AGRICULTURAL USE, SOILS & FERTILITY REPORT

OF LAND KNOWN AS

NIMBLE TAILORS CLOSE

AT CRANFORD IN NORTHAMPTONSHIRE
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The information included in this report is based upon an inspection of the land on 15th May 2008, on information provided by GP Planning Ltd and on information from IACS returns and Annual Stocktaking Valuations.

AUTHOR’S CV

James Fulton is a practitioner with Berrys responsible for the delivery of rural business advice to a wide range of professional, private and corporate clients. He directly manages approximately 10,000 acres of land in hand and specialises in land management, soils and agriculture.
1.0 INSTRUCTION

1.01 Berrys have been instructed to carry out a detailed assessment of the agricultural use and the soils and fertility of the field known as Nimble Tailor’s Close, identified by the red outline on the plan at Appendix 1, on behalf of GP planning Ltd.

1.02 The report has been requested to be submitted in association with a planning application but the report is entirely independent of that application.

2.0 INTRODUCTION

2.02 The freehold ownership of the land lies with Sir John Robinson Bt and the Cranford Estate, although it is occupied by J P Clarke Esq. under an Agricultural Holdings Act Tenancy, dated 13\textsuperscript{th} September 1955.

2.03 The land comprises approximately 5.6 Ha of agricultural land which was eligible under IACS for AAPS and has been treated as Set-Aside for a number of years.

2.04 The DEFRA ALC mapping confirms that the land falls into Grade 3

2.05 Three auger bores have been taken in order to identify the soil types and depths.

3.0 AGRICULTURAL LAND CLASSIFICATION

3.01 The land has been classified using the guidelines set out in the Agricultural Land Classification of England and Wales (MAFF,1988). This 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 limitations can operate in one or more of four principal ways: they may affect the range of crops that can be grown, the level of yield, the consistency of yield and the cost involved in obtaining that yield. The classification gives considerable weight to flexibility of cropping, whether actual or potential, but the ability of some land to produce consistently high yields of a somewhat narrower range of crops is also taken into account.

3.02 The principal physical factors influencing agricultural production are climate, site and soil. These factors together with interactions between them form the basis for classifying land into one of five grades; Grade 1 land being of excellent quality and Grade 5 land of very poor quality. Grade 3, which constitutes about half of the agricultural land in England and Wales, is now divided into two subgrades designated 3a and 3b.

3.03 The main climatic factors are temperature and rainfall, although account is taken of exposure, aspect and frost risk. The site factors used in this classification are gradient, microrelief and flood risk. Soil characteristics of particular importance are texture, structure, depth and stoniness. These climatic, site and soil factors result in varying degrees of constraint on agricultural production.

3.04 The grade or subgrade of land is determined by the most limiting factor present. When classifying land the overall climate and site limitations should be considered first as these can have an overriding influence on the grade. (A description of grades and subgrades can be found at appendix 2)
4.0 SITE

4.01 The site totals approximately 5.6 hectares (13.8 acres) and is shown on the plan at Appendix 1.

4.02 The field is oddly shaped and awkward to work due to this shape. The field has a slope running from North West to South East and also falls away towards No 1 on the map in the South West Corner.

4.03 The general gradient across the field from the low point at 4 to the high point at 6 is 3.8 degrees with the gradient of the steepest point being 5.5 degrees.

4.04 The slope faces South East which will increase the mean daily temperature and hence the accumulated temperature.

4.05 The slope will also contribute to surface run off and water erosion in heavy rain due to the soil type.

5.0 SOIL

5.01 The reconnaissance soil map of the area (Soil Survey of England and Wales) shows the site to be within the Banbury Association described as stony, well drained, fine and coarse loamy ferritic brown earths resting on shattered ironstone. (Soils and their use in Midland and Western England, 1984) Full description at Appendix 3.

5.02 Initial augur bores were inconclusive due to the inability to augur below 30cm. It was assumed that this was due to the high incidence of large stones within the top 30cm but trial pits suggest that it was due to the extremely high level of compaction below this depth.

5.03 The trial pits show there to be two distinct areas within the field, that including trial pit one to the west of a North South line through trial pit 2 (referred to as area 1) and the area to the East of trial pit 2 (referred to as area 2).

5.04 The whole site has previously been worked but it is probable that this occurred at two separate times. Area one has had the ironstone mined to a far greater depth than area two and has been restored differently. A full description of the soil in the two areas is found at Appendix 4.

5.05 Both areas suffer from having been restored very badly as shown by the extreme compaction from around 30cm depth down to the ironstone.

5.06 The nature of the soils means that Potash levels are inherently low and require annual applications of fertiliser.

5.07 The thin or non-existent top soil combined with a heavily compacted subsoil lead to extreme droughtiness in summer and wetness in winter as supported by the poor state of the grasses and the prevalence of the mares tail.

6.0 AGRICULTURAL USE

6.01 The land is included in the tenancy of JP Clarke Esq. who has farmed the land since he took on the tenancy on the 13th September 1955.
6.02 Nimble Tailor’s Close and the surrounding land has been within an arable rotation which can be seen since the inception of the Arable Area Payments Scheme (AAPS) under the Integrated Administration and Control System (IACS) in 1992.

6.03 The field has been classified as setaside since the beginning of IACS and has remained as such on the subsequent Single Farm Payment (SFP) claims.

7.0 CONCLUSIONS

7.01 The land, while recognised as agricultural within Section 336 of the Town and Country Planning Act (1990), is not currently used for any agricultural production due to the poor quality of the land.

7.02 Following the guidelines set out in the Agricultural Land Classification of England and Wales (MAFF,1988) this land would fall into the Grade 4 classification – poor agricultural land

7.03 The speed at which the land drains and thus its potential soil moisture deficit make it unsuitable for grass production other than for rough grazing land.

7.04 Its position within the holding, an outlying field with no stock proof fencing, leaves it unsuitable for grazing.

7.05 Overall the site is of very little use to what is primarily an arable holding.

8.0 LAND IMPROVEMENT SCHEME

8.01 Material will be placed to a maximum depth of 2m. Prior to filling, the soil will be stripped and stored for use on the restored surface, in accordance with MAFF Best Practice Guide for Handling Soils - Sheet 1, using excavators and dump trucks.

8.02 The bottom 1m will comprise inert clay or similar excavation material, which will be covered by sub soils, placed to a depth of 0.9m with a topsoil layer of 0.3m above.

8.03 Stripped top soils from the site will be re-spread and any deficiency in depth will be made up using imported top soils from local Greenfield site clearance projects.

8.04 The sub soils will be loose-tipped, in accordance with MAFF Good Practice Guide for Handling Soils - Sheet 4. Prior to the replacement of the topsoil, stones will be removed from the subsoil layer.

8.05 Subsoil will be supplied to the site from local Greenfield site clearance projects; material will only be accepted for delivery to the site provided that it has been found to be free of contamination.

8.06 All material to be imported to the site will meet the requirements of a Paragraph 9 Exemption to be issued by the Environment Agency.

8.07 Following placement of the fill, subsoil and topsoil, the surface will be managed for agriculture in accordance with an approved aftercare scheme.
DESCRIPTION OF GRADES AND SUBGRADES

Grade 1 – Excellent quality agricultural land

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

Grade 2 – Very good quality agricultural land

Land with minor limitations which affect crop yield, cultivations and 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 some of the more demanding crops such as winter vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

Grade 3 – Good to moderate quality agricultural land

Land with moderate limitations which affect the choice of crops, timing and the 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.

Subgrade 3a – Good quality agricultural land

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

Subgrade 3b – Moderate quality agricultural land

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

Grade 4 – Poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In most climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 – Very poor quality agricultural land

Land with very severe limitations which restrict use to permanent or rough grazing, except for occasional pioneer forage crops.
DESCRIPTION OF BANBURY SERIES

0-20cm depth

Dark Brown, slightly stony clay loam or sandy clay loam

20-50cm depth

Strong brown, slightly stony clay loam; strong medium granular or fine angular blocky structure.

50-70cm depth

Strong brown or reddish brown, very stony clay loam; strong medium granular or fine angular blocky structure.

70-100cm depth

Strong brown or reddish brown, extremely stony clay loam; massive structure
DESCRIPTION OF SOILS

AREA 1

0 – 30 cm depth

Well structured light brown sandy clay loam (typical of topsoil found within the Banbury Association)

30 – 200 cm depth

Heavily compacted, very poorly structured mottled fine sandy clay

200 + cm depth

Ironstone

AREA 2

0 – 120 cm depth

Heavily compacted, very poorly structured stony reddish brown sandy clay

120 + cm depth

Ironstone
PHOTOGRAPHS OF TRIAL PITS

PIT 1
PIT 2

Boundary between area 1 & 2
PIT 3