 - 120	Chalk			5YR 4 / 4					2	I	1	18.64	-1.22	2	
9	91	0 - 25	MCL	N	10YR 4 / 3	5%		25 - 60	MCL	Y	10YR 5 / 4	10%			Moderate	N	N	60 - 120	HCL								1	I	1	37.86	6.01	2	
10	87	0 - 30	HCL	Y	10YR 4 / 3	5%		30 - 60	HCL	Y	10YR 6 / 4	5%			Moderate	N	N	60 - 120	Chalk								1	I	2	23.16	3.58	2	
11	89	0 - 30	MCL	Y	10YR 4 / 3	6%	4%	30 - 120	MCL	Y	10YR 6 / 4	10%			Moderate	N	N	-				/					2	I	1	30.94	3.28	2	
12	91	0 - 35	MCL	Y	10YR 4 / 3	6%	4%	35 - 120	MCL	Y	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	31.84	4.18	2	
13	92	0 - 30	MCL	Y	10YR 4 / 3	6%	4%	30 - 120	MCL	Y	10YR 6 / 4	10%			Moderate	N	N	-				/					2	I	1	30.94	3.28	2	
14	92	0 - 30	MCL	N	10YR 4 / 3	6%		30 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					2	I	1	37.80	8.32	2	
15	91	0 - 35	MCL	N	10YR 4 / 3	8%		35 - 70	MCL	N	10YR 6 / 4	5%			Moderate	N	N	70 - 120	Chalk								2	I	1	24.85	8.00	2	
16	90	0 - 35	MCL	N	10YR 4 / 3	3%		35 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					1	I	1	36.00	8.35	2	
17	91	0 - 35	MCL	N	10YR 4 / 3	3%		35 - 120	MCL	N	10YR 6 / 4	10%			Moderate	N	N	-				/					1	I	1	36.00	8.35	2	
18	90	0 - 30	MCL	N	10YR 4 / 3	8%		30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	31.96	4.30	2	
19	93	0 - 35	MCL	N	10YR 4 / 3	8%		35 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	33.03	5.37	2	
20	94	0 - 30	MCL	N	10YR 4 / 3	10%		30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	30.94	3.28	2	
21	94	0 - 35	MCL	N	10YR 4 / 3	5%		35 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					1	I	1	34.81	7.16	2	
22	93	0 - 30	MCL	N	10YR 4 / 3	3%		30 - 120	HCL	N	10YR 4 / 4	10%			Moderate	N	N	-				/					1	I	1	34.51	6.85	2	
23	93	0 - 30	MCL	N	10YR 4 / 3	3%		30 - 120	MCL	N	10YR 4 / 4	10%			Moderate	N	N	-				/					1	I	1	34.51	6.85	2	
24	92	0 - 35	MCL	N	10YR 4 / 3	6%		35 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					2	I	1	38.67	9.19	2	
25	92	0 - 30	MCL	N	10YR 4 / 3	3%	3%	30 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					2	I	1	37.80	8.32	2	
26	92	0 - 30	MCL	N	10YR 3 / 2	3%	3%	30 - 120	MCL	N	10YR 4 / 4	5%			Moderate	N	N	-				/					2	I	1	37.80	8.32	2	
27	91	0 - 35	MCL	N	10YR 4 / 3	6%		35 - 120	HCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	34.22	6.56	2	
28	93	0 - 30	MCL	N	10YR 4 / 3	3%	3%	30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	32.98	5.32	2	
29	96	0 - 30	MCL	N	10YR 4 / 3	6%		30 - 120	MCL	N	10YR 6 / 4	10%			Moderate	N	N	-				/					2	I	1	32.98	5.32	2	
30	97	0 - 35	MCL	N	10YR 4 / 3	3%		35 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					1	I	1	36.00	8.35	2	
31	95	0 - 30	MCL	N	10YR 4 / 3	3%		30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					1	I	1	34.51	6.85	2	
32	94	0 - 35	MCL	N	10YR 4 / 3	3%		35 - 120	MCL	N	10YR 6 / 4	5%			Moderate	N	N	-				/					1	I	1	40.45	10.97	1	
33	94	0 - 30	MCL	N	10YR 4 / 3	3%		30 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					1	I	1	39.33	9.85	2	
34	94	0 - 30	MCL	N	10YR 4 / 3	6%		30 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					2	I	1	37.80	8.32	2	
35	95	0 - 30	MCL	N	10YR 4 / 3	10%		30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	30.94	3.28	2	
36	97	0 - 30	MCL	N	10YR 4 / 3	6%		30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	32.98	5.32	2	
37	99	0 - 30	MCL	N	10YR 4 / 3	3%		30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					1	I	1	34.51	6.85	2	
38	100	0 - 30	MCL	N	10YR 4 / 3	3%		30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					1	I	1	34.51	6.85	2	
39	98	0 - 30	MCL	N	10YR 4 / 3	6%		30 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					2	I	1	37.80	8.32	2	
40	96	0 - 30	MCL	N	10YR 4 / 3	6%		30 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					2	I	1	37.80	8.32	2	
41	100	0 - 30	MCL	N	10YR 4 / 3	6%		30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	32.98	5.32	2	
42	102	0 - 30	MCL	N	10YR 3 / 2	3%	3%	30 - 120	MCL	N	10YR 5 / 4	10%			Moderate	N	N	-				/					2	I	1	32.98	5.32	2	
43	103	0 - 30	MCL	N	10YR 4 / 3	6%		30 - 120	MCL	N	10YR 5 / 4	5%			Moderate	N	N	-				/					2	I	1	37.80	8.32	2	
92.81																																	

92.81

Appendix 4b – Trial Pit Descriptions

Sample Point No. 5		
Horizon 1	0-30cm Brown (10YR 4/3) heavy clay loam with 8% rounded, subrounded, and subangular hard stones between 2cm and 6cm	
Horizon 2	30-120cm Yellowish brown (10YR 5/4) heavy clay loam, with medium angular blocky structure, firm consistence, and 5% angular and subangular hard stones.	
Horizon 3		
Pictures		
Horizon 1	Horizon 1 - stones	Horizon 2
		
Slowly permeable layer	Not present	
Gleying	Not present	
Wetness Class	I	
Wetness limitation	2	
MB Wheat	31.96	
MB potatoes	4.30	
Droughtiness Limitation	2	
Stoniness Limitation	2	

ANALYTICAL REPORT										
Report Number	25098-25		W250		AMET PROPERTY					
Date Received	20-OCT-2025				HENWICK BARN					
Date Reported	28-OCT-2025				BULWICK					
Project	KERNON				CORBY					
Reference	MEOPHAM				NORTHANTS					
Order Number					NN17 3DU					
Laboratory Reference	SOIL769834		SOIL769835		SOIL769836		SOIL769837			
Sample Reference	MEOPHAM 5		MEOPHAM 5 SS		MEOPHAM 14		MEOPHAM SS 33			
Determinand	Unit	SOIL	SOIL	SOIL	SOIL					
Coarse Sand 2.00-0.63mm	% w/w	1	2	3	1					
Medium Sand 0.63-0.212mm	% w/w	3	1	2	1					
Fine Sand 0.212-0.063mm	% w/w	19	17	17	19					
Silt 0.063-0.002mm	% w/w	49	51	53	57					
Clay <0.002mm	% w/w	28	29	25	22					
Textural Class **		HCL	HCL/HZCL	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. ** Please see the attached document for the definition of textural classes.										
Reported by <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)

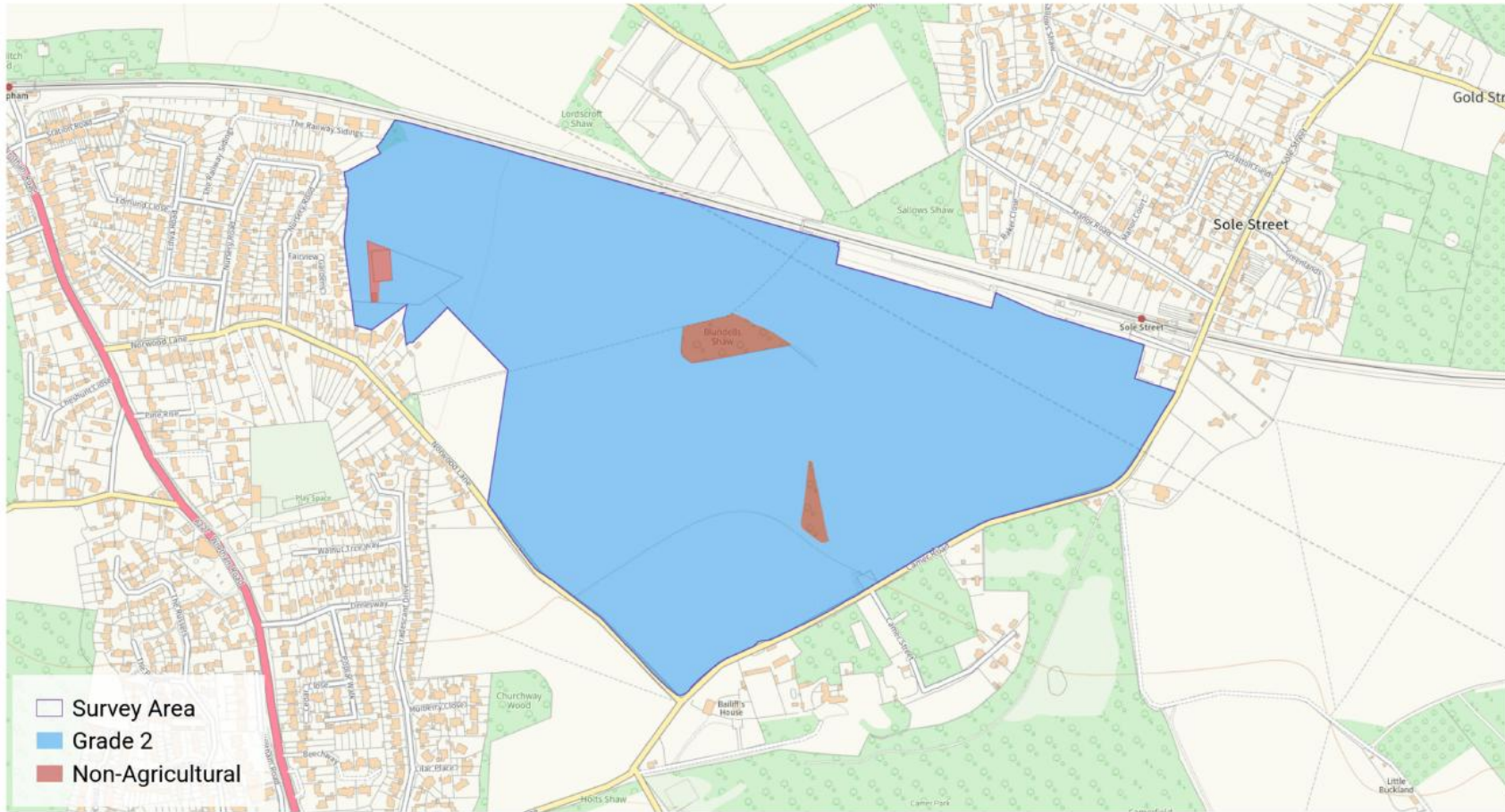
Organic soils i.e. those with an organic matter greater than 10% will be preceded with a letter O.

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

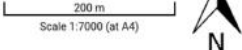
APPENDIX 5 - DESCRIPTION OF ALC GRADES

- Grade 1 - excellent quality agricultural land Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.
- Grade 2 - very good quality agricultural land Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but 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.
- Grade 3 - good to moderate quality agricultural land Land with moderate limitations which 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.
- 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 a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
- Subgrade 3b - moderate quality agricultural land Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
- Grade 4 - poor quality agricultural land Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. 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 in utilisation. The grade also includes very droughty arable land.
- Grade 5 - very poor-quality agricultural land Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

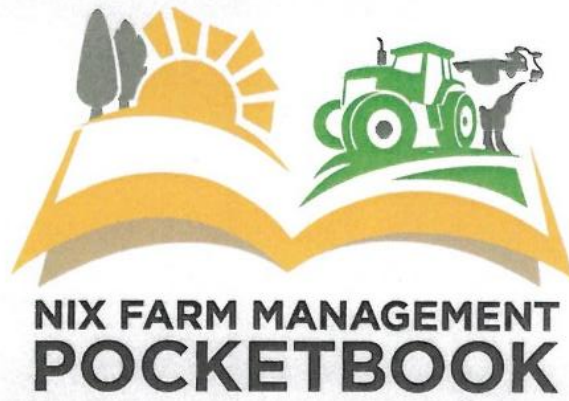
Appendix 6 - Map of ALC Grade



Produced on Land App, Nov 7, 2025.
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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 x £410 x 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.



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