

**LAND AT
BROAD OAK, BOTLEY**

**AGRICULTURAL LAND
CLASSIFICATION AND
CONSIDERATIONS**

November 2023





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1 INTRODUCTION

- 1.1 This report considers the agricultural land quality of a parcel of land extending to approximately 2.8 ha at Broad Oak, Botley.
- 1.2 The site comprises of one land parcel, which is shown outlined in red on the aerial image below. The land is in grassland use, with an unmanaged area previously in horticultural use.

Insert 1. The Site (Boundary Approx.)



- 1.3 A detailed Agricultural Land Classification (ALC) has been carried out over the site. The site has been graded as Grade 2 and Subgrade 3a quality.
- 1.4 This report:
- (i) reviews the relevant planning policy in Section 2;
 - (ii) describes the site and the ALC survey and findings in Section 3;
 - (iii) assesses the findings against that policy in Section 4; and
 - (iv) provides 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 POLICY AND GUIDANCE

National Planning Policy

- 2.1 The National Planning Policy Framework (NPPF) (2023), Paragraph 174 notes that planning policies and decisions should contribute to enhance the natural and local environment by, inter alia, recognising **“the wider benefits from the 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.
- 2.3 Paragraph 175 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 58 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 as “significant” development. However, the “Guide to assessing development proposals on agricultural land” (Natural England, February, 2021) advises local planning authorities to **“take account of smaller losses (under 20ha) 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 Eastleigh Borough Council Local Plan (2016-2036) strategic policy S5 "New development in the countryside" notes at part 2 that in permitting new development the Council will seek to:
- "d) safeguard the best and most versatile agricultural land unless the benefit of the development clearly outweighs the loss; and**
 - e) protect soils during construction wherever possible in line with the Defra Code of Practice for the sustainable use of soils on construction sites."**

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 20ha of BMV land is involved.

- 2.7 The Institute of Environmental Management and Assessment (IEMA) produced a Guide "**A New Perspective on Land and Soil in Environmental Impact Assessment**" in February 2022. Whilst that refers to EA development, it identified in table 3 (page 49) the magnitude of impacts on soil resources. The permanent irreversible loss of under 5ha is defined in table 3 as a "**minor magnitude of impact**".

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 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 can be found reproduced in **Appendix KCC1**.

Detailed ALC Survey Results

- 3.3 KCC Ltd carried out a detailed ALC survey of the site in November 2015. Five 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 stoniness and to better describe the soil profiles.
- 3.5 A detailed ALC report is set out in **Appendix KCC2**.
- 3.6 The results of the survey can be seen in the table below.

Table 1. ALC Results

ALC Grade	Description	Area (ha)	Proportion (%)
Grade 2	Very Good	0.9	32
Subgrade 3a	Good	1.9	68
Total	-	2.8	100

- 3.7 The distribution of the grading can be seen on the ALC plan which can be found at the back of this report, referenced **Plan KCC3 (KCC2132/03)**.

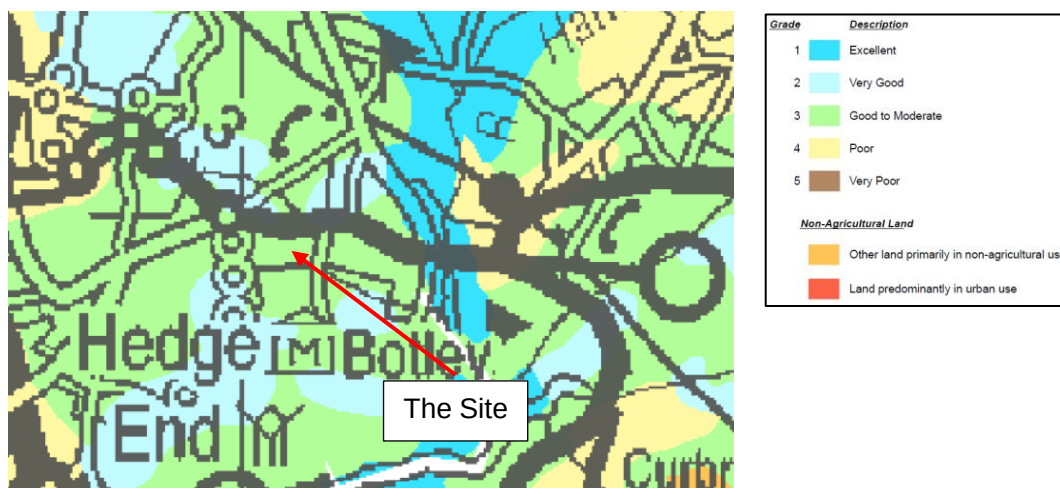
4 POLICY ASSESSMENT

- 4.1 The NPPF (2021) identifies that land of Grades 1, 2 and 3a as the best and most versatile agricultural land and requires, that the economic and other benefits of BMV land be recognised.
- 4.2 In the context of plan making, the NPPF sets out that where significant development of such land is demonstrated to be necessary, poorer quality land is to be used in preference.
- 4.3 Eastleigh Borough Council seek to safeguard BMV land unless the benefits outweigh the loss, and to protect the soils.

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

- 4.4 The significance of the 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 KCC1**).
- 4.5 The MAFF statistics from the “provisional” ALC in the 1970s provide provisional grading for 11,433,000ha. 42% of that land would be 4.8 million hectares.
- 4.6 The Utilised Agricultural Area (UAA) of England, which is less than the total amount of agricultural land, was 8.9 million hectares in 2022 (Agricultural Land Use in England at 1 June 2022, DEFRA, 29 September 2022). This suggests that 3.7 million hectares of BMV land is in active agricultural use.
- 4.7 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.
- 4.8 Therefore, it is not considered that BMV quality land is a rare resource.
- 4.9 On the published “provisional” ALC maps from the 1970s the land is shown as undifferentiated Grade 3, as can be seen on the map below.

Insert 2. Provisional ALC Map



- 4.10 There are limitations with the “provisional” maps, which are described in TIN049 (**Appendix KCC1**). In 2017 Natural England produced predictive likelihood of 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). For this area the map shows part of the site as being low likelihood of BMV land. It will be noted that parts of the site and land around the site are listed as ‘urban’.

Insert 3. Predictive BMV Map



- 4.11 There is no detailed ALC data for this site. The closest Agricultural Land Classification survey data available is for a site to the north and the south west of the site. Results concluded that the sites were a mixture of Grade 2, Subgrade 3a and 3b land.

- 4.12 Based on this, it can be concluded, in terms of land quality in the local area, that the Site is shown as some of the lowest quality available. Field survey has however identified the Site as BMV.

Economic Benefits

- 4.13 There is no research that we are aware of that seeks to analyse the productive economic advantages of BMV to non-BMV land. Grade 2 land is described in the ALC as capable of growing moderate to high yields of a narrow range of crops, or a moderate yield from a wider range of crops. Subgrade 3a is described as producing a moderate yield of a narrow range of crops, principally cereals or grass, of lower yields or a wider range of crops.
- 4.14 In the absence of any empirical data, any economic assessment is inevitably crude. Taking standard budgeting textbooks, such as the John Nix Pocketbook for Farm Management (extracts which have been reproduced in **Appendix KCC3**) it is possible to show the difference between moderate and high yields, as an illustration between crops.
- 4.15 Taking that crude measure and applying it to winter wheat and oilseed rape, the differences are shown below.

Table 2. Assessment of Economics of Farmed Land

Item	Winter Wheat		Oilseed Rape	
	Average	High	Average	High
Yield (t/ha)	8.6t/ha	10.0t/ha	3.5t/ha	4.0t/ha
Output (£)	£2,108/ha	£2,423/ha	£1,803/ha	£2,060/ha
Gross Margin (£)	£1,200/ha	£1,515/ha	£1,066/ha	£1,363/ha
Uplift (£)	-	£315/ha	-	£257/ha

John Nix Pocketbook for Farm Management, September 2022

- 4.16 The site is grassland. However, if it was to be cropped the economic benefit of BMV and to non-BMV land would be less than £1,300 (£1,028 - £1,260 on 2022 budgets). Hence the economic benefits on a land parcel of this size, are fairly limited. The yield benefits over a similar area of non-BMV land would equate to 2.0 tonnes of oilseed rape or 5.6 tonnes of winter wheat. This is a modest production benefit, in the context of UK cereal production in 2022 of £24 million ha (Cereal and oilseed production in the UK 2022, Defra 21/12/22).
- 4.17 In practical terms the field is not suitable for arable use. It is too small and is unlikely to be economic to farm as cereals or break crops.

- 4.18 The Proposed Development will not have a significant adverse impact on a full-time farm business, nor will it result in any other agricultural land being impacted or becoming unfarmable as a result of severance. Other farmland can continue to be managed as it is now.

Whether this is “Significant” Development

- 4.19 This proposal should not be considered to be “**significant development of agricultural land**” in the context of the NPPF.
- 4.20 Paragraphs 174 and 175 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 the loss of 20 ha or more of BMV land (as can be seen in the TIN049 in **Appendix KCC1**). This has been the threshold for consultation with MAFF since 1987.
- 4.21 At just 2.8 ha, the quantum of BMV is less than 15% of the threshold for consultation with Natural England. Therefore, this quantum is not “significant development”.
- 4.22 The “Guide to assessing development proposals on agricultural land” (Natural England, 5th February 2021) (**Appendix KCC4**) does not define a threshold but does provide some guidance. This adds to our view that 20 ha is a reasonable threshold for definition what is significant development:
- Paragraph 6 states “**you should take account of smaller losses (under 20 ha if they are significant when making you 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 to consider that the loss of 20ha may be significant in an area where BMV land is rare, for example.
 - 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.

Conclusion

- 4.23 The site was surveyed in November 2015. This identified that the site was a mixture of Grade 2 and Subgrade 3a.

- 4.24 The 2.8 ha site is all of BMV quality and is therefore <15% of the threshold for consultation with Natural England. Therefore, the quantum of BMV is not considered significant and only limited weight should be given to the loss of such a small area.
- 4.25 The 1:250,000 scale provisional ALC gives an indication that there are no obvious areas of poorer quality available, but at this scale is of limited use.
- 4.26 When considering the economic benefits of the agricultural land, it is estimated that the economic benefits of the site are less than £1,300 per annum. This is fairly limited.

5 SUMMARY AND CONCLUSIONS

- 5.1 The proposed site extends to 2.8 ha.
- 5.2 The land has been classified as comprising of a mix of Grade 2 and 3a.
- 5.3 The NPPF requires the economic benefits and other benefits of BMV to be considered. The economic benefits of the site are approximately £1,300 per annum.
- 5.4 With regards to the NPPF, this is not considered “significant” development of agricultural land. Accordingly, poorer quality land does not need to be considered in preference.
- 5.5 The site is shown on published maps as some of the lowest quality available. Survey has shown it to be of BMV quality, but its farmability and economic benefits are limited.
- 5.6 Agricultural land quality of this small site should not be a bar to non-agricultural development.

Appendix KCC1
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.

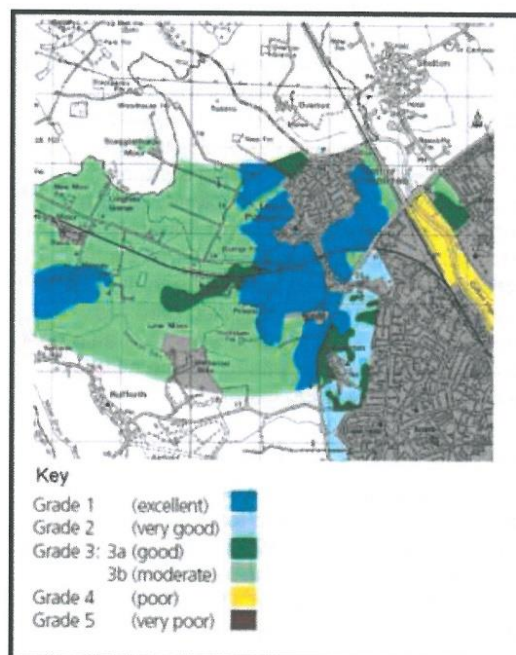
Policy to protect agricultural land

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://www.naturalengland.org.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

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Appendix KCC2
Agricultural Land Classification Report

THE SOILS AND AGRICULTURAL LAND CLASSIFICATION OF LAND AT BROADOAK, NEAR SOUTHAMPTON

1. This report sets out the findings of an agricultural land classification of approximately 4 hectares of agricultural land at Broadoak on the south eastern edge of Botley, near Southampton.
2. The site, comprising a single field in permanent grassland is situated on the western edge of Corbett's Way and immediately south of the A334. Part of the field has been used as an allotment in the recent past.
3. The ground was surveyed in November 2015 and has been graded according to the current Defra guidelines and criteria (MAFF 1988). 5 sites were examined over the land (Figure 1).

Factors affecting ALC grade at Botley

4. Climate affects the grading of land through the assessment of an overall climatic limitation and also through the interaction with soils.
5. The key climatic variables for this site are provided by the Met Office (1989), interpolated from the published 5km grid climatic datasets. The figures for this site are for a point in the centre of the survey area and are given in the table below:

Table 1: Climate and altitude data

Grid reference	SU 5040 1300
Altitude	15m AOD
Average annual rainfall	815mm
Accumulated temperature >0°C (Jan-June)	1537 degree days
Moisture deficit, wheat	111mm
Moisture deficit potatoes	106mm
Field capacity period	168 days

6. Annual rainfall amounts are moderate, at around 830mm, and temperatures are equable reflecting a typical climate in this part of southern England. Plant water demand is moderate and the field capacity period, that period when soils are potentially wet, of about 170 days is high enough to restrict cultivation to the autumn period in all but the driest soils. The combination of rainfall and temperature at this site imposes no direct **climatic limitation** upon land quality.
7. **Soil droughtiness** is the principal limitation to land quality over this ground. Most soils hold insufficient available water to fully sustain plant growth.
8. **Soil wetness** is also slightly limiting over a small part of the site where profiles show evidence of seasonal wetness by way of some rusty mottles above a dense subsoil layer.

Relief and drainage

9. The field slopes gently to the north and east over gradients of less than 2°. **Gradient** is not limiting on this ground. Drainage is to the watercourses to the north and south of the site.

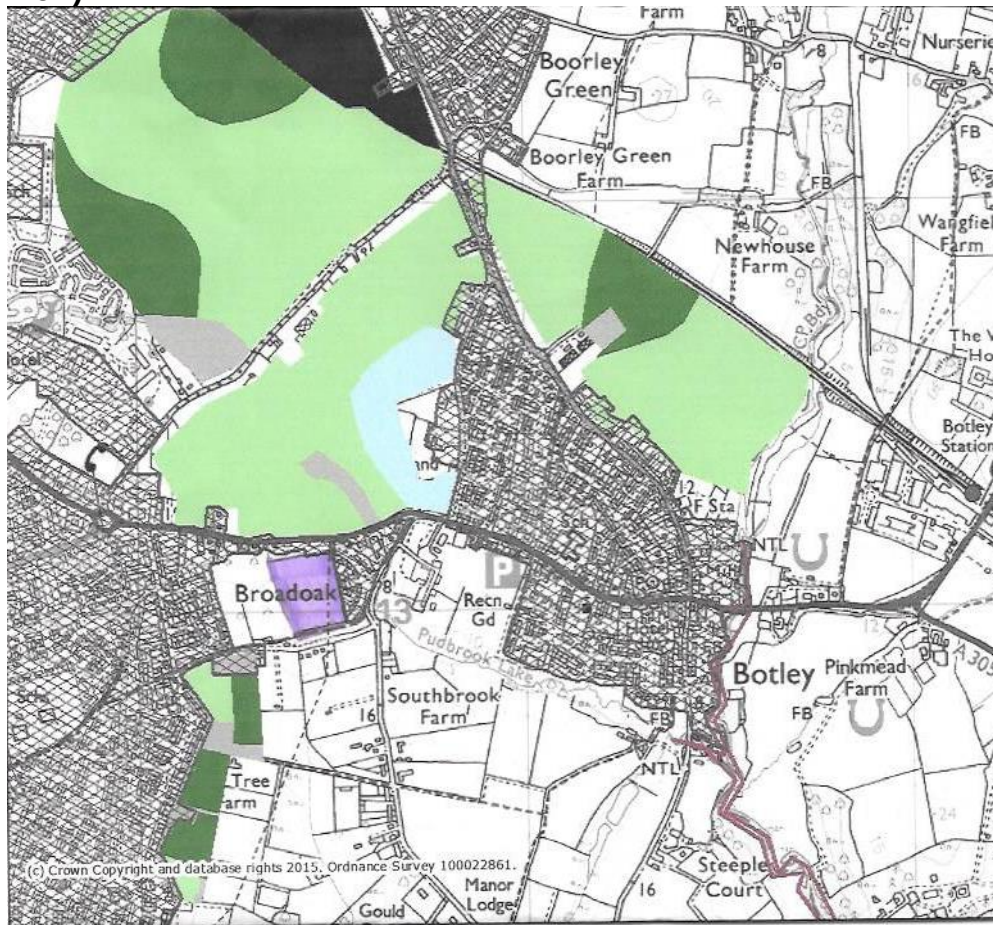
Geology and soils

10. Geological information from the BGS web site (www.bgs.ac.uk) discovering geology/geology of Britain) shows the ground to be underlain by rocks of the Earnley Sand formation which comprises glauconitic silts and sands. These rocks have only been identified in the south west corner of the field; elsewhere drift covers the ground. Much of the site has a cover of flinty gravel within a light loamy matrix, but in the south west corner the loamy material sits over stiff flinty clay.
11. The small scale soil map indicates soils of the Wickham 4 association, comprising slowly permeable medium loamy and silty over clayey soils together with seasonally wet clayey profiles. This soil investigation recognises a varied soil cover on this small site with well drained variably stony light loamy soils over the bulk of the ground. In the south west corner a small area of light textured soils on weathered fine sandstone occurs and an area of seasonally wet loamy over clayey soils is recognised in the south east corner of the field.

Agricultural Land Classification

12. The provisional 1:250,000 scale agricultural land classification map (MAFF 1979) shows all the land on this site as Grade 3, but with small patches of grade 2 land nearby. The map is provisional and was designed to be used for areas larger than about 80 hectares in extent and boundaries on this plan do not necessarily reflect the detailed situation. Since the map was constructed there have been changes to the classification. The effects of the interaction between climate and soils are now more clearly stated, which puts the land quality more clearly into the local context.
13. Post 1988 land quality surveys on land around Botley (Figure 1) shows mainly sub-Grade 3a land to the north of the A334 with small areas of Grade 2 land and some areas of moderate quality land (sub-Grade 3b). Immediately south of the site investigated, sub-Grade 3b and 3a quality land is mapped on a number of small sites adjoining Hedge End. The current survey site is shown in purple.

FIGURE 1 – LAND QUALITY OF SITES AROUND BOTLEY (Magic Ref:)



14. The current survey recognises Grade 2 and sub-Grade 3a land over the 4 hectare site.
15. **Grade 2 land** accounts for approximately hectares and occurs as two patches in the field. In the west soils are deep and freely drained loams becoming fine sandy below the immediate subsoil in the weathered bedrock. The slightly stony, coarser, topsoil and immediate subsoil is developed in a thin cover of river terrace drift, which contains some flints which contrasts with the stoneless fine sandy material beneath. Structures are weak throughout and the soils lack sufficient water to fully support crop growth and yields may be slightly lower in most years because a lack of available water. In the south east, soils have loamy over clayey profiles in mixed loamy and clayey drift, and profiles are slightly wet. The soils are also stony, enough to reduce available water and like the area described above, is slightly droughty.
16. **sub-Grade 3a land** covers approximately hectares with the bulk of the area having very flinty soils in drift that are moderately droughty. These soils are freely drained and weakly structured and rooting is not impaired by any dense layers within the profiles. The amount of flint is, however, sufficient to reduce land quality to the “good” category. A small area of ground on the southern boundary is wet and has medium loamy over

clayey profiles with a slowly permeable horizon within 60cm of the ground surface. This places the soils in Wetness Class III. Soil material above this layer is prominently marked with ochreous and greyish mottles.

THE WIDER PICTURE

17. This site falls within a broad area of mixed parent materials either derived from the Bracklesham Beds Group, comprising sands, silts and clays or from remnants of a, once, wider spread of river terrace materials sitting over the bedrock. This changeable distribution gives a varied pattern of land quality which is illustrated by the post-1988 land quality surveys completed in the local area. In much of the area between the chalk outcrop to the north and the coast a variable pattern of land quality is likely to occur over variable parent materials.

References

MAFF (1979). 1:250,000 scale provisional ALC Map of England and Wales.

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

METEOROLOGICAL OFFICE (1989). Climatological data for Agricultural Land Classification.

SSEW (1983). 1:250,000 scale soil map. Sheet 6 – South East England.

No	Depth (cm)	Colour	Mottles	Texture	Stones (%)	AP-MD Wh Po	Wetness Class	Limit	ALC
1	0-18 18-30 30-60 60-120	10YR 3/3 10YR 4/3 2.5Y 4/4 10YR 5/1		MSL MSL LFS LFS	4 2	59 3	I	DR	2
2	0-18 18-35 35-75 STOP	10YR 3/3 10YR 4/3 10YR 4/3		MSL MSL MSL	10 15 15	-11	I	DR	3a
3	0-17 17-33 33-68 STOP	10YR 3/3 10YR 4/3 10YR 4/3		MSL MSL MSL	10 15 15	-11	I	DR	3a
4	0-18 18-40 40-62 STOP	10YR 3/3 10YR 3/3 10YR 5/3	SM	MSL MSL C+SCL	10 10 15	-2	II	DR	2
5	0-16 16-33 33-46 46-58 STOP	10YR 3/2 10YR 3/3 10YR 5/3 10YR 5/4	SM SM SM	MCL MCL C C	10 15 5 10		III	WT	3a

KEY

Texture

LFS – loamy fine sand
MSL – medium sandy loam
MCL – medium clay loam
SCL – sandy clay loam
C - clay

Limitation

DR - droughtiness
WT – soil wetness

No	Depth (cm)	Colour	Mottles	Texture	Stones (%)	AP-MD Wh Po	Wetness Class	Limit	ALC
1	0-18 18-30 30-60 60-120	10YR 3/3 10YR 4/3 2.5Y 4/4 10YR 5/1		MSL MSL LFS LFS	4 2	59 3	I	DR	2
2	0-18 18-35 35-75 STOP	10YR 3/3 10YR 4/3 10YR 4/3		MSL MSL MSL	10 15 15	-11	I	DR	3a
3	0-17 17-33 33-68 STOP	10YR 3/3 10YR 4/3 10YR 4/3		MSL MSL MSL	10 15 15	-11	I	DR	3a
4	0-18 18-40 40-62 STOP	10YR 3/3 10YR 3/3 10YR 5/3	SM	MSL MSL C+SCL	10 10 15	-2	II	DR	2
5	0-16 16-33 33-46 46-58 STOP	10YR 3/2 10YR 3/3 10YR 5/3 10YR 5/4	SM SM SM	MCL MCL C C	10 15 5 10		III	WT	3a

KEY

Texture

LFS – loamy fine sand
MSL – medium sandy loam
MCL – medium clay loam
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C - clay

Limitation

DR - droughtiness
WT – soil wetness

Appendix KCC3

**Extracts from John Nix Pocketbook for
Farm Management (53rd Ed.)**



John Nix Pocketbook

FOR FARM MANAGEMENT



2023 53RD
EDITION

The most comprehensive business information in British agriculture

Graham Redman

II. ENTERPRISE DATA

1. CROPS

WHEAT

Feed Winter Wheat

Production level	Low	Average	High	
Yield: t/ha (t/ac)	7.25 (2.9)	8.60 (3.5)	10.00 (4.1)	
	£	£	£	£/t
Grain at £225/t	1,631	1,935 (784)	2,250 (911)	
Straw in Swath	173 (70)	173 (70)	173 (70)	
Total Output	1,804 (731)	2,108 (854)	2,423 (981)	245
Variable Costs £/ha (£/ac) :				
Seed.....		97 (39)		11
Fertiliser.....		533 (216)		62
Sprays.....		278 (113)		32
Total Variable Costs		908 (368)		106
Gross Margin £/ha (ac)	896 (363)	1200 (486)	1,515 (613)	140

Fertiliser Basis 8.6t/ha				Seed:		Sprays £/ha:	
Nutrient	Kg/t	Kg/Ha	£/Ha	£/t C2	£605	Herbicides	£121
N	22	190	£358	Kg/Ha	175	Fungicides	£110
P	7.0	60	£85	% HSS	30%	Insecticides	£3
K	10.5	90	£90	£/t HSS	£435	PGRs	£17
						Other	£28

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 yield used for feed and milling wheats including spring varieties is 8.4t/ha.

The table below offers a weighted estimate of yield variations according to wheat type based on a national yield of 8.41t/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 –

	Winter	1st WW	2nd WW	spring	Total
t/ha	101%	102%	93%	85%	
Total	100%	8.49	8.63	7.82	8.41
Feed	101%	8.58	8.71	7.90	8.49
Bread	93%	7.90	8.02	7.27	6.18
Biscuit	99%	8.41	8.54	7.74	8.32

2. *Straw* is sold in the swath. Fertiliser accounts for mineral depletion.
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 £150/t of seed (£26.50/ha). This has not been added in the gross margins so should be considered.
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 £170/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)	3.00 (1.2)	3.50 (1.4)	4.00 (1.6)	
	£	£	£	£/t
Output at £515/t	1545 (626)	1,803 (730)	2,060 (834)	515
Variable Costs £/ha (£/ac) :				
Seed.....		74 (30)		21
Fertiliser.....		410 (166)		117
Sprays.....		253 (102)		72
Total Variable Costs		737 (298)		210
Gross Margin £/ha (ac)	808 (327)	1066 (432)	1,323 (536)	305

Fertiliser Basis 3.5t/ha				Seed:		Sprays:	
Nutrient	Kg/t	Kg/Ha	£/Ha	£/Ha C	45	Herbicides	£125
N	46	160	£301	£/Ha Hy	90	Fungicides	£68
P	14	49	£69	£/Ha HSS	30	Insecticides	£16
K	11	39	£39	C:Hy:HSS	20:20:60	PGRs	£0
	Seed write-off	7%		Kg/Ha	5.5	Other	£44

1. *Prices.* The price used for the 2023 crop is £484/t plus oil bonuses at 44% oil content. 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 £484 x 1.5 = £29. (Figures are rounded to the nearest £5.00 in the margin)

Spring Oilseed Rape

Production level	Low	Average	High	
Yield: t/ha (t/ac)	2.00 (0.8)	2.28 (0.9)	2.50 (1.0)	
	£	£	£	£/t
Output at £515/t	1030 (417)	1,172 (475)	1,288 (522)	515
Variable Costs £/ha (£/ac) :				
Seed.....		71 (29)		31
Fertiliser.....		202 (82)		89
Sprays.....		132 (53)		58
Total Variable Costs		405 (164)		178
Gross Margin £/ha (ac)	625 (253)	767 (311)	883 (358)	337

2. *Inputs:* Seed as per WOSR, but 45% conventional, 5% HSS, 50% hybrid. *Fertiliser:* N/P/K at 80/32/25 kg/ha. *Sprays,* Herbicides. £51, Fungicides, £41, Insecticides £13, and Others £28/ha
3. *Winter Versus Spring:* As little as 8,000 hectares of spring OSR are grown in the UK which is 2.5% of the entire crop. As can be seen, the financial reward is slim compared with other combinable crops.

Appendix KCC4
Guide to Assessing Development
Proposals on Agricultural Land
(Natural England, 2021)



(<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,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>) 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

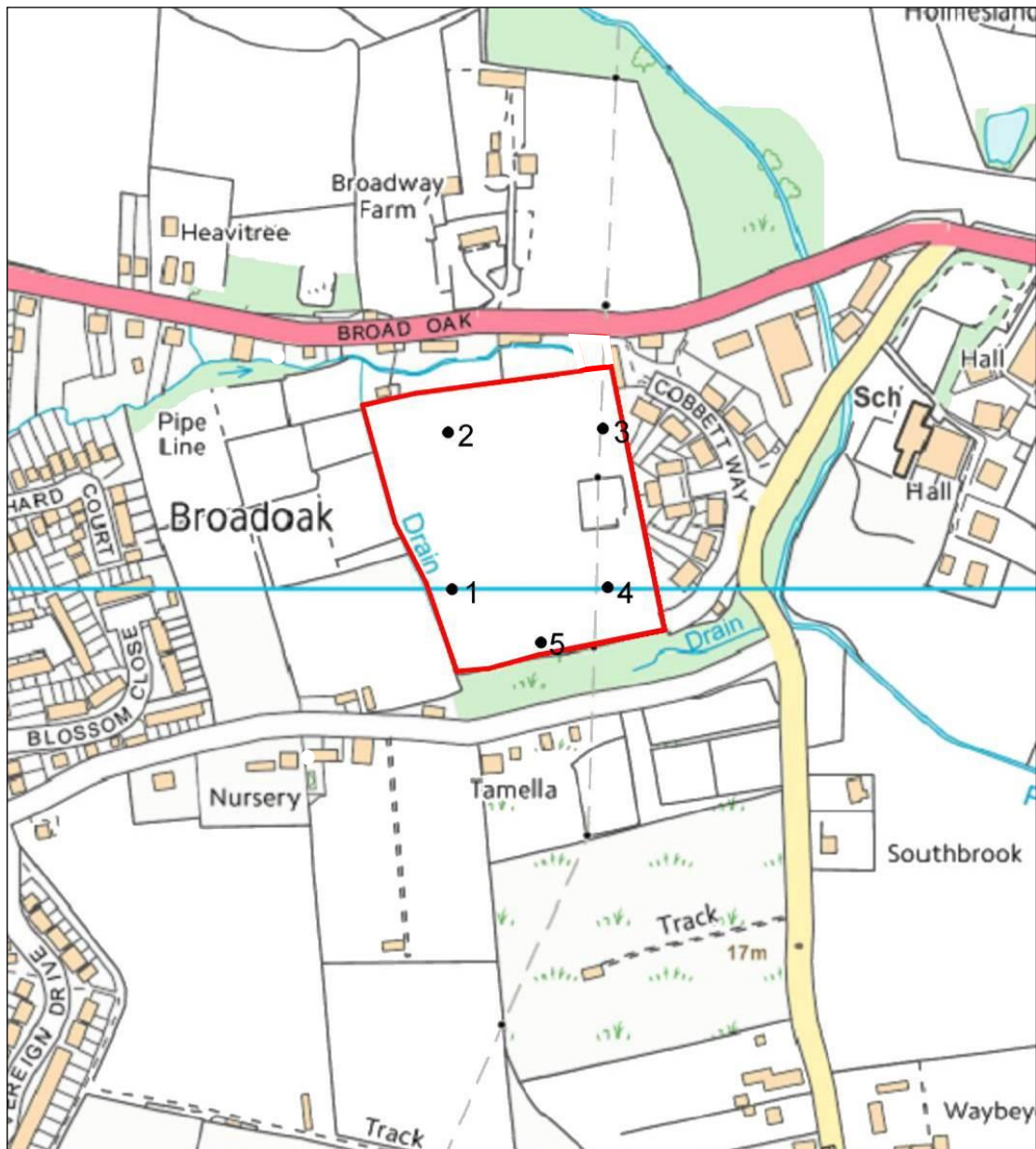
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Plan KCC2132/01
Auger Point Plan

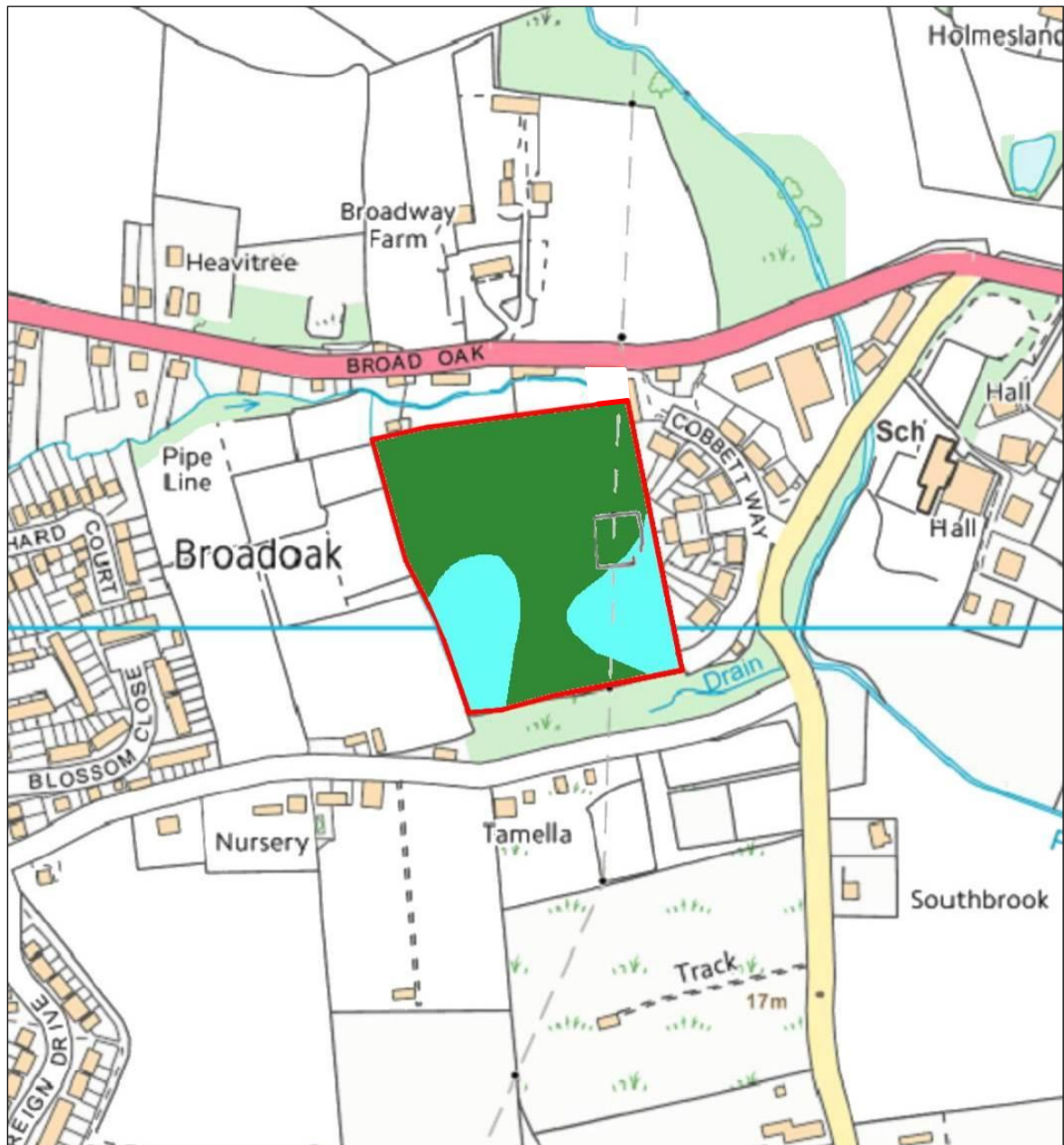


KEY

- Auger sample location
- Red line indicates Site boundary

PLAN	KCC1		
TITLE	Auger Inspection Locations		
SITE	Broad Oak, Botley		
CLIENT	Drew Smith Group		
NUMBER	KCC2132/01A 11/23tk		
DATE	November 2023	SCALE	NTS
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			

Plan KCC2132/03
Agricultural Land Classification Plan



KEY		Ha	%	PLAN	KCC3		
				TITLE	Agricultural Land Classification		
	Grade 2	0.9	32	SITE	Broad Oak, Botley		
	Grade 3a	1.9	68	CLIENT	Drew Smith Group		
	Grade 3b			NUMBER	KCC2132/03A 11/23tk		
	Grade 4			DATE	November 2023	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						
	Urban						
	Not surveyed						



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