March 2025

Bloor Homes Southern

Agricultural Land Quality

at

Hyde End Road, Shinfield

Beechwood Court,
Long Toll, Woodcote,
RG8 0RR

01491 684 233
www.reading-ag.com

Contents

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 Hyde End Road, Shinfield, 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 land[1], and summarised in Natural England's Technical Information Note (TIN) 049[2].

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 (NPPF[3]) as best and most versatile (BMV) agricultural land.

1.6 In a national context, paragraph 187 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*.

[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 (2024).** *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 188 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 includes extends to approximately 10.7ha of agricultural land on the southern edge of Shinfield. Most of the land is agricultural, with around 0.8ha in farm buildings and access tracks. The site is dissected by Hyde End Road and collectively bounded by residential properties to the north, High Copse Farm to the west and the Langley Mead Nature Reserve to the south and east.

2.2 The topography of the site is level at 45m above Ordnance Datum (AOD).

2.3 Drainage of the site is through the soil profile and facilitated by field ditches which direct water toward the River Loddon to the east.

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 45m AOD, and are given in Table 1. The climate at the site is mild. Moisture deficits are moderately large to large. The number of Field Capacity Days (FCD) is smaller than is typical for lowland England (150) and is favourable for agricultural land working. There is no climatic limitation to the agricultural land quality at the site.

Table 1: Local agro-climatic conditions

Parameter	Measurement
Grid Ref	SU 73200 67200
Average Annual Rainfall	667mm
Accumulated Temperatures >0°C	1,474 day°
Field Capacity Days	138 days
Average Moisture Deficit, wheat	115mm
Average Moisture Deficit, potatoes	109mm

Soil parent material and soil type

2.5 The bedrock geology mapped by the British Geological Survey[4] is the London Clay Formation which mainly includes slightly calcareous silty clay.

2.6 Superficial river terrace deposits of sand and gravel overlie the bedrock across the site.

2.7 The Soil Survey of England and Wales soil association mapping[5] (1:250,000 scale) shows the Hurst association in the west of the site and the Fladbury 3 association in the east. The main soils of the Hurst association comprise sandy loam throughout, sometimes with fine loamy textures at depth. The subsoils are very stony. The drainage regime is variable due to groundwater and drainage outlets.

2.8 The contrasting Fladbury soils are characterised by stoneless clay throughout, and often slowly permeable in the subsoils. The profiles are affected by high groundwater and are commonly in Wetness Class (WC) IV[6].

[4] **British Geological Survey (2025).** *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 shows the site as Grade 3, which is defined as good to moderate quality agricultural land and described as:

> *"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."*

3.2 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."*

3.3 The provisional ALC maps are 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 …"*

3.4 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/."*

3.5 Extensive survey work has been undertaken around Shinfield, including within the present site boundary. The agricultural land at the site is classified as mostly Subgrade 3b with Subgrade 3a in the north and south[7, 8].

Agricultural land quality and soils

3.6 Seven soil profiles were observed within the site. Detailed soil borehole log is available for five profiles observed: four west of Hyde End Road and one in the north-east of the site.

3.7 In the western field, the soil profiles include very dark greyish brown or greyish brown (10YR3/2 or 10YR4/2 in the Munsell soil colour charts[9]) medium sandy loam of 29cm average depth. The topsoil is slightly stony with between 5 and 10% hard stone. The upper subsoil is mainly brown or greyish brown (10YR5/3 or 10YR5/2) medium sandy loam with typically 10-20% stone. Other than in one profile, the subsoils are mottled and gleyed. The lower subsoils are variable.

3.8 In the south of the western field, the profiles are medium sandy loam to depth but become progressively stonier, up to 40% gravel. There is noted to be a droughtiness limitation to Subgrade 3b due to poor water retention in coarse, stony soil.

3.9 In the north of the western field, the upper subsoil is brown (10YR5/3) medium sandy loam which is slightly stony and mottled. In the north-west, a lower subsoil of pale brown (10YR6/3) sandy clay loam was observed to a depth of 65cm. In the north-east, the lower subsoil comprises loamy medium sand between 50cm and 75cm and then poorly structured, gleyed greyish brown and grey (2.5Y5/2 and 2.5Y6/1) clay from 75cm to depth. Theses profiles are classified as Subgrade 3a, limited most by droughtiness.

3.10 The profile in the north-east of the site comprises very dark greyish brown (10YR3/2) medium sandy loam topsoil of 35cm depth. The stone content is recorded as 8%. This overlies a light brownish grey (10YR6/2) medium sandy loam upper subsoil which is mottled, gleyed and slightly stony. From 60cm depth, the soil is light olive grey (5Y6/2) and mottled and transitions from medium sandy loam to loamy medium sand at around 80cm depth.

---

[7] **ADAS (1996).** *Wokingham District Local Plan Sites SH11, SH13, SH14, SH15 and SH16 – Shinfield, Berkshire. Agricultural Land Classification Semi-detailed Survey, November 1996.* ADAS Ref.: 0206/177/95, 0206/117/96. MAFF Ref.: EL 02/01176

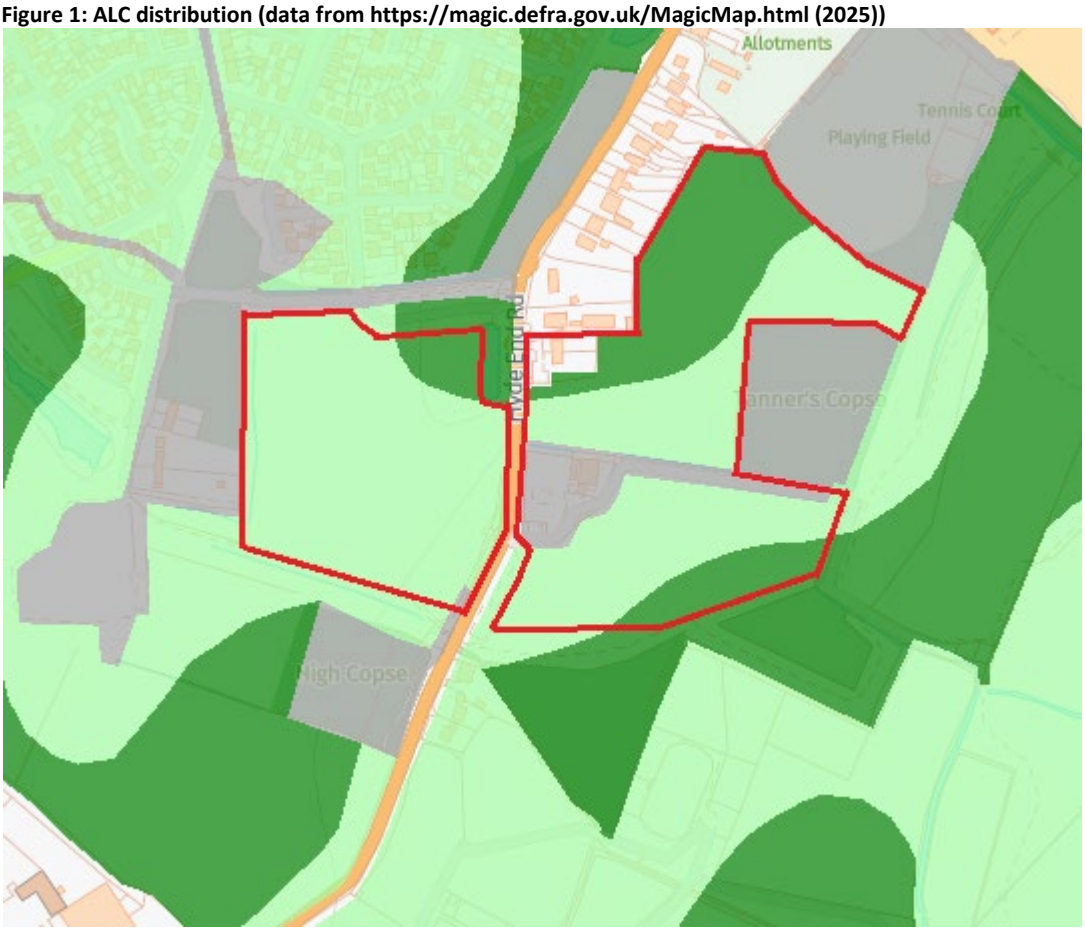
[8] **ADAS (1996).** *Wokingham District Local Plan Sites SH11, SH13, SH14, SH15 and SH16 – Shinfield, Berkshire. Agricultural Land Classification Semi-detailed Survey, February 1996.* ADAS Ref.: 0206/177/95. MAFF Ref.: EL 02/01176

[9] **Munsell Color (2009).** *Munsell Soil Color Book*. Grand Rapids, MI, USA

3.11 The profile has been assessed as Grade 2 but the field has been classified as an equal split of Subgrade 3a and Subgrade 3b. The droughtiness limitation to Grade 2 has been verified by recalculating the moisture balance for the profile as noted. With no supplementary notes from the field survey, the reason for the downgrading is not clear. Potentially the point has been mapped as such because Grade 2 is an anomaly among the other results.

3.12 The ALC grade distribution at the site is shown below in Figure 1 and Table 2.

Figure 1: ALC distribution (data from https://magic.defra.gov.uk/MagicMap.html (2025))



Key: Dark Green – Subgrade 3a
Light Green – Subgrade 3b

Table 2: Agricultural Land Classification

Grade	Description	Area (ha)	%
Subgrade 3a	Good quality	3.0	28
Subgrade 3b	Moderate quality	7.0	65
Non-agricultural land		0.7	7
Total		10.7	100

4 Summary

4.1 The site at Hyde End Road, Shinfield extends to approximately 10.7ha of mostly agricultural land.

4.2 The land is provisionally mapped as Grade 3 quality.

4.3 Extensive soil surveys have been undertaken around Shinfield and have included seven observation points within the present site boundary.

4.4 Most of the soil is sandy loam or sandy clay loam, with instances of clay or sand lower subsoils. Profiles frequently become increasingly stony with depth. As there is a variably limited capacity for water retention within the profiles there is a resulting drought stress. The agricultural land has therefore been classified as a mostly (65%) Subgrade 3b with Subgrade 3a in the north and south, accounting for 28% of the site.