

**LAND EAST OF YAPTON LANE,
BINSTED, WEST SUSSEX**

**AGRICULTURAL LAND
CLASSIFICATION**

September 2014





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BINSTED, WEST SUSSEX**

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Authorised By

Greengates Barn, Stoke Common Lane, Burton Stoke, Swindon SN5 4LL

*Directors - Tony Kernon BSc(Hons), MRAC, MRICS, FBIAC Sarah Kernon
Chartered Surveyors-- Verity Drewett BSc(Hons), MRICS, MBIAC, Sara Compton BA (Hons), MSc, MRICS, MBIAC
Julia Norman BSc(Hons), MRICS*

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(December 2012)

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1 INTRODUCTION

- 1.1 This report sets out the results of a detailed survey to determine the quality of approximately 17.7 hectares (ha) (circa 44 acres) of agricultural land to the east of Yapton Lane, Binsted, West Sussex ('the Site').

The Authors

- 1.2 This report has been prepared by Kernon Countryside Consultants (KCC). KCC is a specialist consultancy advising farmers, landowners and local authorities on farm business, farm diversification and equine proposals. We are familiar with many different types of agricultural, horticultural and equine enterprises, and many forms of rural economic diversification.
- 1.3 An Agricultural Land Classification (ALC) survey was undertaken across the Site on 8th September 2014.

2 METHODOLOGY AND PUBLISHED ALC INFORMATION

Methodology

- 2.1 The ALC system provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. The ALC system divides agricultural land into five grades (Grade 1 '*Excellent*' to Grade 5 '*Very Poor*'), with Grade 3 subdivided into Subgrade 3a '*Good*' and Subgrade 3b '*Moderate*'. Agricultural land classified as Grade 1, 2 and Subgrade 3a falls in the '*best and most versatile*' category as defined in Annex 2 of the National Planning Policy Framework of March 2012. Further details of the ALC system and national planning policy implications are set out by Natural England in its Technical Information Note 049 **Appendix KCC1**.
- 2.2 The work has been carried out by a Chartered Scientist, who is a Member of the Institute of Professional Soil Scientists (IPSS). The IPSS is the chartered and professional body of the British Society of Soil Science (BSSS). In addition, this ALC survey has been carried out by a soil scientist who meets the requirements of the IPSS Professional Competency Scheme for ALC. The IPSS Professional Competency Scheme is endorsed, amongst others, by the Welsh Government, the Science Council, and the Institute of Environmental Assessment and Management (IEMA) (see IPSS Document 2 '*Agricultural Land Classification of England and Wales*', given as **Appendix KCC2**). The IPSS Professional Competency Scheme is endorsed, amongst others, by the Department for Environment, Food and Rural Affairs (Defra), Natural England, the Science Council, and the Institute of Environmental Assessment and Management (IEMA) (see Appendix KCC2 also).
- 2.3 This assessment is based upon the findings of a study of published information on climate, geology and soil in combination with a soil investigation carried out in accordance with the Ministry of Agriculture, Fisheries and Food (MAFF) '*Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land*', October, 1988 (henceforth referred to as the 'the ALC Guidelines').
- 2.4 A detailed ALC survey was completed on the 8th September 2014. The detailed survey involved examination of the soil's physical properties at 16 locations located on a 100 m by 100 m grid. The sample auger locations of the detailed soil survey are shown at **Appendix KCC3**.
- 2.5 The sample points were located using a hand-held Garmin E-Trec Geographic Information System (GIS) to enable the sample points to be relocated for verification, if

necessary. The soil profile was examined at each sample location to a maximum depth of approximately 1.2 m by hand with the use of a 5 cm diameter Dutch (Edleman) soil auger.

- 2.6 The soil profile at each sample location was described using the '*Soil Survey Field Handbook: Describing and Sampling Soil Profiles*' (Ed. J.M. Hodgson, Cranfield University, 1997). Each soil profile was ascribed a grade following the ALC Guidelines.

Background – Published Information

- 2.7 Provisional ALC maps were published in the late 1970s and early 1980s, on a regional basis. The proposed site is shown on the provisional map for the South East Region (MAFF, 1983), in an area of Grade 2 in the west and Grade 3 (not differentiated between Subgrades 3a and 3b).
- 2.8 Provisional ALC maps are not sufficiently accurate to allow a full assessment of an individual field or development site and should not be used other than for general guidance at a strategic level. The low resolution of the data means that the boundary between grades should be treated as somewhat indeterminate. Further, the provisional maps were created before the guidelines were most recently revised (the ALC Guidelines, MAFF 1988).
- 2.9 A review of the Magic website has confirmed that there is no existing publicly available post-1988 ALC information available for the Site¹.

¹ MAGIC.gov.uk. Last viewed 11th September 2014

3 AGRICULTURAL LAND CLASSIFICATION

3.1 As described in the ALC Guidelines, the main physical factors influencing agricultural land quality are:

- climate;
- site;
- soil; and
- interactive limitations

3.2 These factors are considered in detail below.

Climate

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

Table 1: ALC Climate Data

Climate Parameter	Data
Average Altitude (m)	4
Accumulated Temperature above 0°C (January – June)	1543
Average Annual Rainfall (mm)	756
Field Capacity Days (FCD)	156
Moisture Deficit (mm) Wheat	119
Moisture Deficit (mm) Potatoes	117

3.4 With reference to Figure 1 ‘*Grade according to climate*’ of the ALC Guidelines, the quality of agricultural land at the is not limited by climate. This means that agricultural land at the Site can be graded as high as Grade 1 in the absence of any other limiting factors (i.e. site and soil).

3.5 Due to the average annual rainfall, agricultural land at the Site is predicted to be at field capacity (i.e. near saturation point) for 156 days per year, mainly over the late autumn, winter and early spring. This is around the average number of field capacity days (FCD) for lowland England (150 FCD). In an interaction with topsoil texture, this will cause an ‘interactive limitation’ to agricultural land quality at the Site - namely soil wetness (see below).

3.6 Due to the relatively low rainfall and the high temperature at the Site, the moisture deficit (MD) for the ALC reference crops, i.e. wheat and potatoes, are 119 and 117 respectively. These are relatively high MD values and will, in an interaction with topsoil texture, subsoil

structure and stoniness, cause an 'interactive limitation' to agricultural land quality at the Site - namely soil droughtiness (see below).

Site

- 3.7 The Site is located approximately 4.5 km to the northwest of Littlehampton and 4 km to the south-west of Arundel, West Sussex, with Yapton lane approximately 200 m to the west. The village of Binsted is approximately 2 km to the north of the Site, with a nursery to the west of Yapton Lane. The Site is centred on National Grid Reference SU 983 047 and consists of three fields. At the time of the ALC survey, the northern field was under grass, the south-eastern field was under pasture that was being grazed by cattle, and the south-western field was under maize.
- 3.8 With regard to the ALC Guidelines, agricultural land quality can be limited by one or more of three main site factors as follows:
- gradient;
 - micro-relief (i.e. complex change in slope angle over short distances); and
 - risk of flooding.

Gradient and Micro-Relief

- 3.9 The Site is located on a very gentle south facing slope which ranges in elevation from approximately 1 m Above Ordnance Datum (AOD) at the lowest point in the south, to approximately 7 m AOD at the highest point in north. Gradient is not a limiting factor at the Site, as the gradient did not exceed 7° (re. Table 1 of the ALC Guidelines).
- 3.10 Micro-relief, i.e. complex changes in slope angle and direction over short distances, affects the quality of the agricultural land in the south-east field (around auger locations 13 and 14) due to the very uneven land present; this is thought to be associated with localised sand and gravel extraction in the past. This will limit the type of machinery and farm implements that are able to effectively work the land. The micro-relief limitation is sufficient to restrict the grading of the agricultural land to Subgrade 3b, in the absence of any other overriding factor.

Risk of Flooding

- 3.11 From an Environment Agency (EA) Flood Risk Map², the very south and some of the east of the Site are shown to have a risk of flooding (flood zone 3) while the rest of the Site is

² Environment Agency Flood Risk Map. Available online @ <http://maps.environment-agency.gov.uk/wiwyby/wiwybyController?value=BN18+0DN&submit.x=0&submit.y=0&submit=Search%09&lang=en&ep=map&topi=c=floodmap&layerGroups=default&scale=9&textonly=off> Last viewed 11th September 2014

not predicted to be at risk of flooding by rivers or the sea. The risk of flooding is not known to be limiting to agricultural land quality in terms of Table 2 '*Grade according to flood risk in summer*' and Table 3 '*Grade according to flood risk in winter*' of the ALC Guidelines.

Soil

Geology/Soil Parent Material

- 3.12 British Geological Survey (BGS) information available online has been utilised to identify the Bedrock underlying the Site and to determine whether or not the bedrock is covered by any Superficial (Drift) Deposits³. This provides information on soil forming materials at the Site.
- 3.13 The northern field of the Site is underlain by bedrock geology described by the BGS (1:50,000) as clay, silt and sand of the London Clay Formation. The southern two fields are underlain by bedrock geology described as clay, silt and sand of the Lambeth Group.
- 3.14 The BGS Superficial Deposit map (1:50,000) indicates that the bedrock at the entirety of the Site is covered by superficial (drift) deposits. In the very south of the Site the bedrock is covered by clay, silt, sand and gravel Raised Marine Deposits. In the centre of the Site and stretching to the north-west, the bedrock of the Site is covered by sand and gravel Raised Beach Deposits. In the north-east of the Site, extending south and covering much of the east of the Site, clay, silt, sand and gravel Head is present.

Published Information on Soil

- 3.15 Provisional information for soils at the Site was gathered from the Soil Survey of England and Wales (SSEW) soil map of South East England (Sheet 6) at a scale of 1:250,000 and accompanying Bulletin No. 15 '*Soils and their Use in South East*' (M. G. Jarvis *et al*, Harpenden, 1984). The information provided indicates that agricultural land at the Site is covered by soil grouped in the Efford 1 Association. The main physical characteristics of these soils are summarised below.
- 3.16 The Efford 1 association consists mainly of well drained (Wetness Class I) brown, fine loamy soils on level or gently sloping river terraces where drift overlies gravel. Efford soils are slightly or moderately stony, fine loamy typical argillic brown earths with gravelly subsoils. A typical profile consists of a dark greyish brown, slightly stony sandy silt loam

³ British Geological Survey 'Geology of Britain Viewer'. Available online @ <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html> Last viewed 11th September 2014.

or sandy loam topsoil. The subsoil consists of a yellowish brown, slightly or moderately stony clay loam over brownish yellow, very stony sandy gravel.

Soil Survey

- 3.17 From the detailed soil survey carried out on the 8th September 2014 it was determined that there are three main soil types across the Site.
- 3.18 The soil profiles in the south of the Site (auger locations 13 - 16) consist of a dark greyish brown (Munsell colour 10YR 4/2) very slightly stony, non-calcareous, heavy clay loam topsoil. The subsoil consisted of a yellowish brown (Munsell colour 10YR 5/4), very slightly or slightly stony, mottled, heavy clay loam or clay over a grey (Munsell colour 10YR 6/1), stoneless, gleyed clay. The profiles showed signs of gleying in the top 40 cm and contained slowly permeable layers which caused the profiles to be placed in Wetness Class IV when the slowly permeable layer was present before 42 cm depth and in Wetness Class III if the slowly permeable layer was present deeper than 42 cm but shallower than 64 cm.
- 3.19 The soil profiles in the west of the Site (auger locations 4, 7, 8, 11 and 12) comprise a brown (Munsell colour 10YR 5/3), slightly stony (5%), non-calcareous, sandy loam or medium clay loam topsoil (heavy clay loam at auger location 12). The subsoil comprises a yellowish brown (Munsell colour 10YR 5/4) or brownish yellow (Munsell colour 10YR 6/6), slightly stony (5%-10%), medium clay loam to depth. The profiles were not gleyed and have therefore been placed in Wetness Class I.
- 3.20 The soil profiles in the north and east of the Site comprise a brown (Munsell colour 10YR 5/3), slightly stony (12%), non-calcareous, sandy loam or medium clay loam topsoil. The subsoil comprises a yellowish brown (Munsell colour 10YR 5/4), slightly or moderately stony (12-16%), medium clay loam over a yellowish brown (Munsell colour 10YR 5/6), moderately stony (18-24%) medium clay loam. The profiles were not gleyed and have therefore been placed in Wetness Class I.
- 3.21 Further details of the sample auger locations are available upon request.

Interactive Limitations

- 3.22 From the published information, together with the findings of the detailed soil survey, it has been determined that the quality of agricultural land at the Site is limited by soil wetness and soil droughtiness.

Soil Wetness

- 3.23 From the ALC Guidelines, a soil wetness limitation exists where *‘the soil water regime adversely affects plant growth or imposes restrictions on cultivations or grazing by livestock’*. The ALC grade according to soil wetness is shown in Table 2 below (based on Table 6 ‘Grade According to Soil Wetness – Mineral Soils’ in the ALC Guidelines).

Table 2: Predicted ALC Grade According to Soil Wetness

Wetness Class	Texture of the Top 25 cm	151-175 Field Capacity Days
I	Sandy Loam, Sandy Silt Loam	1
	Medium Clay Loam*, Sandy Clay Loam	1
	Heavy Silty Clay Loam**, Heavy Clay Loam**	2
II	Sandy Loam, Sandy Silt Loam	1
	Medium Clay Loam*, Sandy Clay Loam	2
	Heavy Silty Clay Loam**, Heavy Clay Loam**	3a
III	Sandy Loam, Sandy Silt Loam	2
	Medium Clay Loam*, Sandy Clay Loam	3a
	Heavy Silty Clay Loam**, Heavy Clay Loam**	3b
IV	Sandy Loam, Sandy Silt Loam	3a
	Medium Clay Loam*, Sandy Clay Loam	3b
	Heavy Silty Clay Loam**, Heavy Clay Loam**	3b
Key * <27% clay; and ** >27% clay		

- 3.24 Therefore, soil profiles at the Site which have a heavy clay loam topsoil and are either seasonally waterlogged (Wetness Class III) or waterlogged for long periods in the winter (Wetness Class IV) are limited by soil wetness to Subgrade 3b in this climate area (151-175 field capacity days), i.e. auger locations 13, 14, 15 and 16.
- 3.25 The soil profile at auger location 12 is limited by soil wetness to Grade 2 due to the well-drained (Wetness Class I) profile and a heavy clay loam topsoil.

Soil Droughtiness

- 3.26 In this climate area, with high potential soil moisture deficits (MD) for the indicator crops of winter wheat (i.e. 119 mm) and potatoes (i.e.117 mm), the slightly stony soils in the west of the Site (auger locations 4, 7, 8, 11 and 12) can be graded as no higher than Grade 2. This is because the moisture balance (crop adjusted available water capacity minus soil

moisture deficit) for potatoes for the soil is between +10 mm and -10 mm (see Table 8 'Grade according to droughtiness' in the ALC Guidelines).

- 3.27 The soil profiles in the north and east of the Site are stonier throughout and are therefore limited by drought to Subgrade 3a. This is because the moisture balance (crop adjusted available water capacity minus soil moisture deficit) for potatoes for the soil is between -10 mm and -30 mm (see Table 8 'Grade according to droughtiness' in the ALC Guidelines).

ALC Grading at the Site

Grade 2

- 3.28 Agricultural land in the west of the Site at auger locations 4, 7, 8, 11 and 12 is limited to Grade 2 due to a minor soil droughtiness limitation for potatoes. At auger location 12 the land is also limited to Grade 2 by soil wetness due to the well-drained (Wetness Class I) profile and the heavy clay loam topsoil.

Subgrade 3a

- 3.29 Agricultural land in the east and north of the Site (auger locations 1, 2, 3, 5, 6, 9 and 10) is limited to Subgrade 3a due to a soil droughtiness limitation for potatoes caused by the stonier soil profiles that are present.

Subgrade 3b

- 3.30 Agricultural land in the south of the Site has been graded as Subgrade 3b due to a wetness limitation caused by the soil profiles that are seasonally waterlogged (Wetness Class III) or waterlogged for long periods in winter (Wetness Class IV) in conjunction with the heavy clay loam topsoil. The south-eastern field has also been limited to Subgrade 3b due to micro-relief caused by the very uneven ground that will limit the range of agricultural machinery that will be able to effectively cultivate the land.
- 3.31 The area and proportion of agricultural land in each ALC grade has been measured from an ALC map, given as **Appendix KCC4**. The findings are reported in Table 3 below.

Table 3: Agricultural Land Classification – Land at Yapton Lane, Binsted

ALC Grade	Area (Ha)	Area (% of Total Site)
Grade 1 (Excellent)	0	0
Grade 2 (Very Good)	5.1	29
Subgrade 3a (Good)	7.9	44.5
Subgrade 3b (Moderate)	4.7	26.5
Grade 4 (Poor)	0	0
Grade 5 (Very Poor)	0	0
Non-agricultural land	0	0
Un-surveyed	0	0
Total	17.7	100

4 SUMMARY

- 4.1 This report considers the quality of agricultural land across approximately 17.7 ha to the east of Yapton Lane, Binsted, West Sussex ('the Site').
- 4.2 A detailed ALC survey has determined that soils over the Site comprise 5.1 ha Grade 2 agricultural land (29% of the Site), 7.9 ha Subgrade 3a (some 44.5%) and 4.7 ha Subgrade 3b (26.5%).

Appendix KCC1

Natural England

Technical Information Note 049 –
Agricultural Land Classification
(December 2012)

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.

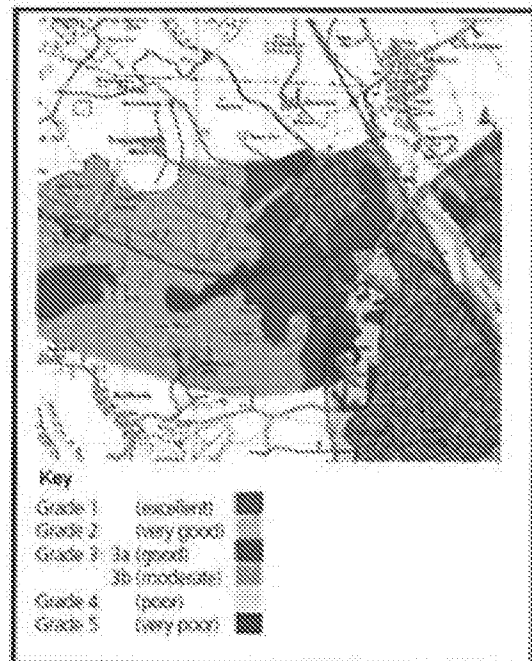
Policy to protect agricultural land

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 1975. 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. This data is also available on 'Magic', an interactive, geographical information website: <http://magic.defra.gov.uk/>

Since 1975, 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 afteruses, 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 Padam
Llanbadam 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 0563 or e-mail enquiries@naturalengland.org.uk.

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Appendix KCC2

IPSS Professional Competency
Scheme Document 2 –
Agricultural Land Classification

Agricultural Land Classification (England and Wales)



Background

The evaluation of land for its agricultural potential in England and Wales¹ is accomplished by application of the Agricultural Land Classification² (ALC). Professional competence in Agricultural Land Classification builds upon foundation skills in field soil investigation, description and interpretation (IPSS PCSS Document 1). This system of professional competence is based upon a detailed written procedures document developed by the Farming and Rural Conservation Agency³.

Qualifications

Professional soil scientists with competence in Agricultural Land Classification will have graduated in a relevant science subject. They will also have a number of years of relevant field experience and will have, or be adequately qualified for, membership of a relevant professional body such as the Institute of Professional Soil Scientists.

Minimum competencies

Skills and Knowledge:

These are described under a number of subheadings that relate to different tasks. A professionally competent contractor should have the skills and knowledge identified under the **General heading** and **all other headings that are relevant** to the tasks required.

General

- ① A general knowledge and understanding of natural soil development and of world, European and national soil taxonomy
- ② A detailed knowledge and understanding of the Agricultural Land Classification system relevant to the site and of the classification of land according to the current published Guidelines and other documents¹⁻⁴ and the ability to apply it accurately and consistently in the classification of an area of land

¹ Similar systems are employed in Scotland and Northern Ireland

² ALC Revised Guidelines and Criteria for the Grading the Quality of Agricultural Land (MAFF, 1988) and Climatological Datasets for ALC (Met. Office, 1989)

³ A former Executive Agency of the Ministry of Agriculture, Fisheries and Food (now Defra)

Agricultural Land classification (England and Wales)



- 1 An awareness and knowledge of existing published and unpublished, paper-based and digital ALC information and sources
- 2 A knowledge of paper and digital topographic, geology and soil maps, mineral assessment reports and memoirs and other technical sources of reference and of their role in ALC work
- 3 An understanding of map scales and of the Ordnance Survey National Grid
- 4 The ability to investigate, sample, describe and interpret soils in the field in a consistent manner and to professional standards (IPSS PCSS Document 1)
- 5 Knowledge of relevant European and national regulations and policies including national and local land use planning policy and guidance, and soil protection policy
- 6 The ability to effectively communicate soil information in a simple and relevant form to developers, planners and other relevant professionals with clear statements as to the reliability and certainty of the results
- 7 The ability to write accurate, concise reports in clear English and in line with best practice examples of ALC survey that communicate the relevant information to all relevant communicants
- 8 An awareness of the importance of systems of quality assurance and control in all aspects of professional work

Preparations prior to field survey

- 1 The ability to compile background site physical data (e.g. relief, geology, soils, climate, flood-risk, exposure and grade from published and unpublished sources) and understanding of the limitations of the data obtained
- 2 An understanding of scale and of how different survey sampling densities may impact on the certainty of results obtained. A knowledge of how to tailor survey density appropriately to the requirements of the client, and understanding of the limitations that might impose

- 3 The ability to compute gradients from map contours
- 4 A thorough knowledge of climatic data interpolation procedures (and any available associated bespoke computer software), and the ability to obtain representative site values
- 5 An understanding of soil maps, the concepts of soil associations and soil series and their limitations as a background to ALC grading
- 6 A knowledge of GPS and data logger technology and its uses and limitations for field survey work
- 7 A knowledge and understanding of relevant Health and Safety legislation requirements for work in the field
- 8 An understanding of basic biosecurity requirements and any animal or plant health restrictions which may be in force

Field survey for Agricultural Land Classification

- 1 The ability to determine, lay out and work to a relevant sampling strategy
- 2 Competency in the Foundation Skills (field soil investigation, sampling, description and interpretation) as per IPSS PCSS Document 1
- 3 The ability to accurately and consistently apply the ALC system to soil and other data collected during the field survey

Reporting

- 1 The knowledge and ability to compile an ALC map from background information and data collected during the field survey
- 2 The ability to write an ALC survey report according to an agreed format
- 3 Understanding of the principles of quality assurance and the ability to apply these as required by the client
- 4 The ability to convey the findings of the survey verbally such that they are understood by the client

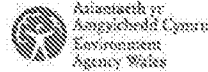
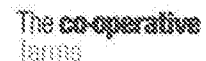
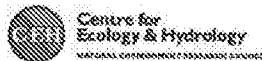
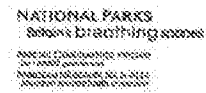
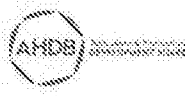
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SUPPORTING ORGANISATIONS

The following organisations have given their support to the Institute of Professional Soil Scientist's Working with Soils Professional Competency Initiative:



'Defra welcomes initiatives, such as the IPSS Working with Soils Competency Statements, that aim to improve the quality of professional soils advice'



Working with Soil – The IPSS Professional Competency Scheme
www.soilscientist.org/workingwithsoil

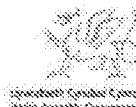
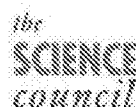
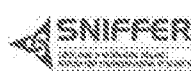
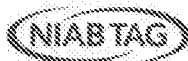


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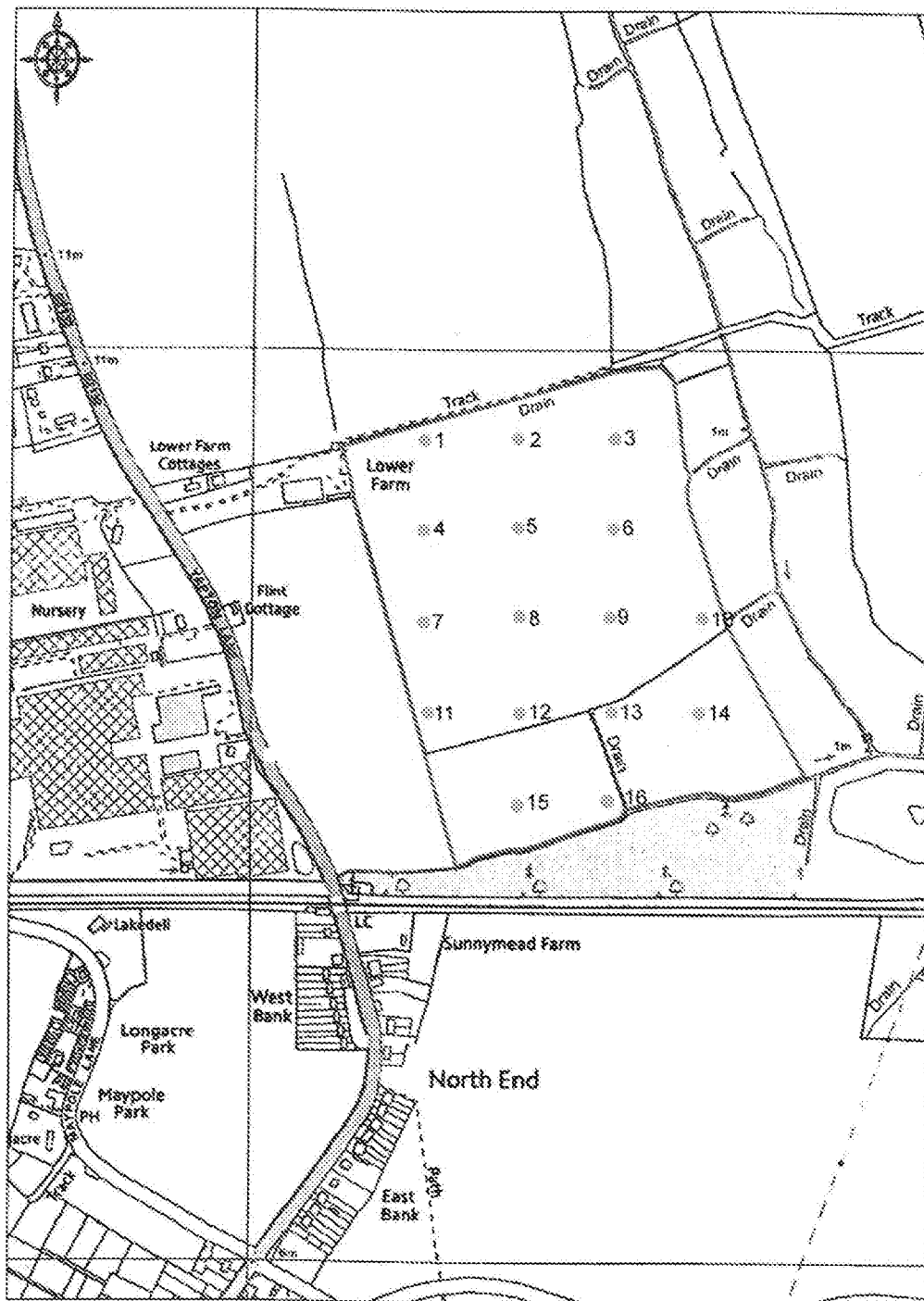


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www.soilscientist.org/workingwithsoil



APPENDIX KCC3

ALC Sample Locations



KEY

- ◆ Auger sample location

PLAN	KCC1		
TITLE	ALC Sample Locations		
SITE	Land at Yapton Lane, Binsted		
CLIENT	Lightsource Renewable Energy		
NUMBER	KCC1815/01 09/14sc		
DATE	September 2014	SCALE	NTS

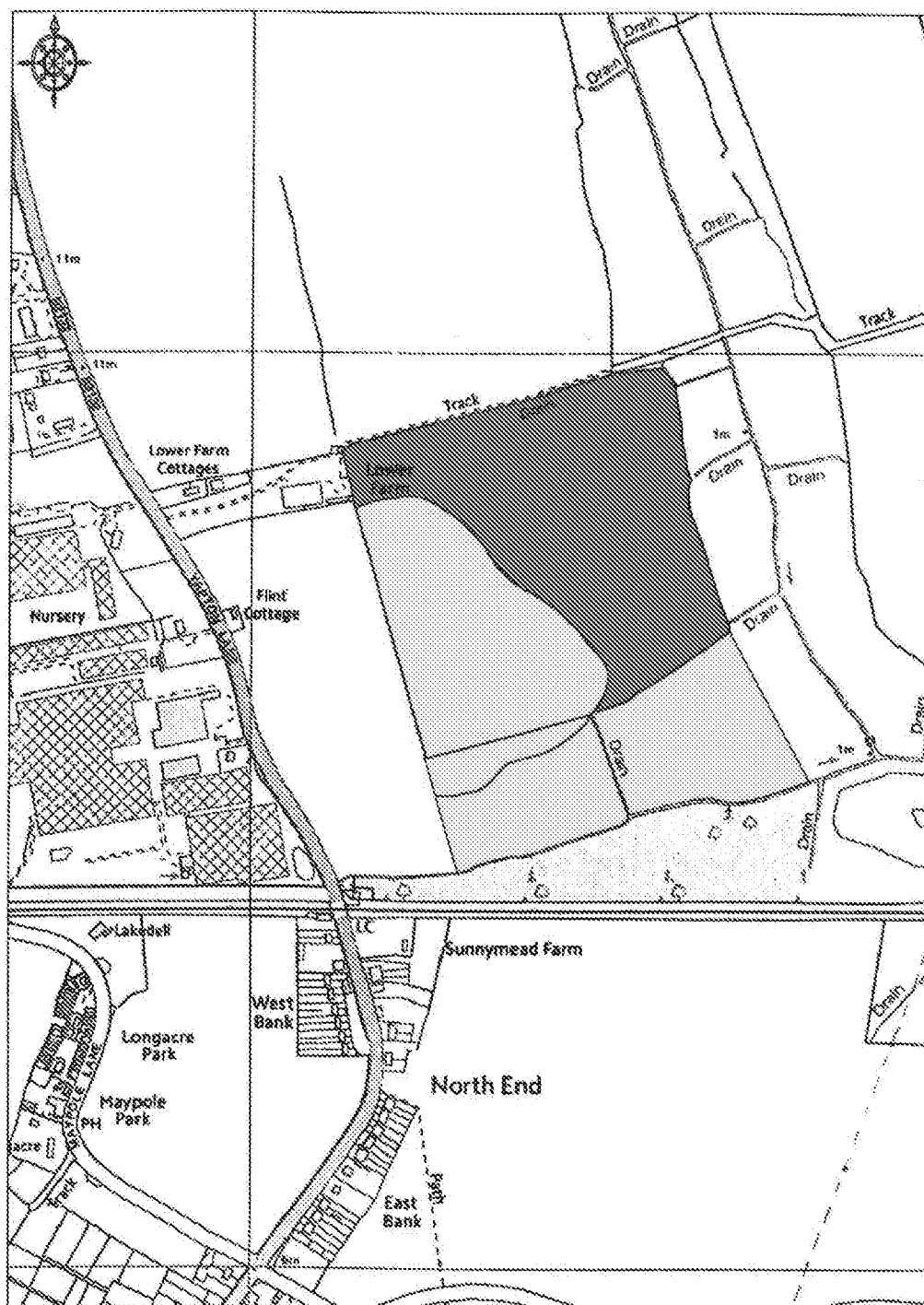
KERNON COUNTRYSIDE CONSULTANTS LTD
GREENACRES BARN, PURTON STOKE, SWINDON,
WILTSHIRE SN5 4LL

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

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Appendix KCC4

Agricultural Land Classification



KEY		Ha	%	PLAN	KCC2		
	Grade 1			TITLE	Agricultural Land Classification		
	Grade 2	5.1	29	SITE	Land at Yapton Lane		
	Grade 3a	7.9	26.5	CLIENT	Lightsource Renewable Energy		
	Grade 3b	4.7	44.5	NUMBER	KCC1815/02 09/14 sc		
	Grade 4			DATE	September 2014	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						