

## 14. LAND AND SOILS

### 14.1 Introduction

14.1.1 This Chapter considers the impacts on agricultural businesses and agricultural soil resources of the potential non-agricultural development of 93 hectares (229 acres) of predominately agricultural land on the northern edge of Winchester.

14.1.2 This Chapter has been prepared by Kernon Countryside Consultants (KCC) upon the instructions of the RPS Group. KCC specialise in providing agricultural land classification and rural business impact assessments, together with associated policy assessments.

### 14.2 Site Description

14.2.1 The application site extends to approximately 93 hectares of primarily agricultural land, located to the north of the built-up area of Winchester. It lies between Andover Road North to the west, and the London to Southampton railway line to the east. The northern boundary of the site is formed by Well House Lane, which runs from Andover Road North in the west to Springvale Road in the east.

14.2.2 In addition to the area proposed for development the applicant also intends to take the remainder of the farm to the east of the railway line (35 hectares) out of productive agricultural use.

14.2.3 With the exception of two small pony paddocks on the northern edge of the site, the land is all cropped for arable production. There are two sets of farm buildings on the unit at Barton Farm and Well Farm. However the buildings are excluded from the application area. The land is occupied by a local farmer on a life-time tenancy, having been occupied by his family for in excess of 130 years.

### 14.3 Assessment Methodology

#### Assessment Methodology

14.3.1 This Chapter considers the impacts on agricultural land quality and farm businesses.

14.3.2 The baseline data is based upon published data, including detailed and reconnaissance agricultural land classification surveys for the area. A site visit was undertaken in 2003, during which the farmer was interviewed and the farm was walked. The information gained during 2003 has been updated via a telephone interview with the farmer in September 2008.

#### Scoping Opinion

14.3.3 The methodology and scope, and the use of the existing survey results, were initially agreed in 2003/2004 with both the City Council and, as advisors on agricultural considerations, with the Department of the Environment, Food and Rural Affairs (DEFRA). Copies of the relevant correspondence are attached at Appendix 14.1.

14.3.4 The Council's most recent Scoping Opinion dated 21 April 2009 (Appendix 2.1) commented in relation to land that *"the scope for land investigation to be included in the ES as indicated is considered adequate. The ES should include an assessment of the effects of the loss of the existing agricultural land"*.

#### Terminology

14.3.5 There are no defined thresholds for assessing the impacts of non-agricultural development on agricultural soil resources. Planning Policy Statement 7 (2004) states that it is for Local Authorities to decide whether "best and most versatile agricultural land" (BMV) can be developed. BMV land is identified in PPS7 as worthy of protection. Accordingly the existence of BMV land is a measure of impact.

14.3.6 EIA requires various thresholds to be set to determine the levels of significance of impact. There are no universally recognised definitions of what constitutes “significance”; this will differ according to the perspective of the stakeholder(s). However, for the purposes of this EIA and to assist in its interpretation, common assessment criteria and terminology have been developed for the presentation of predicted impacts. The assessment criteria for impacts on agricultural soil resources and business have been set in consultation with various other consultants and agricultural departmental offices from DEFRA.

### **Impact Assessment Criteria**

14.3.7 The assessment of impact on land resources has been carried out in three stages. Firstly the magnitude of the potential impact has been considered. Secondly the importance/sensitivity of the receptor has been considered. Thirdly the significance of impact has been determined by the interaction of magnitude and sensitivity. The effects have been determined by the thresholds set out in Tables 14.1–14.3 below

14.3.8 The magnitude of impact of the proposed development has been assessed against the criteria set out in Table 14.1.

**Table 14.1 Methodology for determining the Magnitude of Impact**

Impact Magnitude	Definition	
	Impact on Soils	Impact on Local Agriculture
Major Negative	The proposed development would directly lead to the loss of over 50 hectares of “best and most versatile agricultural land” (Grades 1/2/3a).	The impact of the development would render a full-time agricultural business non-viable.
Moderate Negative	The proposed development would directly lead to the loss of between 20 and 50 hectares of “best and most versatile agricultural land” (Grades 1/2/3a).	The impact of the development would require significant changes in the day-to-day management of a full-time agricultural business.
Slight Negative	The proposed development would directly lead to the loss of less than 20 hectares of “best and most versatile agricultural land” (Grades 1/2/3a) or would directly lead to the loss of any quantity of non “best and most versatile agricultural land” (Grades 3b/4/5).	Land take would require only minor changes in the day-to-day management/structure of a full-time agricultural business or land take would have significant effects on a part-time business.
Negligible	No direct impact upon agricultural land.	Land take would require only negligible changes to an agricultural business.

14.3.9 The significance of the impacts has been assessed against the criteria set out in Table 14.2

**Table 14.2 Methodology for Determining Sensitivity**

Sensitivity	Examples of Receptors
High	Land Resources are matters of potentially national importance. There are no defined criteria against which to set thresholds. National planning policy towards the development and protection of agricultural land is at paragraphs 28 and 29 of Planning Policy Statement 7 (2004). The effect on land resources is a combination of the quantum and quality of agricultural land affected, relative to both the national resource and the relative availability of land of that quality locally. Land resources should therefore be classified as being of high environmental value (sensitivity).
Moderate	/

Low	Farm businesses are of potentially local importance. The way that farms are operated will vary over time according to ownership, local and international economic factors. Farm businesses are tolerant of some change without detriment to their character.
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**Table 14.3 Impact Significance Matrix**

Magnitude	Sensitivity		
	High	Moderate	Low
Substantial	Major Adverse/Beneficial	Major–Moderate Adverse/Beneficial	Moderate-Minor Adverse/Beneficial
Moderate	Major-Moderate Adverse/Beneficial	Moderate-Minor Adverse/Beneficial	Minor Adverse/Beneficial
Minor	Moderate-Minor Adverse/Beneficial	Minor Adverse/Beneficial	Minor/Negligible
Negligible	Negligible	Negligible	Negligible

#### 14.4 Planning Policy

14.4.1 Policy relating to development in rural areas was previously set out in Planning Policy Guidance Note 7 (PPG7): The Countryside - Environmental Quality and Economic and Social Development (Feb 1997), as amended in March 2001. This has now been superseded by Planning Policy Statement 7 (PPS7): Sustainable Development in Rural Areas (2004).

14.4.2 Planning Policy Statement 7 (PPS7) Sustainable Development in Rural Areas, closely reflects much of the previous PPG7 guidance. With regard to development in relation to best and most versatile land, agricultural land classification Grades 1, 2 and 3a are still recognised as the key categories. PPS7 includes some new advice on the identification of any major areas of agricultural land that are planned for development in the Local Plan. PPS7 advocates that Local Planning Authorities may wish to include policies in their Plan to protect specific areas of best and most versatile land from speculative development.

14.4.3 As set out in PPS7 paragraph 28, the occurrence of higher grade agricultural land is recognised as an important factor, but needing to be reviewed alongside other sustainability considerations:

*“The presence of best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification), should be taken into account alongside other sustainability considerations (e.g. biodiversity: the quality and character of the landscape; its amenity value or heritage interest; accessibility to infrastructure, workforce and markets; maintaining viable communities; and the protection of natural resources, including soil quality) when determining planning applications. Where significant development of agricultural land is unavoidable, local planning authorities should seek to use areas of poorer quality land (grades 3b, 4 and 5) in preference to that of a higher quality, except where this would be inconsistent with other sustainability considerations. Little weight in agricultural terms should be given to the loss of agricultural land in grades 3b, 4 and 5, except in areas (such as uplands) where particular agricultural practices may themselves contribute in some special way to the quality and character of the environment or the local economy. If any undeveloped agricultural land needs to be developed, any adverse effects on the environment should be minimised”.*

14.4.4 Paragraph 29 goes on to say:

*“Development plans should include policies that identify any major areas of agricultural land that are planned for development. But local planning authorities may also wish to include policies in their LDDs to protect specific areas of best and most versatile agricultural land from speculative development. It is for local planning authorities to decide whether best and most*

*versatile agricultural land can be developed, having carefully weighed the options in the light of competent advice.”*

14.4.5 Local Planning Policy relating to agricultural land quality was set out in Policy CE12 of the Winchester District Local Plan Review (Adopted July 2006). However this policy was not saved under paragraph 1(3) of Schedule 8 to the Planning and Compulsory Purchase Act 2004.

## **14.5 Baseline Conditions**

### **Agricultural Land Quality**

14.5.1 The agricultural land classification (ALC) system divides land into five grades according to the extent to which inherent characteristics can be exploited for agricultural production. Grade 1 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. ALC is based upon an assessment of limiting factors, including soils, climate and other physical limitations and the way in which these factors interact.

### **Published Data**

14.5.2 The site is shown on the 1:250,000 published Provisional Agricultural Land Classification Map (MAFF 1977) as being of undifferentiated Grade 3 quality. However, the ALC system has been revised since these “provisional” maps were produced, including the sub-division of Grade 3 to include Sub-Grades 3a and 3b. As a result they cannot be relied upon for assessing land quality of a particular site.

### **Site Survey Results**

14.5.3 DEFRA (formerly MAFF) was contacted in 2003 and provided copies of survey work undertaken in the area. Since MAFF’s revised guidelines and criteria for grading the quality of agricultural land came into effect in 1988 two agricultural land classification surveys have taken place over Barton Farm:

- A detailed survey was undertaken in 1994 by ADAS over approximately 47 hectares at Barton Farm, as part of the MAFF’s statutory input to the Winchester Local Plan. The results of the original survey have been amended slightly to account for the additional information collected during a later 1997 survey. A copy of the ADAS survey is attached at Appendix 14.2;
- In 1997 a reconnaissance/semi-detailed survey was carried out over approximately 330 hectares of land to the north of Winchester by the Farming and Rural Conservation Agency on behalf of MAFF in connection with its statutory input to the Hampshire Structure Plan review. All land to the south of Well House Lane (ie Barton Farm) was undertaken at a semi-detailed level. A copy of the FRCA Report is attached at Appendix 14.3.

14.5.4 Correspondence with the City Council, DEFRA and GOSE in 2003 has confirmed that the semi-detailed survey is sufficiently detailed to enable decisions to be taken regarding the non-agricultural use of the site. However, if non-agricultural use is permitted it may be necessary to complete a further soil survey in order to provide sufficient information for a detailed soil handling strategy for all or part of the site. The correspondence is set out in Appendix 14.1.

14.5.5 Using the survey results provided by DEFRA we set out below the distribution of ALC grades over the proposed application site at Barton Farm. As part of the proposal the applicant intends taking the remaining farm land to the east of the railway line (35 hectares) out of production and retaining it as open space, with limited public access via designated footpaths only. The idea would be that, if left fallow, this could enhance the biodiversity of the site. Although this part of the farm will be taken out of productive agricultural use, it will not be irreversibly developed and accordingly could return to a productive agricultural use at any time. Accordingly the agricultural land resource to the east of the railway line will not be lost and therefore is not included in the assessment below.

**Table 14.4 ALC Survey Results**

<b>ALC GRADE</b>	<b>DEFINITION</b>	<b>AREA (HA)</b>	<b>% OF SITE</b>
2	Very Good	10	10.5
3A	Good	51	54.5
3B	Moderate	25	27.5
Non Agricultural	Other	7.1	7.5
<b>TOTAL</b>		<b>93.1</b>	<b>100</b>

14.5.6 Grade 2 land has been identified in the dry valley bottoms to the south and north of the site. The main limitations include soil droughtiness, soil workability and occasionally topsoil stoniness. The soils are derived from chalk or superficial drift deposits of loamy material above the chalk.

14.5.7 Sub-Grade 3a land covers approximately 51 hectares of the Barton Farm site. The principal limitation is soil droughtiness, with topsoil stoniness occasionally being equally restricting. Soils within this unit typically comprise well drained, calcareous medium silty clay loam topsoils which are very slightly to moderately stoney.

14.5.8 Sub-Grade 3b land covers approximately 25 hectares. It is commonly associated with the lower slopes of the dry valley features, many of which contain superficial deposits of flinty material resting above the chalk bedrock.

14.5.9 Areas of other land include the hard tracks that traverse across the site, and the highways land on the eastern and northern sides of the site.

### **Soil Conservation**

14.5.10 With the exception of soils on convex brows, soils over much of the site are moderately deep. Topsoils are easy to handle and represent a valuable resource, which can be stripped from the construction areas and used elsewhere, either for landscaping on adjoining land or for re-use elsewhere as topsoil.

14.5.11 Under arable use soil depth is of the order of 280-300mm. There is expected to be a limited demand on the construction site for the quantities of topsoil available from the construction area, and the sale of any surplus topsoil might be considered as an option. The presence of calcium carbonate gives relatively stable structures and stored soils will maintain a loose friable consistency for re-instatement.

14.5.12 Subsoils over much of the ground are similarly easy to handle and can be used for general landscaping purposes. They may also be used for part of the construction of playing fields and other level amenity areas which require a grass cover. The presence of variable quantities of hard flint will have to be addressed if the landscaping is for sports areas, where stones may be a hazard in the playing surface.

14.5.13 Lower subsoils of weathered chalk are suitable for construction and are often used for fill materials and construction of temporary haul roads.

14.5.14 Movement of materials should be undertaken between late April and September during the drier parts of the year when the ground is in moisture deficit to avoid excessive compaction.

### **Farm Businesses**

14.5.15 Barton Farm is occupied by Mr M Burge of Vale Farm, Pitt, near Winchester. Mr Burge has held a lifetime tenancy over the whole of Barton Farm including the farm cottages, Well Farmhouse and the buildings at both Barton Farm and Well House Farm for the last twenty years. However Barton Farm has been tenanted by the Burge family for the last 130 years.

14.5.16 Barton Farm extends to approximately 121 hectares (300 acres) of cropable land. With the exception of two pony paddocks adjoining Well House Farm the entire farm is cropped for arable cropping. All of the arable land has been registered for the Single Farm Payment.

14.5.17 Mr Burge's farm business is based at Vale Farm. This is an arable farm extending to 182 hectares (450 acres), of which 52 hectares (130 acres) is held on an annual tenancy and the remaining 130 hectares (320 acres) is owner occupied.

14.5.18 The two farms are operated together and both units share machinery and labour. However, there are sufficient buildings on each farm to enable them to operate as standalone units if necessary.

14.5.19 The cropping on both units for the 2008 harvest was typical of preceding years and comprised autumn sown wheat and barley, some spring sown barley and a break crop of oilseed rape.

14.5.20 The two farms employ two full-time workers – Mr Burge and his son. Contractors are employed to carry out combining, drilling and spraying. All other work is carried out by Messrs Burge.

14.5.21 Vale Farm is entered into the Countryside Stewardship Scheme and as a result farming practices in recent years have become less intensive. Barton Farm is entered into the Entry Level Stewardship Scheme.

14.5.22 There are two ranges of buildings at Barton Farm, however both sets are excluded from the assessment area. These include a single grain store at Well House Farm, and a range of buildings, some of which have been converted to non-agricultural uses, at Barton Farm. The farm business has sufficient grain storage at Barton Farm for approximately half of the season's crop, the remainder is either transported back to Vale Farm or sold off the combine.

## 14.6 Identification and Evaluation of Key Impacts

14.6.1 Two key areas of impacts have been identified:

- Impacts on agricultural land quality, ie the effects of the loss of agricultural land as a national resource; and
- Impacts on farm businesses. The effects of non-agricultural development on the viability of farm businesses operating within the study area.

14.6.2 These impacts have been split down into construction impacts and post construction impacts.

14.6.3 Construction phase impacts, which may also continue through the operational life of the scheme have been identified as:

- Effects on the national resource of agricultural land;
- Effects on farm size and structure;
- Effects on field drainage and water supplies, both during the construction phase and long term.

14.6.4 The following post construction phase impacts have been identified.

- Trespass onto surrounding agricultural land.

## 14.7 Assessment of Construction Phase

14.7.1 The proposed development includes the development of approximately 86 hectares of agricultural land. The majority of the site falls into Grade 3a (54.5%) the remaining agricultural land is Grade 2 (10.5%), Grade 3b (27.5%) and Other (7.5%). Accordingly the development will involve the development of some 61 hectares of "**best and most versatile agricultural land**".

14.7.2 The magnitude of impact on the national resource of agricultural land of the irreversible development of 61 hectares of BMV land (65% of the site) is deemed to be **Substantial Negative**. The Significance of Impact is **Major Adverse**.

### **Effects on the Farm Size and Structure**

14.7.3 The proposals affect one farming businesses which is based at Vale Farm, Pitt, Nr Winchester.

14.7.4 The proposed development at Barton Farm involves a loss of 121 hectares to the occupying business as once planning consent is granted the Landlord proposes taking the whole unit back in hand, not just that which is proposed for development. With the exception of two pony paddocks all of the land is cropped for arable purposes. The application site comprises just over 65% of the farm business.

14.7.5 The loss of 121 hectares of land will significantly reduce the farm business's cropping area and this will have implications on the overall productivity/profitability of the farm business. However the remaining arable land at Vale Farm will still be able to continue in a productive agricultural use.

14.7.6 In summary the magnitude of impact on the agricultural business is deemed to be **Moderate Negative** due to the overall quantum of land take.

### **Farm Water Supplies**

14.7.7 The land that is proposed for development has been in arable use for a number of years and consequently there are no individual field water supplies. Accordingly there will be no agricultural impact on farm drainage.

### **Farm Drainage**

14.7.8 None of the land which is proposed for development is drained. Accordingly there will be no agricultural impact on farm drainage.

### **Field Accesses**

14.7.9 The development involves the loss of entire fields and accordingly there will be no individual areas that will become severed. Accordingly there will be no impact on agricultural accesses.

### **Rural Designations**

14.7.10 The site is shown as being designated within a Nitrate Vulnerable Zone. As the farm business does not operate any livestock enterprises the loss of this land will not have any implications on the farm's ability to comply with the Nitrate Vulnerable Zone regulations.

14.7.11 The site is also entered into the Entry Level Stewardship Scheme. The loss of this land and consequently the business's ability to remain within the scheme will have financial implications on the farm business. However these implications will not be significant.

## **14.8 Enhancement and Mitigation Proposals**

14.8.1 There are no measures which can mitigate against the loss of agricultural land. Soils handling and conservation should be undertaken in accordance with the relevant chapters in "The Good Practice for Handling Soils" (MAFF 2000).

14.8.2 There are very few measures which can be put in place to mitigate against the impacts on agricultural businesses. In order to avoid the spread of trespass onto neighbouring agricultural land, care will need to be taken over the boundary design of the proposal. However in this case the proposal is bordered by strong physical boundaries (roads and the railway line) which will help prevent the spread of trespass.

## 14.9 Residual Effects and Mitigation

14.9.1 As set out above there is little that can be done to mitigate against the loss of agricultural land both in terms of the impacts on the national resource of agricultural land and the impacts on individual farm businesses. Accordingly the residual effects of the development remain as set out above.

14.9.2 In summary the residual impacts of the scheme on agricultural land quality and farm businesses are:

- **Magnitude of Impact on Soil Resources:** Substantial Negative
- **Magnitude of Impact on Farm Businesses:** Moderate Negative
- **Significance of Impact on Soil Resources:** Major Adverse
- **Significance of Impact on Farm Businesses:** Minor Adverse

## 14.10 Summary

14.10.1 This Report assessed the effects of the non-agricultural development at Barton Farm, Winchester. The assessment highlighted the following two key areas of impact:

- impacts of the loss of agricultural land; and
- the effects of non-agricultural development on the viability of farm businesses operating within the area

### *Impacts of Site Development*

14.10.2 In summary, the assessment found the significance of the impact of the soil resources to be **major adverse** and the impact on farm businesses to be **minor adverse** (refer to Table 14.3). A more detailed breakdown of the findings of the assessment are summarised below in Table 14.5.

**Table 14.5: Summary of Impacts of Site Development**

<b>Development Impact</b>	<b>Assessment Finding</b>
Effects on the national resource of agricultural land	The proposed development will involve the long term irreversible loss of approximately 86 hectares of agricultural land, hectares of which 61 hectares comprise Grades 1, 2 and 3a ie “the best and most versatile” agricultural land. The magnitude of the loss of this land is deemed to be <b>substantial negative</b> .
Effects on farm size and structure	The proposed development will result in the loss of 121 hectares of land which equates to approximately 65% of the occupying farm business. Although the remainder of the farmland will be unaffected, the effects on the occupying farm business are deemed to be <b>moderate negative</b> due to the overall quantum of land take.
Effects on field drainage and water supplies	The impact on field drainage and water supplies is considered <b>negligible</b> – the development involves the loss of whole fields so there shall be no negative effects as a result of severance of field water supplies.
Effects on field accesses	The proposed development on farm access is <b>negligible</b> - given that it will involve the development of whole fields there will be no severance of land parcels.
Effects of development on neighbouring agricultural land	The spread of trespass onto agricultural land is unlikely and therefore the impact of the development is considered to be <b>negligible</b> – the site is bordered on all sides by roads/the railway line.

### *Mitigation and Residual Effects*

14.10.3 There are no mitigation measures that can mitigate against the loss of agricultural land. Due to the inability to introduce mitigatory measures, the residual effects of site development remain the same as those outlined above.