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Bloor Homes Southern

Agricultural Land Quality

at
Southleigh, Havant

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1 Introduction

- 1.1 Reading Agricultural Consultants Ltd (RAC) is instructed by Bloor Homes Southern to assess the Agricultural Land Classification (ALC) of land at Southleigh, Havant, by means of a desk appraisal of soil and site characteristics.
- 1.2 Guidance for assessing the quality of agricultural land in England and Wales is set out in the Ministry of Agriculture, Fisheries and Food (MAFF) revised guidelines and criteria for grading the quality of agricultural land¹, and summarised in Natural England's Technical Information Note (TIN) 049².
- 1.3 Agricultural land in England and Wales is graded between 1 and 5, depending on the extent to which physical or chemical characteristics impose long-term limitations on agricultural use. The principal physical factors influencing grading are climate, site conditions and soil which, together with interactions between them, form the basis for classifying land into one of the five grades.
- 1.4 Grade 1 is excellent quality agricultural land with very minor or no limitations to agricultural use. Grade 2 is very good quality agricultural land, with minor limitations which affect crop yield, cultivations or harvesting. Grade 3 land has moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield, and is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). Grade 4 is poor quality agricultural land with severe limitations which significantly restrict the range of crops and/or level of yields. Grade 5 is very poor quality land, with very severe limitations which restrict use to permanent pasture or rough grazing.
- 1.5 Land which is classified as Grades 1, 2 and 3a in the ALC system is defined in Annex 2 of the National Planning Policy Framework (NPPF³) as best and most versatile (BMV) agricultural land.
- 1.6 In a national context, paragraph 174 of the NPPF indicates that planning policies and decisions should contribute to and enhance the natural and local environment by:

¹ **MAFF (1988).** *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land.* MAFF Publications.

² **Natural England (2012).** *Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land,* Second Edition.

³ **Ministry of Housing, Communities and Local Government (2021).** *National Planning Policy Framework.*

- protecting and enhancing soils; and
- recognising, amongst other matters, the wider benefits from natural capital and ecosystem services, including the economic and other benefits of the BMV agricultural land.

1.7 Paragraph 175 goes on to state that plans should allocate land with the least environmental or amenity value, where consistent with other policies in the NPPF, and footnote 58 explains 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 Site and climatic conditions

General features, land form and drainage

- 2.1 The site centres around Southleigh Farm and is surrounded by existing development, with Havant to the west, Westbourne to the east and the A27 and Emsworth to the south. The site extends to around 140ha and is primarily comprised of agricultural land, mostly in arable use but with a large, triangular parcel of grassland in the north-east accounting for around 25ha. Non-agricultural land includes the yard and buildings of Southleigh Farm, a barn at Locks Farm, wooded areas and a substantial tree belt around the periphery of the grassland parcel.
- 2.2 North of Southleigh Road, the topography is very gently sloping along a uniform slope, falling from around 35m above Ordnance Datum (AOD) at Bartons Road to 13m AOD at Southleigh Road. South of Southleigh Road, the slopes level out from 13m AOD to around 10m AOD.
- 2.3 Drainage of the site is via the slopes and into a series of drains across the south of the site. Water is ultimately drained into Sweare Deep and on into Chichester Harbour.

Agro-climatic conditions

- 2.4 Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5km grid point data set at a representative altitude of 13m AOD, and are given in Table 1. The climate at the site is warm and wet. Moisture deficits are moderately large to large. The number of Field Capacity Days (FCD) is larger than is typical for lowland England (150) and is slightly unfavourable for agricultural land working. However, there is no climatic limitation to the agricultural land quality at the site.

Table 1: Local agro-climatic conditions

Parameter	Measurement
Grid Ref	SU 73750 07180
Average Annual Rainfall	800mm
Accumulated Temperatures >0°C	1,537 day°
Field Capacity Days	167 days
Average Moisture Deficit, wheat	112mm
Average Moisture Deficit, potatoes	108mm

Soil parent material and soil type

- 2.5 The bedrock geology mapped by the British Geological Survey⁴ is the London Clay Formation which mainly includes slightly calcareous blue-grey or grey-brown silty clay and sometimes silt, with some layers of sandy clay.
- 2.6 Superficial river terrace deposits of sand and gravel cover most of the site. Head deposits comprised of angular rock debris and other clayey material are mapped in the very north, in a band cutting across the middle of the grassland parcel and also on the south side of Southleigh Road, running eastward. A small area in the north of the site has no mapped superficial deposits.
- 2.7 The Soil Survey of England and Wales soil association mapping⁵ (1:250,000 scale) shows the Park Gate association across most of the site. The main Park Gate soils include silty clay loam textures throughout. The soils are moderately permeable but are affected by high winter water tables, however with appropriate drainage they are only occasionally waterlogged (Wetness Class (WC) II).
- 2.8 Across the north of the site, the Wickham 3 association is mapped. The main series includes silty clay loam or clay loam textures over clay but locally where developed in coarser drift, the profiles include sandy silt loam textures over clay. The profiles are slowly permeable in the subsoil and mainly in WC IV⁶.

⁴ **British Geological Survey (2023).** *Geology Viewer*, <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/>

⁵ **Soil Survey of England and Wales (1984).** *Soils of South East England (1:250,000), Sheet 6.*

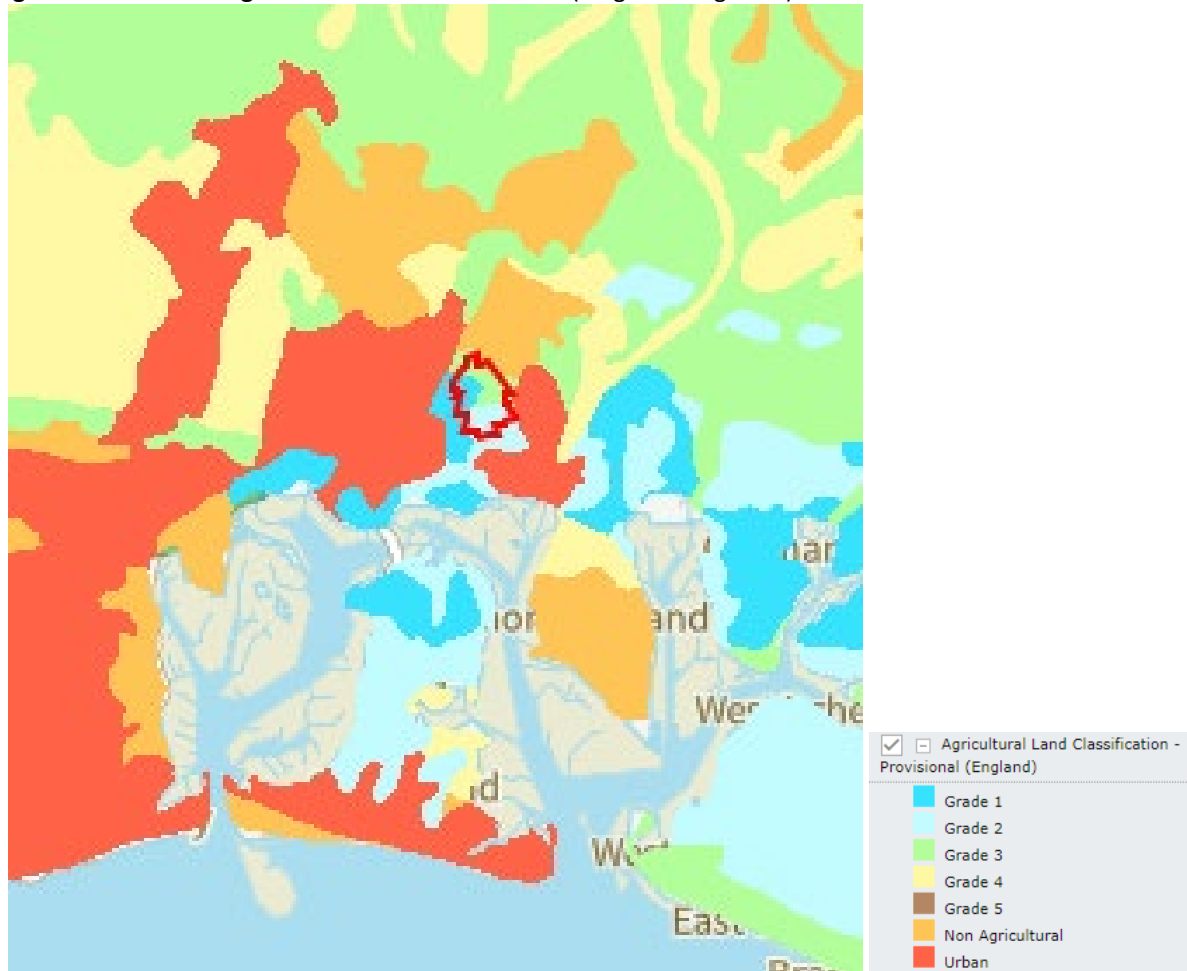
⁶ **Jarvis et al (1984).** *Soils and Their Use in South East England.* Soil Survey of England and Wales Bulletin 15, Harpenden.

3 Agricultural land quality

Existing data

- 3.1 Provisional ALC mapping at 1:250,000 shows the site as excellent quality Grade 1 in the west, very good quality Grade 2 in the south, and good to moderate quality Grade 3 in the north and north-east, as shown in Figure 1.

Figure 1: Provisional Agricultural Land Classification (magic.defra.gov.uk)



- 3.2 The ALC guidelines describe each of the grades as follows:

“Grade 1 – Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.”

“Grade 2 – Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the

more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1."

"Grade 3 – Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or level of yield. Where more demanding crops are grown, yields are generally lower or more variable than on land in Grades 1 and 2."

3.3 Grade 3 is further subdivided into good quality Subgrade 3a, described as:

"Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops."

and moderate quality Subgrade 3b, described as:

"Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year."

3.4 The Provisional ALC map is not suitable for assessing the quality of individual sites, as explained in Natural England's TIN049:

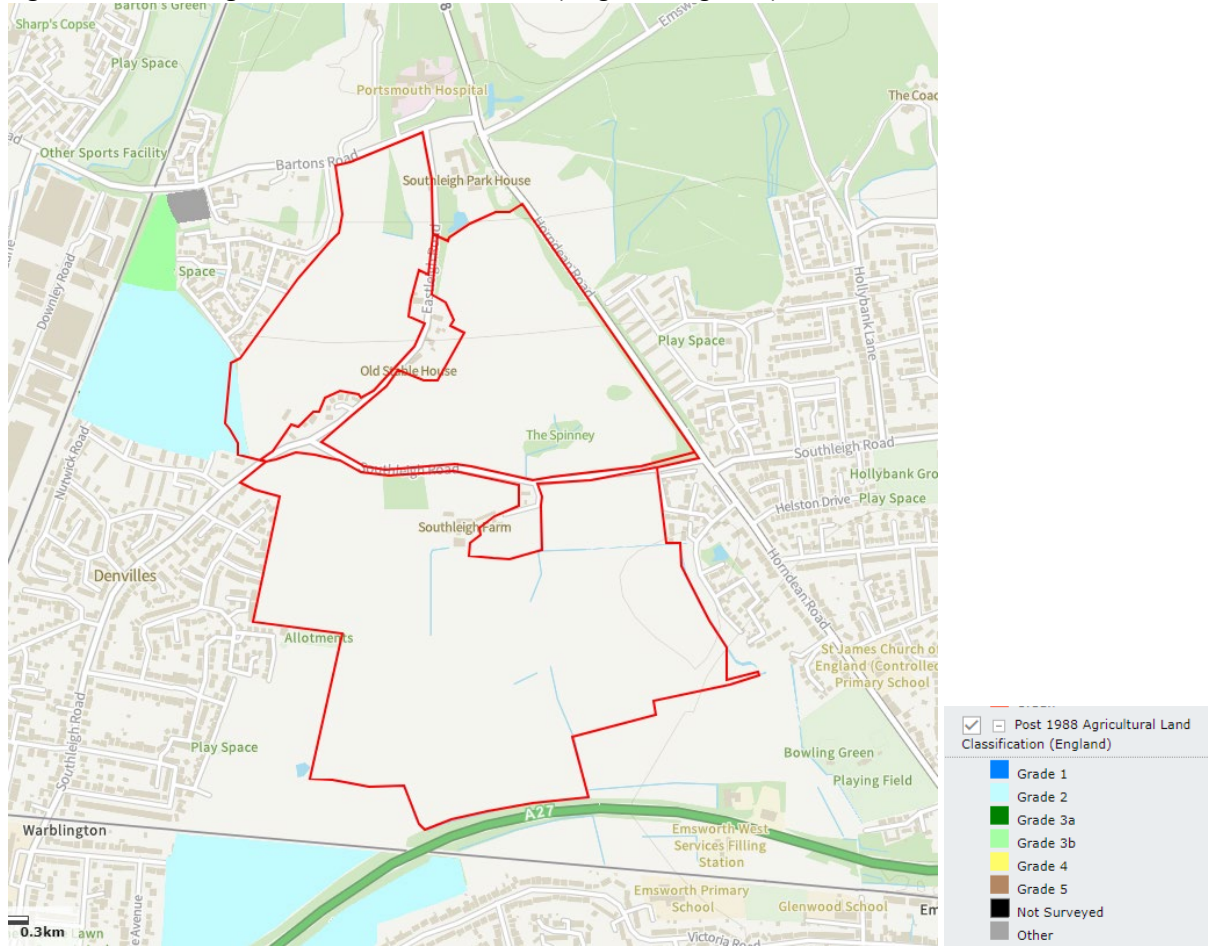
"These maps are not sufficiently accurate for use in assessment of individual fields or development sites, and should not be used other than as general guidance. They show only five grades: their preparation preceded the subdivision of Grade 3 and the refinement of criteria, which occurred after 1976. 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 ..."

3.5 TIN049 goes on to say:

"Since 1976, selected areas have been resurveyed in greater detail and to revised 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/>."

- 3.6 There is no detailed ALC data available within the site boundary, however land to the immediate west and south-west was surveyed by ADAS on behalf of MAFF in 1992⁷. The surveys classified most of the land as Grade 2 with a small area of Subgrade 3b to the west, as shown in Figure 2.

Figure 2: Detailed Agricultural Land Classification (magic.defra.gov.uk)



Land to the West

- 3.7 A total of 10.4ha at Locks Farm and 2.2ha at East Leigh Farm to the west of the site was surveyed.
- 3.8 All the agricultural land at Locks Farm is classified as Grade 2. The site is mapped as having soils of the Wickham 3 association and also having superficial river terrace deposits. The soils are described briefly as having medium clay loam topsoils which pass to permeable clay lower subsoils. The soils are brownish throughout with no evidence of waterlogging. The stone content is low and roots were found throughout. The main limitation to the ALC is slight droughtiness.

⁷ **ADAS (1992).** *Agricultural Land Classification, Havant Borough Local Plan, Hampshire – Objector Sites*

- 3.9 The land at East Leigh Farm was found to be distinct from that at Locks Farm, the boundary between the two being evidenced at the surface by a break of slope. Although mapped in the same Wickham 3 soils, there are no superficial deposits mapped and the soils are developed directly in the underlying clay. There is heavy clay loam topsoil which passes to gleyed and slowly permeable clay subsoils. The profiles are in WC IV are limited to Subgrade 3b by soil wetness.

Land to the South-West

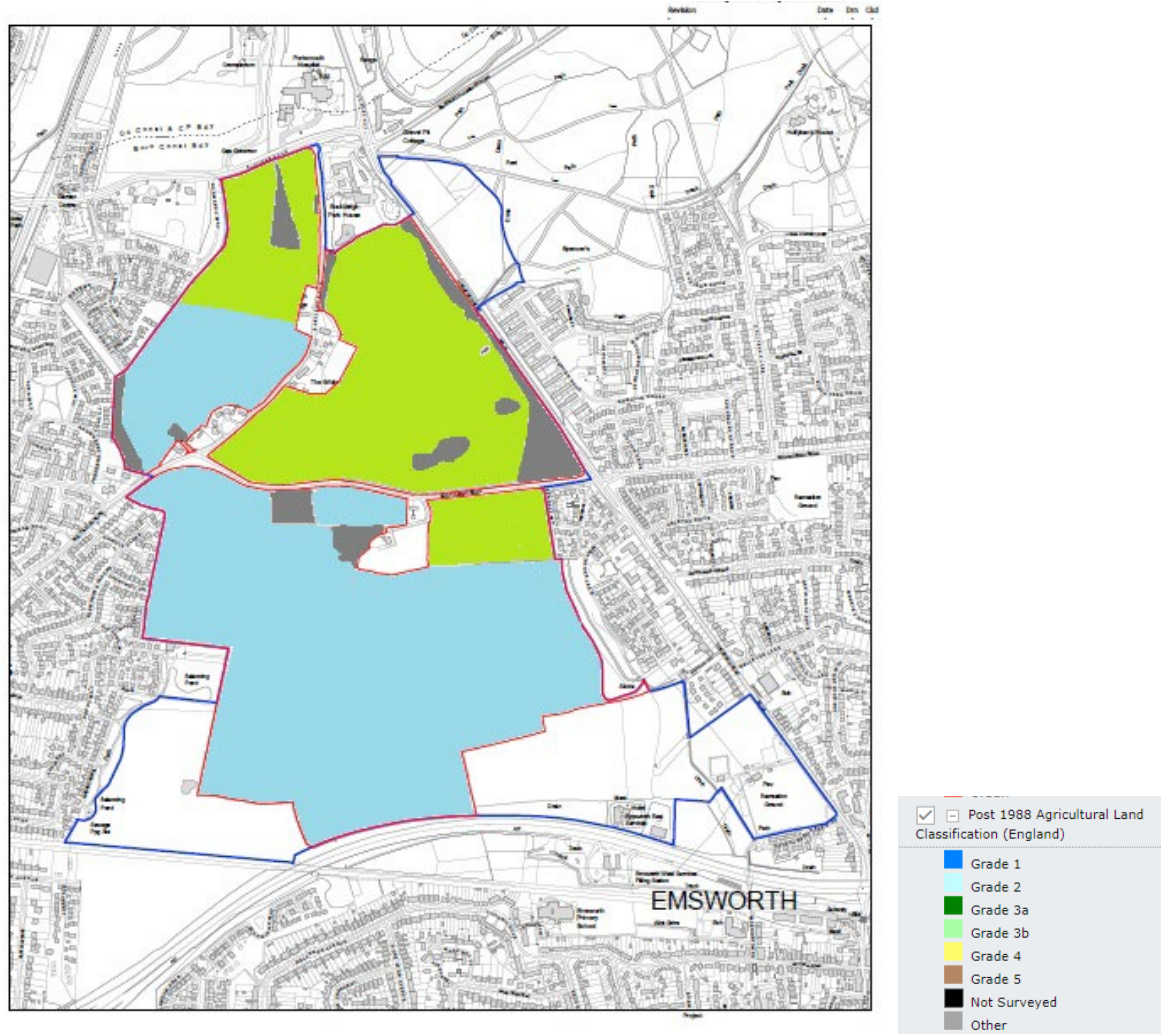
- 3.10 A total of 7.9ha east of Castle Avenue, Emsworth, is classified as Grade 2. Most of the area surveyed is mapped as having river terrace deposits but a small area is mapped as head deposits. The Park Gate soil association is mapped.
- 3.11 The topsoil is medium clay loam. The clay content increases through the profile, through heavy clay loam upper subsoil to clay lower subsoil. The structural conditions are moderate, but there is noted to be deep gleying in the lower subsoils. The profiles are assessed as WC II and are limited by wetness to Grade 2.

Likely agricultural land quality

- 3.12 The detailed ALC survey data in the immediate vicinity of the site has not identified any land of Grade 1 quality as is provisionally mapped in both areas. On that basis, it is reasonable to assume it unlikely that a significant proportion, if any, of Grade 1 land would be found at Southleigh.
- 3.13 The detailed soil data obtained in areas mapped as having river terrace deposits and head deposits, and in areas mapped as both Park Gate and Wickham 3 soils over those deposits, has been consistently classified as Grade 2. The flatter land in the south is limited by wetness and the gently sloping land in the east is limited by droughtiness. It is logical to assume that this pattern would continue across the site at Southleigh.
- 3.14 The survey data to the west identified land of Subgrade 3b quality associated with Wickham 3 soils where there is no superficial drift geology mapped, i.e. the soil is developed directly over the London Clay Formation bedrock. From south of Southleigh Park House, in a band across the mid-slopes roughly between Brookvale in the west and Spencer Road in the east, the mapped data is the same and the land is likely to be Subgrade 3b.

3.15 Given the difference in land use and in surface conditions evident from aerial imagery, the Subgrade 3b quality land may extend further, across the whole of the 25ha grassland parcel. The likely distribution of agricultural land quality is shown in Figure 3.

Figure 3: Likely Agricultural Land Classification



4 Other Local Development Sites

4.1 There are three very recently constructed housing developments adjacent to the site:

- Land south of Bartons Road, Havant (application APP/15/01435) is at the north-western boundary. This site was provisionally mapped as mostly Grade 3 with Grade 1 in the south, and borders on the site classified by ADAS as Grade 2 and Subgrade 3b;
- Land west of Horndean Road and south of Southleigh Road (application APP/14/00547) is at the eastern boundary. The site was provisionally mapped as urban but borders on mostly Grade 2, with some undifferentiated Grade 3; and
- Land at Manor Farm and Copseys Nursery, Hallett Road (application APP/12/01222). This site was provisionally mapped as Grade 1.

4.2 All these sites were originally in agricultural use. No reference to ALC assessments or soil surveys have been found within the application documents available for each of the above permitted developments. It is highly probable that agricultural land of BMV quality in Grade 2 was required for each of them.

5 Summary

- 5.1 The site at Southleigh, Havant, extends to around 140ha of agricultural land which is mainly in arable use. Approximately 25ha is under grass.
- 5.2 The site is provisionally mapped as ALC Grade 1 in the west, Grade 2 in the south and Grade 3 in the north and north-east. No detailed ALC data is available within the site boundary. However, land to the immediate west and south-west has been surveyed.
- 5.3 The surveys classified most of the land as Grade 2, which is limited by droughtiness on gently sloping land and by wetness on level land, and Subgrade 3b. The boundary between the area of Grade 2 and Subgrade 3b caused by a change in the underlying geology was evident from the surface from a break in slope.
- 5.4 Based on the available data and the relationships between the topography, geology and mapped soil types, it is considered unlikely that a significant proportion of Grade 1 quality land will be present at the site. Most of the site is likely to be in Grade 2. A band of land across the north of the site, and potentially across the whole of the 25ha grassland parcel, is likely to be in Subgrade 3b.
- 5.5 Other development sites at the margins of the site at Southleigh with comparable conditions, including provisional mapping as Grade 1 in some areas, have been granted consent. No detailed ALC survey data associated with any of those applications has been found.