SUNNICA ENERGY FARM
DCO EXAMINATION

WRITTEN REPRESENTATION

ANNEX D – AGRICULTURAL LAND CLASSIFICATION

SAY NO TO SUNNICA ACTION GROUP LTD

11 NOVEMBER 2022

PINS SCHEME REF: EN010106

READING AGRICULTURAL CONSULTANTS

November 2022

Sunnica Energy Farm

Assessment of Agricultural Impacts

For

Say No To Sunnica Action Group Ltd

Beechwood Court
Long Toll
Woodcote
RG8 0RR

[redacted]

1 Executive summary

1.1 RAC is instructed to review and report on the agricultural aspects of Sunnica Ltd's application for a Development Consent Order for an extensive ground mounted solar array and associated infrastructure. The proposed development occupies a total area of 981ha plus connectors and the cable route.

1.2 The locality is dominated by agricultural land use, making use of extensive irrigation resources and infrastructure to support rotations including high value crops such as potatoes, onions, carrots and parsnips.

1.3 The Environmental Statement (ES) is based on an Environmental Impact Assessment (EIA) which is inadequate in its consideration of agriculture and soils in the proposed development area. It fails to address food production from the development area, the impact of irrigation on production and the loss of irrigation resources should the development go ahead.

1.4 A technical review of the baseline assessment shows that it is insufficiently robust to support the conclusions of the EIA with regard to land quality and the impacts of the proposed development on soils and agriculture.

1.5 The agricultural baseline does not include information such as measurements of organic matter content of soil or soil carbon/nutrient stocks making it impossible to assess the success or failure of the site construction, management and dismantling regimes to deliver the benefits claimed in the ES.

1.6 A desk top review of the grading of soils for agricultural land classification finds significant differences between expected grades and those found in the soils baseline. This inconsistency should be investigated by a detailed survey carried out by an independent authority.

1.7 The loss to the local economy of agricultural output across the development area, plus unknown added losses associated with reduction in the processing and packaging of agricultural crops in the area, and other losses associated with the loss of productive land that are not quantified by the Developer.

1.8 The proposed development is likely to have cumulative or defined negative impacts that will result in the permanent loss of water for agriculture in the development area generally and/or the permanent loss of production from high quality agricultural land.

1.9 The Environmental Statement fails to identify measures likely to mitigate the impact of the use of the land as a solar park on agricultural production or soils.

2 Introduction

2.1 Reading Agricultural Consultants Ltd (RAC) is instructed by Say No To Sunnica Action Group Ltd (SNTS) to review and report on the agricultural elements of Sunnica Ltd's (the Developer) application for a Development Consent Order (DCO) for, and associated documents relating to, the construction, operation and decommissioning of Sunnica Energy Farm. The development includes an extensive ground-mounted solar photovoltaic (PV) array, battery energy storage systems (BESS) and supporting infrastructure with a stated capacity exceeding 500MW.

2.2 This report has been prepared by Peter W Danks, Senior Director of RAC, with assistance from colleagues Howard Elliot and Sophie Webb, Associates of RAC. CVs of all three are attached at Appendix 1.

2.3 A site visit was carried out on 25th July 2022 in the company of members of SNTS in order to assess the context of the proposed development in relation to the agricultural landscape and the soils and topography of the area.

3 Information used

3.1 Links to specific web-sourced references can be found in footnotes throughout this report. The documents and websites referred to in the course of producing the report are listed below:

- Magic Map: https://magic.defra.gov.uk/;
- Sunnica Energy Farm Examination Library: https://infrastructure.planninginspectorate.gov.uk/projects/eastern/sunnica-energy-farm/?ipcsection=docs&stage=app&filter1=Environmental+Statement;
- Natural England - National Character Area Profiles: https://nationalcharacterareas.co.uk/;
- Energy Security Strategy: www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy;
- Food Strategy: www.gov.uk/government/publications/government-food-strategy/government-food-strategy;

- National Planning Policy Framework 2021;
- *11 Commitments on Solar Farms*. Solar Energy UK;
- *Planning guidance for the development of large scale ground mounted solar PV system*. BRE National Solar Centre;
- Minister's review of application for solar development at Gwernigron Farm, St Asaph, Denbighshire;
- UK Climate Change Risk Assessment 2022;
- *Working with Soil Guidance Note on Assessing Agricultural Land Classification Surveys in England and Wales.* British Society of Soil Science Guidance Document 1. (2022);
- MAFF Agricultural Land Classification of England and Wales: Revised criteria for grading the quality of agricultural land;
- Isleham-village.co.uk;
- *The impact of solar photovoltaic (PV) sites on agricultural soils and land*. Welsh Government Literature Review. November 2021;
- *Sustainability of Best and Most Versatile (BMV) Agricultural Land*. Welsh Government Scoping Report. 2020;
- *Capability, Suitability and Climate Program: Applying ALC Data for Modelling Irrigation Suitability*. Welsh Government Report. 2020;
- The John Nix Pocketbook for Farm Management. 2022;
- Agriculture Budgeting and Costing Guide. 2022;
- UK Land Cover® Plus mapping;
- *The challenges of developing an irrigation strategy for UK agriculture and horticulture in 2020: industry and research priorities*. Knox, Kay, Hess and Holman. Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources Vol 15, 2020;
- *Irrigation water strategy for UK agriculture and horticulture.* Knox, Kay, Holman and Hess (2020).

- Cam and Ely Ouse abstraction licensing strategy www.gov.uk/government/publications/cam-and-ely-ouse-abstraction-licensing-strategy/cam-and-ely-ouse-abstraction-licensing-strategy;
- *Meeting our future water needs: a national framework for water resources*. Environment Agency. 2020
- *Using D-Risk to inform the feasibility of water sharing as a drought risk management tool at Lark catchment*. Cranfield University;
- *Water for agriculture: collaborative approaches and on-farm storage*. Cranfield University (2014);
- River Lark Catchment Partnership website: www.riverlark.org.uk;
- National River Flow Archive: https://nrfa.ceh.ac.uk/data/station/spatial/33004;
- *Manage water on land: guidance for land managers* www.gov.uk/guidance/manage-water-on-land-guidance-for-land-managers;
- *Winter Storage Reservoirs - Getting control over your water resource*. MAFF PB2512 (1996); and
- *Solar parks and biodiversity: room for improvement*. Wageningen University. (2021).

4 Description of the locality and context

4.1 The proposed Energy Farm comprises four sites with a combined area of 981ha, plus connectors, spread across nine parishes[1] which extend to about 11,900ha between Soham, Isleham and Mildenhall to the north and Burwell, Newmarket and Kentford to the south. There are already 176ha of solar voltaic arrays on farm sites in the parishes.

4.2 The location of the proposed energy farm is described in detail in Chapter 2 of the Environmental Statement [EN10106/APP/6.1], with accompanying maps and plans. It is split into six elements, Sunnica East A and B, Sunnica West A and B, and the cable route.

4.3 **Sunnica East Site A** occupies approximately 230ha located about 3.5km east of Mildenhall, 0.5km southeast of Isleham and 0.6km south-west of West Row. The proposed development

[1] List of parishes paragraph 9.13

comprises solar PV panels, BESS and associated infrastructure, which would occupy 115ha with the remaining area used for environmental mitigation.

4.4 The area is characterised by agricultural arable fields interspersed with individual trees, hedgerows, tree belts, farm access tracks and public rights of way. The arable fields are moderately sized, of regular shape and cropped cereals and root crops, including: winter wheat; winter barley; spring barley; maize; potatoes; and sugar beet, plus other crops such as carrots, or onions.

4.5 **Sunnica East Site B** occupies 319ha located about 1.5km south-east of Mildenhall, 1.5km east of Freckenham and immediately south of Worlington. The proposed development comprises the solar PV panels, BESS and associated infrastructure, which would take up 227ha with the remaining area used for environmental mitigation.

4.6 The area is characterised by agricultural arable fields interspersed with individual trees, hedgerows, tree belts, small woodland blocks, farm access tracks and public rights of way. The arable fields are cropped with cereals and root crops, including: winter wheat; winter barley; spring barley; maize; potatoes; and sugar beet, plus other crops such as carrots, parsnips or onions.

4.7 A 7.5MW solar farm is situated 400m to the south-east of Sunnica East Site B and Bay Farm Power Ltd's Anaerobic Digestion (AD) plant approximately 250m to the south. The farm is used to grow feed crops for the AD plant and spread digestate arising from the operation.

4.8 **Sunnica West Site A** occupies about 373ha located about 0.3km east of Snailwell, 1km south of Chippenham and 1.5km west of Kennett. It is bounded by the A14 to the south and crosses the A11 to the east. The proposed development comprises solar PV panels, BESS and associated infrastructure, which would take up 256ha with the remaining area used for environmental mitigation.

4.9 The area is characterised by agricultural arable fields with boundary trees and hedgerows, shelter belts, small woodlands, farm access tracks and Public Rights of Way. Many arable fields are separated by managed hedgerows, or treed shelter belts. Arable crops grown in the area comprise: winter wheat; winter barley; spring barley; maize; potatoes; and sugar beet, plus other crops such as carrots, or onions.

4.10 **Sunnica West Site B** occupies about 66ha located about 0.5km north-east of Snailwell, 1.4km south of Fordham, 2km south-west of Chippenham and 5.5km east of Burwell, adjacent to the

Chippenham Fen SSSI and RAMSAR site. The proposed development comprises solar PV panels and associated infrastructure, which would take up 23ha with the remaining area used for environmental mitigation.

4.11 The area is characterised by grass fields with mature trees and some recent tree planting.

4.12 The Scheme would be connected to the existing Burwell National Grid Substation by two 400Kv grid connection routes: A, connecting Sunnica East site A with Sunnica East site B and then on to Sunnica West site A; and B, connecting Sunnica West site A with Sunnica West Site B and the National Grid Substation, which lies about 5.5km west of Sunnica West Site B. This change from the scheme as described in the ES would require larger sub-stations and additional heavy plant to be installed than those identified in the EIA, which required an extension to the Burwell Substation.

4.13 The proposed grid connection routes would cross agricultural arable and grass land, the Railway, Highways and Public Rights of Way, the Rivers Kennett and Snail, New River and Burwell Lode, and drainage systems associated with Burwell Fen, Little Fen and an identified area of agricultural land. The lengths of the grid connection routes would be 7km for Route A and 13km for Route B.

The locality

4.14 The proposed development area extends across the boundaries of three landscape character areas: the Fens; the Brecks; and the East Anglian Chalk. Agriculture dominates the landscape and Natural England puts the maintenance of agricultural land use and encouraging biodiversity enhancement at the core of its Statements of Environmental Opportunity for all three areas[2], with the agricultural sector providing a foundation for the development and enhancement of biodiversity and conservation of soils in the areas whilst continuing to be a major provider of food and horticultural produce.

4.15 Natural England identifies that intensive farms like those in the area each directly provide more than six full time equivalent posts[3], which will be supplemented by jobs in related businesses in the agricultural and food production sectors which rely on farming in the area.

[2] https://nationalcharacterareas.co.uk/the-brecks/statement-of-environmental-opportunity/
https://nationalcharacterareas.co.uk/east-anglian-chalk/summary/
https://nationalcharacterareas.co.uk/the-fens/statement-of-environmental-opportunity/
[3] http://publications.naturalengland.org.uk/file/5742315148673024

5 Solar Farms and Agriculture

5.1 The sustainable management of the human ecosystem relies on the balancing of resource uses within recognisable environmental limits. Ecosystem management to maximise a single benefit, such as food or energy production, can result in declines in other benefits. Currently pressures on food and energy security present immediate challenges to policy makers in consideration of potentially irreversible changes to the natural resource system that could permanently impact its ability to deliver services.

5.2 Since the Agriculture Act of 1947, Government policy has consistently aimed to "*promote a healthy and efficient agriculture capable of producing that part of the nation's food which is required from home sources…*"[4], by protecting agricultural land and farm businesses. More recently, Government policy has reiterated this aim, with particular reference to solar developments.

- Energy Security Strategy (07/04/22)

"We will continue supporting the effective use of land by encouraging large scale projects to locate on previously developed or lower value land"[5].

- Food Strategy (13/06/22) (para 1.2.2)

"it is possible to target land use change at the least productive land"[6]

5.3 Government has confirmed the importance of protecting our soils and the services they provide in their own right in its Natural Environment White Paper '*The Natural Choice: securing the value of nature*' (June 2011), which at paragraph 2.35 emphasises the protection of Best and Most Versatile (BMV) agricultural land.

5.4 It is generally accepted that high quality productive agricultural land is an asset to the Country and as such it is protected in Government Guidance and Policy, including the National Planning Policy Framework (NPPF)[7] and the Draft Overarching National Policy Statement for Energy (EN-

[4] https://api.parliament.uk/historic-hansard/commons/1945/nov/15/agriculture-government-policy
[5] https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy#:~:text=We%20will%20continue%20supporting%20the,impacts%20of%20using%20greenfield%20sites. Solar and other technologies
[6] https://www.gov.uk/government/publications/government-food-strategy/government-food-strategy para 1.2.2
[7] https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment paragraph 174

1)[8]. This is reflected in Solar Energy UK's ten commitments to best practice[9], which state in their first guideline that, *inter alia*, developers "*will focus on non-agricultural land or land which is of lower agricultural quality*" where available.

5.5 However, the notes supporting the ten commitments go on to state that ground-mounted solar "*Should ideally utilise previously developed land, brownfield, contaminated land, industrial land and preferably agricultural land of classification 3a* [*sic*], *3b, 4, and 5 (in most instances avoiding use of the "Best and Most Versatile" cropland where possible*), which is clearly in conflict with industry guidance[10], which states that "*Ground Mounted Solar PV projects over 50kWp should ideally utilise … … agricultural land preferably of classification 3b, 4 and 5 (avoiding the use of "Best and Most Versatile" cropland where possible)*".

5.6 Most recently, the Welsh Minister for Climate Change, Julie James AS and colleagues, had cause to review the recommendation of an Inspector to grant planning permission for a solar park at Gwernigron Farm, St Asaph Denbighshire[11]. The Ministers' review[12] (Appendix 2) considered, *inter alia*, whether the development would result in the loss of Best and Most Versatile Agricultural Land, and whether any harm identified in relation to the matters considered would be outweighed by the benefits of the scheme, in particular its contribution to renewable energy generation and combatting the climate change emergency.

5.7 The inspector considered that the 37-year period of the development could be regarded in policy terms as temporary [Inspector's Report (IR) paragraph 314, Ministers' Decision Letter (DL) paragraph 63], that the renewable energy generated by the solar farm provided overriding need (IR319) and that overall, with detailed mitigation, harm to BMV and soils could be avoided and the development would accord with Planning Policy Wales policy to conserve BMV agricultural land (IR331).

5.8 The Welsh Ministers differed in the planning balance from the Inspector and concluded that the amount of energy generated (IR110 - 47.5MW) did not override the loss of BMV (DL68 - 43.1ha) and that the fact that the land would be unavailable for food production for 37 years (DL69).

[8] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015233/en-1-draft-for-consultation.pdf paragraphs 5.11.8 & 5.11.14

[redacted]

[11] DNS/3247619 (1st July 2022)

[12] Reference qA1472901 (14th September 2022)

5.9 The Ministers' decision was that the '*fragility of this finite resource*' (DL71) with '*significant risk of permanent loss*' '*fundamentally conflicts with national planning policy*' and planning permission was refused.

5.10 English and Welsh methodology for identifying Best and Most Versatile (BMV) Agricultural Land is part of a common grading system used in the two countries to enable comparison of the quality of agricultural land. Government policy in both nations affords BMV land protection from significant, inappropriate development and requires that planning decisions should take account of the economic and other benefits of BMV agricultural land.

5.11 The interactions between solar farms and agriculture are likely to shift with climate change and the risks associated with it. The UK Government's third review of those risks was published in January 2022[13]. In terms of food and energy production, three priority risk areas were identified:

- Risks to crops, livestock and commercial trees from multiple climate hazards;
- Risks to supply of food, goods and vital services due to climate related collapse of supply chains and distribution networks; and
- Risks to people and the economy from climate-related failure of the
- power system.

5.12 Recent global political events have highlighted not only risks associated with climate change and energy security but also food security. The disruption of supply, economic sanctions and policy interventions associated with events in Ukraine have added to extant problems associated with COVID-19 and rebound from it, which has resulted in increasing demand and prices. In considering the interaction between sustainable food and energy production in the face of climate change, global supply chain disruption, resource insecurity and market volatility. These issues have to be addressed by building resilience into food and energy supply to address long term risks associated with interruption in supply and market volatility.

13 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1047003/climate-change-risk-assessment-2022.pdf

6 Review of the Environmental Statement

6.1 The EIA Regulations specify the contents expected of an environmental impact assessment in terms of the necessary identification of significant effects arising from:

- The existence of a development
- The use of natural resources in a development
- The existence of emissions, nuisances and waste arising from a development.

6.2 The purpose of EIA is to ensure and promote sustainable development. This is the objective underpinning national land use planning policy as set out in the National Planning Policy Framework (NPPF), and has economic, social and environmental dimensions. These are matters for consideration in the delivery of planning processes. The NPPF emphasises that sound planning is crucially dependent upon the availability of appropriate information, particularly where EIA is required.

6.3 Insofar as agriculture, as a land use and an economic activity, is concerned the relevant considerations on which information is required are its functioning as a user of land, the nature and availability of productive resources of land, water and infrastructure, and its role and connectivity in the wider economy and environment. In relation to the Sunnica Energy Farm proposal these considerations, as far as they have been addressed, have fallen within the scope of the Environmental Statement's Socio- Economic Chapter and associated background Appendices, notably 12B Soils and Agriculture Baseline Report.

6.4 The assessment approach adopted by the socio-economic and land use aspects of the Proposed Development is stated as following 'Best Practice' relevant to other energy infrastructure projects in the absence of any statutory methodological guidance (12.4.2). No specific sources are identified.

Assessment Methodology

6.5 The factors addressed in the assessment of the effects of the Proposed Development on agricultural land resources and farming circumstances are set out in Tables 12-3, 12-5, 12-7 and 12-8 of the ES.

6.6 The agricultural land resource is considered primarily in the context of the national Agricultural Land Classification (ALC) system for England and Wales. While any loss of the land resource is regarded as an adverse effect, weight (effects of high and medium magnitude) is attributed to

BMV quality land (grades 1 and 2 and subgrade 3a). Any loss of land of subgrade 3b quality or lower of whatever magnitude is considered to be an effect of low or very low weighting and sensitivity. This is broadly consistent with the policy emphasis in the NPPF (paragraph 174 and 175).

6.7 There is connectivity between the consideration of the agricultural land resource and that of soil resources in general. The latter are a multifunctional resource, with their productive capabilities assessed in agricultural terms but these are only one of a range of functions. This is recognised in the ES:

> *"Soil is for all practical intents and purposes a non-renewable resource. Therefore, the preservation and beneficial reuse of this resource is desirable in its own right" (12.4.40).*

This is consistent with national land use planning policy; NPPF paragraph 174(a).

6.8 Chapter 12 of the ES deals with the assessment of soil resources in terms of their textural and structural sensitivity to physical disturbance, and the magnitude of impacts relative to their agricultural productivity rather than any wider functional attributes or capabilities.

6.9 Effects on farming circumstances are considered in terms of the adverse aspect of the termination of a farm business or the extent to which they are constrained or interrupted, or the beneficial aspect of the stimulation of opportunities to create or enhance a farm enterprise. The type of farming activity effects determines its sensitivity to impacts of a proposed development, with breeding livestock and high value vegetable and fruit crops deemed to be the more sensitive receptors.

6.10 In terms of the application of these assessments, it is accepted that there is an element of professional judgement required. Consistency and transparency are, therefore, of importance. While the land resource assessment is largely contained within clear parameters of a quantum (20ha) and being of BMV quality or not, this is not the case with the farming circumstances assessment.

6.11 Whilst the ES refers to best practice comparables, these are not identified. The best and most widely applied and tested methodologies for the assessment of impacts on farming interests within EIA are found in those currently promoted by Highways England and HS2 which have been subject to extensive consultation and testing. In terms of both and their approaches towards impacts of development upon farm holdings, there is separate assessment of land loss as a proportion of the holding, severance impacts, losses of infrastructure, and consideration of

disruptive impacts on effective land use and operations. The magnitude of the cumulative impacts is assessed against specified quantitative and qualitative criteria and receptor sensitivity criteria. This best practice approach is not adopted by the Sunnica ES.

Assessment Conclusions and Assumptions

6.12 The impacts of the proposed development on the agricultural land resource are based on the assumption that the development is judged to be merely a temporary use, despite a projected, lengthy 40-year plus timespan. The construction and operational phases of the development are considered in this context. The land resource is assessed to be of low sensitivity to change due to the predominance of land of less than BMV quality in the ALC identified in the baseline. The impact of the proposed development is thus deemed to be very low and the affected land, with a limited exception, is identified as being undisturbed by the development and returned to agricultural use in a more advantageous condition. The effect of the proposed development is, therefore, assessed as negligible.

6.13 The construction phase is stated as being the start of prolonged suspension of current agricultural use. Although during the operational phase some agricultural use (grazing) is said to be possible, current large scale intensive arable production will cease. The current use is considered to be of medium sensitivity to change and the changes introduced are assessed as having a low adverse impact due to the beneficial financial outcomes from the release of the land.

6.14 The limited extent of land of BMV quality stated as being affected by the proposed development is contested on the bases that the constraint of droughtiness on some land has been exaggerated and that the ability of land to be irrigated has been discounted. There has been considerable debate about the latter matter, particularly in relation to whether irrigation remains a factor in the determination of land quality in the ALC or has been formally removed. Despite conflicting responses from officers of Natural England, a Freedom of Information request of the Agency has confirmed that the guidelines on the assessment of agricultural land quality published in 1988 and including the availability of irrigation as a positive determining factor, remain extant and unqualified. The extent of land of BMV quality affected by the proposed development has, therefore, been understated.

6.15 Notwithstanding the differences of opinion on the classificatory methodology, the actual land use situation affected by the proposed development and reflective of the productive capability of the land is as set out in the Soils and Agriculture Baseline Report:

"All of the farm businesses can be described as predominantly arable dry land units that include high margin irrigated crops (e.g. potato, sugar beet, onion) among rotations of cereals."

This is a description which closely reflects that for BMV subgrade 3a (good quality) land in the 1988 guidelines, rather than one for land of lower quality:

"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."

The description for subgrade 3b (moderate quality) land reads:

"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."

6.16 This is a stated capability to which the ES affords a low sensitivity to change and to the loss of which, over a potentially minimum period of 40 years, it gives no recognition or weight in the assessment of the effect of the proposed development. This assessment is clearly in conflict with the stated versatility of the land and its capacity to produce moderate to high yields.

6.17 Instead, the ES places great weight on the assumed neutral impact of the proposed development on the required land and soil resources, and indeed on the beneficial consequences of the long-term removal of the sites from substantive agricultural production. It considers that the development will remove potential compaction and erosion risks and promote structural benefits through deeper root development in the subsoil and increase organic matter levels in the soil. These, it is contended, will after 40 years, safeguard the soil resource and enhance its future productive capacity. No potentially negative effects are identified, nor evidence that the stated outcomes are likely, provided.

6.18 The ES fails to take into account that the land will continue to be accessed and subject to repeated vehicle movements for the construction of the scheme, driving steel stanchions into potentially tight chalk rock in some areas and the potential for mixing soil and substrates when removing those stanchions, and subsequent management of the land and infrastructure along routes necessarily prescribed by the layout of the development with compaction consequences.

6.19 Further, no information is provided about the feasibility of establishment and management of the grassland on established productive arable soils, other than vague references to sheep

grazing and mechanical measures, which will require access by unidentified machinery. There also will be microclimatic changes to the land and vegetative cover as a consequence of its being variably covered. Upon decommissioning there will be inevitable disturbance to soil in varying degrees.

6.20 No evidence has been advanced based on the monitoring of decommissioned or existing solar facilities or similar developments to support the contention that there are no negative impacts arising from the prolonged change in the environment of the land, or if such impacts were likely, how they might be mitigated.

6.21 The cessation of current agricultural land uses on the commencement of construction will have physical consequences for the operation of the affected farm businesses. These are identified in the Soils and Agriculture Baseline Report:

- A reduction in available land under arable crops
- Disruption to management programmes and use of specialised equipment affecting individual farmers or their contractors (possible loss of contracts)
- Potential surplus capacity in specialist crop and water storage infrastructure

These effects are assessed in the ES on an individual farm basis in terms of proportional land take, operational severance, or infrastructure effects, but are attributed an all-encompassing assessment of representing a medium magnitude of change. The unmitigated effect is not stated, and the farm type is attributed only a medium degree of sensitivity to change. The latter does not compare with the higher sensitivity rating afforded to the higher value arable farm types in other EIA methodologies.

6.22 The assessment that impacts on farm operations will be of a low magnitude and of a negligible effect is based on a number of generalised considerations:

- The availability of other land will enable management operations to be adjusted to accommodate the loss of access to the project land
- Contracts can be readily suspended for the duration of the Proposed development and/or replaced by alternative contracts on the project land
- Surplus crop storage can be leased to other producers
- Irrigation water abstraction rights can be traded to other users and/or surplus reservoir capacity leased

- Use of the land as a solar farm represents a positive diversification of farm business to their economic benefit

None of these considerations are assessed in terms of their scale, practicality and certainty on a farm-by-farm basis but are addressed as generalisations.

6.23 Normal practice in the assessment of the effects of development proposals on farm holdings is to concentrate on the physical impacts of development proposals and the extent to which the operational functioning of the associated farm enterprises is compromised. Financial considerations arising from the release of land for development are not included in the assessment.

6.24 The proposed solar development is promoted as a form of farm diversification, which would conventionally operate alongside a continuing farming business. Given the scale of change of the development and its longevity, particularly in the case of two of the affected holdings, the financial arrangements have more in common with conventional compensation than commercial activities subordinate to farming activity. Whether or not this is the case, it cannot be assumed that individual recipients of the financial arrangements will use these in the furtherance of their own or other local agricultural activities. Consequently, whilst there may be a financial benefit accruing from the development, it may not offset the functional effects of the proposed development.

6.25 The ES also fails to take into account the cumulative effects of aspects of the proposed development. For instance, the existing Bay Farm AD plant is extensively integrated with two of the affected agricultural businesses. The 'green' feedstock for the plant mainly comprises maize and sugar beet grown on surrounding land, and agricultural by-products including sugar beet pulp and vegetable outgrades, and livestock manure. It is understood that the AD operation in turn relies upon the crops grown on the land holding to provide a beneficial use for digestate arising from site. The EIA does not account for the impact of the loss of land associated with the proposed development on the availability of land for spreading digestate from the AD plant.

6.26 The areas of maize and beet grown on the proposed development area for use in the plant are not identified in the ES, but it is very likely that a significant proportion of feedstock is drawn from land that would be occupied by Solar PV arrays should the development proceed. It is more likely that the proposed development area makes up a substantial element of the land bank that the AD operation relies upon for the beneficial use of digestate arising from the operation.

6.27 The likely impacts of the displacement of land used for growing feedstock and the application of digestate are not identified in the ES and consequently the effects of the proposed development, for instance in terms of increased and displaced vehicle movements associated with the continuing AD operation, and the viability of the AD plant cannot be assessed as part of the EIA.

7 Baseline assessment of soils and agricultural land

7.1 The ES is supported by a Soils and Agriculture Baseline report[14] produced by Daniel Baird Soil Consultancy Ltd (DBSC), which concludes that 37.3ha (3.8%) of the proposed development area is classified as Subgrade 3a, which is included within definition of BMV land. The remainder of the land is classified as: Subgrade 3b, 493.3ha (50.3%); Grade 4, 393.4ha (40.1%); and non-agricultural, 57ha (5.8%).

7.2 RAC has carried out a technical review of the baseline report (Appendix 3) which concludes that its findings are not robust and should not be relied upon as part of the EIA. The justification of this conclusion is set out in the Appendix and summarised as follows:

- the soil observation pits and lab samples appear to have been an afterthought and didn't inform the auger survey;
- one detailed pit sample per 145ha of land surveyed at an observation density of 0.8/ha, including atypical profiles, on a rigid 100m Ordnance Survey-based grid does not meet Natural England guidelines for the assessment of land quality;
- inconsistencies between pit and augered observations at the same site indicate that the pit samples and laboratory analyses were an afterthought and didn’t inform the auger survey. It is extremely likely that the grading of the site was carried out using manual analysis alone, in the absence of confirmatory laboratory results;
- the baseline mapping of ALC data does not reflect the published baseline or the observations made in the course of the survey and associated calculations. Taking results at face value, much more Grade 2 and 3a land should be mapped than is shown in the baseline report;

[14] EN010106-001863-SEF_ES_6.2_Appendix_12B_Soils and Agriculture Baseline Report

- calculations of limitations on Grade due to droughtiness are not supported by either adequate observations to either the full depth of the soil profile or evidence presented with the baseline report, or both; and
- when assessed against the British Society of Soil Science (BSSS) criteria for reliability[15], the report fails on three counts:
    - Limitations have not been justified when concluding the ALC Grades on site;
    - Auger boring records do not clearly reflect moisture balance (MB) assumptions for drought (Wheat and Potatoes); and
    - Soil pits do not clearly show soil wetness class.

7.3 These omissions are significant and cause the report to fall below the standard to be expected of a good report. The BSSS recommends that in cases where such significant issues or omissions exist, the report concerned should not be accepted without referral to specialists.

7.4 Notwithstanding the technical shortcomings of the baseline report, there are several other matters concerning the report that are worthy of comment.

7.5 The main survey work was undertaken in several batches, the known dates being mainly in November 2015 and October 2019 with single survey days in December 2015, July 2019 and July 2020. The dates of surveys at Snailwell and Sunnica West are not provided. This is a protracted survey period involving multiple soil surveyors, making it difficult to achieve consistency in observation and interpretation of the soils. This is reflected in the results of surveys carried out across land bordering the proposed development area carried out for SNTS, the conclusions of which go against those of the project baseline (Volume 6 of the ES Appendix 12B).

7.6 According to the pit descriptions in Annex F to the baseline, six pits were excavated on 23rd and 24th September 2021; none were contemporary with the auger survey. The only soil samples sent for laboratory analysis were from the pits, with the results made available in October 2021; no samples were taken during the original survey. There would have been little opportunity for the information derived from the pits and laboratory analysis to inform the findings of the survey, given that the final ES was published less than a month after the receipt of laboratory results. It is standard practice to take samples for analysis during a soil survey in order that the

[redacted]

results of hand texturing and visual inspection can be verified for consistency across the project, particularly when a survey is over an extended period.

7.7 The conclusion of the technical review of the methodology and observations made during the soil survey, and the interpretation of the results used to inform the EIA, is that it falls short of the required standard and so cannot be relied on as an accurate description of the baseline agricultural land quality. The soils baseline is insufficiently robust to support the conclusions of the EIA with regard to land quality and the impacts of the proposed development on soils and agriculture.

Desk-based appraisal of likely ALC

7.8 This report has thus far demonstrated that the data and mapping presented by DBSC is unreliable and not consistent with the ALC system, which has been established in England and Wales for more than 40 years.

7.9 A desk-based appraisal of the likely land quality of the northern section of Sunnica East, at Lee Farm near Isleham, has been undertaken in order to compare the findings of the DBSC work and conclusions drawn from collation of information from data sources published by Defra, Natural England and the Soil Survey and Land Research Centre, covering a well-studied part of the UK.

7.10 The limitations of relying upon published data rather than ground observed data are acknowledged but the purpose of the appraisal is not to produce a definitive classification, only to identify contrasts between what is, according to authority, most likely to exist and what has been found by DBSC and highlight inconsistencies.

7.11 The agricultural land at Lee Farm, which falls in the Sunnica East segment, is mainly farmed in an arable rotation, with pigs also in the rotation in fields all around the central farm buildings. The land is gently sloping to level, draining northward *via* Lee Brook into the River Lark.

7.12 The bedrock geology is primarily of the Zig Zag Chalk Formation. In the north of the study area at Lee Farm the bedrock geology is the West Melbury Marly Chalk Formation (not identified by DBSC). The formation is described as buff, grey and off-white, soft, marly chalk and hard grey limestone arranged in couplets. A narrow strip of mixed Holywell Nodular Chalk and New Pit Chalk is mapped in the south-west.

7.13 Superficial head deposits are mapped north, south and east of the farm buildings and include angular rock debris and clayey material. Peat is mapped in conjunction with Lee Brook and also

in the north-east of the study area at Lee Farm (also not identified by DBSC), and alluvium is mapped along the brook north of Beck Road.

7.14 There is a complex pattern of soil associations at Lee Farm mapped in detail by the Soil Survey:

- Swaffham Prior association south of Beck Road and across a majority of the land north of Beck Road and west of Lee Brook;
- Moulton association north of Beck Road and east of Lee Brook;
- Reach association associated with the peat deposits;
- Wantage 2 association east of Sheldrick's Road; and
- Adventurers' 1 bordering the Lee Farm area to the north.

Swaffham Prior

7.15 South and west of Breckland, the component Swaffham Prior series predominates and is described as typically including dark greyish brown, slightly stony, calcareous sandy loam topsoil of 25cm depth overlying brown, slightly or moderately stony, calcareous sandy loam, and passing to soft shattered chalk, chalk rubbly or very stony sandy silt loam from a depth of 60cm.

7.16 Using the same climatic data as DBSC, the Swaffham Prior series, whether underlain by chalk or by very stony sandy silt loam, is limited by droughtiness to **Subgrade 3a**.

Moulton

7.17 The Moulton series is noted as accounting for about one-third of the Moulton association in Cambridgeshire, and similar but deeper Maplestead and Frilsham series' another third.

7.18 The Moulton series includes dark brown, slightly stony sandy loam of 25cm depth, passing to similar but yellowish brown upper subsoil. Lower subsoil is typically present at 60cm depth and may be sandy loam or sandy clay loam and overlies weathering chalk or marl from a depth of 85cm.

7.19 The Maplestead series is similar but includes brown sandy loam to a depth of around 95cm before passing to slightly stony loamy sand.

7.20 The Frilsham series includes finer textures, being characterised by sandy clay loam or clay loam throughout, passing to chalk rubble at 70cm depth.

7.21 Each of the three series' assessed as described are subject to a droughtiness limitation to **Subgrade 3a**, regardless of whether the stone content is assessed as hard stone or chalk.

Reach

7.22 The main component series is generally described as "*carbonatic loamy material passing to soft chalk*". It includes a top horizon of very dark brown, extremely calcareous but humose clay loam or silty clay loam of 30cm depth. Below the topsoil is described as extremely calcareous white, mottled, stoneless silty clay loam (chalk marl).

7.23 Assuming the 'subsoil' to be silty clay loam with 80% chalk, there is a slight droughtiness limitation to **Grade 2**.

Wantage

7.24 The main component series includes a very slightly stony, silty clay loam topsoil to 25cm depth. A thin brownish grey, slightly stony silty clay loam separates the topsoil from a very stony, extremely calcareous, grey silty clay loam lower subsoil. Thinly bedded chalk lies at a depth of around 60cm.

7.25 This profile is subject to a droughtiness limitation to **Subgrade 3a**, regardless of whether the very stony subsoil includes hard stone or chalk.

Adventurers'

7.26 The typical Adventurers' soil comprises humified peat which is black near the surface and passes to dark reddish brown at moderate depth. Grey stoneless clay loam or sandy loam is typically at 100cm depth. Such a profile is inherently of **Grade 1**, although is likely to be situated within a flood plain which may exert some limitation.

7.27 Taken at face value, it is clear that all of the soils mapped as being present across the Lee Farm study area would be expected to be of BMV quality, predominantly in Subgrade 3a, without irrigation. Some variations are within or are close to the threshold of Grade 2, and the peaty soils are inherently of Grade 1. The droughtiness calculations for the mapped soil types are set out in Appendix 3.

7.28 The mapping by DBSC of the totality of this area as Grades 3b and 4 is counter intuitive given the soil series' mapped in detail by the Soil Survey and is worthy of further investigation.

Qualitative Evidence

7.29 The ALC guidelines set out the definitions of each of the possible classifications. Of the BMV grades determined as most likely to occur in the study area:

"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 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."

and

"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."

7.30 The grades mapped in the study area by DBSC are:

"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 grazed or harvested over most of the year."

and

"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 moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land."

7.31 Although there are patterns of patchiness indicating variability across land north of Beck Road visible in remote sensing imagery (Appendix 4), street view imagery shows one such field to

contain a potato crop. In line with ALC definitions, these land uses are not consistent with the land being classified in any non-BMV Grade.

7.32 In the settlement of Isleham itself, Mill Street, Malting Lane and, significantly, Appleyard Farm, all suggest a long history of farming and related activities in the area including growing top fruit. For the character of the area to continue to be defined by arable land uses is testament to versatile and successful growing conditions.

7.33 In addition to the implications of the name Appleyard Farm, in 2013, a community orchard was established in Isleham[16]. Referring to the ALC guidelines' grade definitions, land capable of producing top fruit is not likely to be worse quality than Grade 2.

7.34 These assumptions are confirmed by crop mapping from Land Cover® plus (Appendix 5), which shows substantial parts of the study area to be cropped with sugar beet, and potatoes in rotation with cereals and other crops between 2017 and 2021 (inclusive). This type of rotation strongly suggests that the land is of a BMV grade rather than, as found in the baseline report, Grade 3b or 4, on which cropping is limited and yields moderate.

7.35 Taking into account the multiple published data sources, a desk-based appraisal of agricultural land quality at Lee Farm and in the surrounding area would conclude that the ALC is likely to comprise a majority Subgrade 3a with a notable presence of Grade 2.

7.36 At least 31.4ha of the proposed development area will be occupied by solar infrastructure, including batteries, inverters, transformers and other heavy plant. No detail is given in the Framework Construction Environmental Management Plan[17] or elsewhere of plans to conserve and restore or reuse any soil resource that would be disturbed or otherwise displaced by the infrastructure that is likely to require year-round access, robust foundations or connections to underground services, all of which are extremely likely to cause soil to be moved in the course of construction and use.

7.37 Detailed soil mapping by the Soil Survey of England and Wales and cropping in the recent past strongly suggests that the soils of the majority of the land in the proposed development area is in BMV grades and so should be protected from development.

[16] [redacted]

[17] EN010106 Volume 6 Environmental Statement 6.2 Appendix 16C: Framework Construction Environmental Management Plan.

7.38 The results of this exercise, which suggest that up to 60% of the proposed development site would be classified as BMV Grades[18], emphasise the conclusion at paragraph 7.3 that the soil baseline report should not be accepted without referral to specialists.

Reconnaissance surveys of adjacent land

7.39 SNTS have asked on three separate occasions for access to the proposed development area in order to verify the findings of the surveys carried out by DBSC.

7.40 In the absence of detailed field surveys and in addition to the above desktop assessment, land adjoining and similar to the proposed development area has been surveyed by independent soil scientists instructed by SNTS Ltd and the resulting report is attached and discussed at Appendix 3.

7.41 The soil surveys were carried out across 80ha of land in August 2021 and September 2022, and included digging and photographing soil pits and laboratory analysis of soil samples to support the findings of the field survey.

7.42 A desktop exercise to support the survey, which covered a smaller area than the above desktop, found the survey area to be dominated by three soil associations: Newport 4; Moulton; and Swaffham Prior, which are described by LANDIS[19] in the following ways.

Newport 4

7.43 Deep well drained sandy soils covering 746 km² (0.5% of England and Wales). Growing Cereals, Sugar Beet, Carrots and Potatoes.

Moulton

7.44 Well drained coarse and fine loamy soils with similar shallow calcareous coarse loamy soils over chalk or chalk rubble in places. This series covers 149 km² (0.1% of England and Wales). In average years the soils are slightly droughty for cereals, oilseed rape and sugar beet, moderately droughty for potatoes and very droughty for grass.

Swaffham Prior

7.45 Well drained calcareous coarse and fine loamy soils over chalk rubble covering 693 km² (0.46% of England and Wales). The soils are very easy to cultivate and there are adequate days for spring and autumn cultivation. Yields from direct drilled autumn- and spring-sown crops are like

those from conventional techniques. Arable crops including winter and spring cereals, sugar beet, potatoes, peas, and beans are grown.

7.46 The report found that of the 80ha surveyed, 78% is classified as BMV land (without upgrading for irrigation), with sandy loam and loamy sand to silty topsoils between 250mm and 450mm depth with ALC grading being limiting mainly by droughtiness and to a lesser extent soil depth.

8 Impacts on soils and agricultural land

Landscape and ecological mitigation

8.1 Appendix 10l of the ES outlines the proposed management of the area necessary to achieve the developer's vision set out in its Environmental Masterplan and mitigate the effects of the scheme on biodiversity and landscape features. The measures are designed to avoid or reduce effects on landscape, heritage and biodiversity features through siting of the Scheme components, including habitat creation, restoration, enhancement and management. The implementation of these measures is taken into account in the assessment of the likely impacts and effects of the Scheme on landscape and biodiversity.

8.2 The Landscape and Ecology Management Plan (LEMP) identifies a total of 56.6 ha within Sunnica East Site A and 32.9 ha within Sunnica East Site B, a total of 89.5ha, nearly 10% of the area of agricultural land occupied by the proposed scheme, to be taken for habitat creation and mitigation for the loss of existing habitats.

8.3 The majority of the development area is occupied by arable land, which is unlikely to be suitable for the creation of replacement grassland due to its relatively elevated nutrient content. In order to overcome this, it is proposed at para 7.2.4 of the LEMP that areas "*not be subject to excavated material*" will be treated with herbicides and dead material removed before placing a layer of chalk up to a maximum of 150mm on top of undisturbed soil and mixing it with topsoil stripped from elsewhere "*along the Scheme*" at a ratio of three parts dug chalk to one part topsoil.

8.4 This methodology appears to have been adapted from elsewhere and only takes into account the loss of potentially BMV land identified in the baseline assessment without identifying the sources of chalk or topsoil used. The shortcomings identified above suggest that this baseline is very likely to be inaccurate and that the loss of a significant area of BMV land will result from either the burial of a soil profile or the taking of topsoil from elsewhere on site. No details are

provided of the likely volume required or provenance of chalk or topsoil used in this proposed soil adjustment scheme.

8.5 Whilst the locations of the proposed habitat creation are known, no true or accurate indication is given of the loss of BMV agricultural land that might be associated with the development. Any loss of BMV land associated with habitat creation cannot be considered 'temporary' and will result in the permanent loss of a valuable resource for future generations.

Decommissioning

8.6 With exception of reference to unidentified Defra guidance on the management, preservation, retention and reinstatement of agricultural soils, Appendix 16E to the ES makes no mention of the restoration of the productive capacity of any agricultural land taken by the scheme where soils are displaced, disturbed or otherwise affected by the proposed development.

8.7 The baseline condition of the soils across the proposed development area has not been established comprehensively and is not described other than in general comments regarding likely soil organic matter levels and the results of analyses of samples taken from six pits in the soil baseline. In contrast, the RAC report appended to the ES baseline report contains the results of analyses of samples, of topsoil and subsoil, from eight sites taken across 70ha, part of which forms part of the proposed development area.

8.8 The number of baseline observations is inadequate to draw any conclusions regarding the management of soil resources across the site or accurately determine the impact of the development on the soil resource after 40 years of operation and its proposed return to highly productive agriculture.

8.9 Decommissioning of solar PV sites is an expanding area of work, particularly in the USA where early sites were located on brownfield or low quality agricultural land. Welsh Government research[20] found that, in the UK, decommissioning schemes are generally prepared within six months of the end of the site's life rather than at the start as would be expected in the case of a major development. The Welsh Government went on to conclude that "*the requirements for a successful outcome of a decommissioning plan need to be identified at an early stage*". A comprehensive baseline is required to inform any effective restoration, this includes the drafting of protocols for soil handling and treatment that would be necessary during the construction

[20] https://gov.wales/sites/default/files/publications/2021-12/atisn15722doc2.pdf

phase to preserve soils and their quality. There are no published studies on the reversibility of solar PV sites and the impact of developments on agricultural land and soil.

9 Effects not assessed

9.1 There is a need to place such a spatially large development proposal in a wider land use and socio-economic context, particularly with regard to food production and employment. The assessment of agriculture and related issues in the ES are restricted to "The Sites" (ES Table 12.1) only.

Food production

9.2 ES Chapter 12 places weight on the position that there is no policy imperative seeking *"to enforce continuity of agricultural production or any specific agricultural management"* (12.4.37). Nevertheless, the non-renewable nature of the resources underpinning agricultural production is recognised (12.4.40) and the magnitude criteria for effects on soil resources rate the loss of productive capacity as high, although subsequently qualifying this in terms of linkage to BMV land. The loss of productive capacity in a wider context is specifically excluded from the assessment…

> *"…which does not consider food security at a national, regional or local level. This because land use planning does not control how agricultural land is managed, for example the growing of non-food energy crops. Food security is managed through national policy on agricultural support and trade and is insensitive to land use planning decisions." (12.4.4)*

9.3 This statement is not entirely accurate. National policy on agricultural support and trade is not the sole influencer on agriculture, there is significant intervention in the management of agricultural resources through the planning system and other regulatory authorities, notably the Environment Agency and Natural England. Furthermore, the Government has recently (2022) announced a national Food Strategy[21] with stated objectives regarding self-sufficiency. There is in the Strategy recognition that, despite international trade in food, domestic production is important in providing resilience against unforeseen uncertainties, of which there has been considerable recent experience. Consequently, in the Strategy the Government commits to

[21] https://www.gov.uk/government/publications/government-food-strategy/government-food-strategy

keeping domestic food production (75% of domestic food consumption) broadly at the same level into the future.

9.4 The approach of the Strategy is based on the twin objectives of enabling the food system to feed the nation now, and to protect it for tomorrow. This is to be achieved through a framework of incentives to enable farmers and food producers to become more sustainable, and the introduction of a parallel land use strategy (scheduled for 2023). The latter will provide a model for land use change which combines land use intensification, land use sharing and land sparing to enable the delivery of a full range of land use objectives, including food production. The introduction of a land use strategy reflects a recognition of the growing competing pressures on land and of the probability that there is insufficient land to accommodate all the demands. Consequently, a framework is necessary to ensure the more effective use of land and to assess multiple uses of land at national, regional and local levels. In this respect there will be a direct connectivity to the land use planning system to ensure the proper consideration of land use priorities at above local level.

9.5 This solar farm proposal exemplifies the need for land use change to be considered in its widest context. The scale of the proposed development demands this, not least because it is located in an area of high and diverse agricultural production, a contribution not necessarily transferable to other areas either temporarily or permanently. While access to solar energy is clearly an important component in meeting future energy requirements, that does not necessarily equate with a view that all proposals whatever their size and location are appropriate or acceptable. There is significant concern and objection to the current scale and distribution of solar farms, which will only be addressed if projects are considered in a wider context rather than solely on a site specific basis. Recent evidence to the House of Commons Business, Energy and Industrial Strategy Committee suggested that the combined land requirements of wind and solar energy infrastructure could exceed 80,000ha over the next 20 years. If this scale of need is likely, then a measured approach needs to be taken to how it is met rather than one dictated by a cumulation of individual project decisions.

9.6 The current proposal would remove over 900ha of agricultural land from highly productive use for a period of at least 40 years, 50 years with construction and dismantling, that is more than 1% of the projected total land requirement for projected solar and wind needs. The substitution of existing high-output arable production with extensive livestock grazing does not represent any meaningful safeguarding of food producing capacity. It is of note that national self-sufficiency of the range of crops produced in the project area (cereals, oilseed rape, potatoes

etc.) has reduced over the past 17 years, while the production of sheep meat has grown to exceed domestic need (John Nix Pocketbook 2023).

9.7 Irrespective of the narrow planning policy protection afforded to BMV quality land, it is relevant to take a wider view of the place of the locality of the proposed development in its extended context. The proposed development is located at the meeting of three distinct landscape areas; the Fens, the Brecks and the East Anglian Chalk. All three are greatly influenced by farming. The maintenance of productive, sustainable agricultural land use is a key component of Natural England's Strategy to exploit environmental opportunities in the region consistent with its being a nationally important source of food. More than 25% of England's potatoes are grown in this wider area.

9.8 Not only does the area contribute to food security, but the intensive nature of farming activity also provides significant amount of land-based employment and a market for an established network of engineering and technical support and food processing and packaging businesses. The Fens, for example, support 27,000 people on 4,000 farms plus employment for workers in the transport and processing sectors.

9.9 Agricultural production, with food processing and packaging and food distribution and retail are all elements of the food system that deliver economic benefits in the local area and underpins food security on regional and national scales. Crops grown in the proposed development area include: carrots; potatoes; parsnips; onions; sugar beet; milling wheat; maize; and winter and spring barley.

9.10 The ES fails to identify the likely impacts associated with the removal of farmland from current uses, it simply places weight on the use of contractors in the farming of the land but does not follow the consequences of diminished or concluded contracts on the use of labour and specialist equipment.

9.11 The baseline assessment also fails to identify the irrigated area affected by the proposed development and any associated loss of production, making it impossible for the ES to assess accurately any socio-economic impact that might result from it.

9.12 The proposed development area, including grid connection routes, extends across nine parishes for which cropping information is available through the UK Centre for Ecology and Hydrology's Land Cover® plus mapping. The mapping system uses satellite-acquired data to map: winter wheat (including oats); spring wheat; winter barley; spring barley; oilseed rape; field beans; potatoes; sugar beet; maize; improved grass; and, from 2020, solar fields, within land parcels

identified within the Land Cover spatial framework. Other cereals, root crops, early potatoes, and vegetables are grouped in a class designated 'other', together parcels which could not be classified. Extracts from crop maps based on Land Cover® plus data are attached at Appendix 5.

9.13 The parishes in the study area comprise: Isleham; Freckenham; Worlington; Chippenham; Snailwell; Fordham; Exning; Burwell; and Red Lodge.

9.14 Table 1 below sets out the cropping areas in hectares within the study area as recorded in the system. Whilst crops grown in the area are known to include parsnips, carrots and onions, these cannot presently be identified using satellite technology. For the purposes of this analysis, is reasonable to assume that more than 50% of the area identified as being cropped with 'other' crops.

Crop Area (ha)	2017	2018	2019	2020	2021	Average	%age of whole
Sugar Beet	876	980	764	953	950	904.6	12.34
Potatoes	484	548	539	528	473	514.4	7.02
Maize	385	172	417	293	377	328.8	4.49
Peas	0	0	83	163	64	62	0.85
Field Beans	255	248	93	115	109	164	2.24
Other	1262	1055	855	831	686	937.8	12.80
Grass	399	431	479	479	391	435.8	5.95
Oilseed Rape	112	170	168	61	112	124.6	1.70
Spring Barley	671	319	725	699	708	624.4	8.52
Spring Oats	0	0	0	0	11	2.2	0.03
Spring Wheat	25	298	261	152	260	199.2	2.72
Winter barley	739	780	743	670	653	717	9.78
Winter Wheat	2127	2330	2204	2205	2349	2243	30.61
Solar farm	0	0	0	176	176	176	2.40
Total	7335	7331	7331	7325	7319	7328.2	

Table 1: Areas of crops grown in nine parishes (Land Cover® plus)

9.15 This analysis shows that up to 40% of the agricultural area of the study area is cropped with higher value crops including sugar beet and potatoes, including 5% growing maize. Maize grown in the area is most likely for use as an energy crop in an AD plant, such as that at Bay Farm near Sunnica East Site B. It is critical to the economics of AD that inputs are grown close to the point of use. Thus, any area of maize that would have been grow on the development area will have to be grown nearby, probably displacing other high value crops occupying a break year in the rotation from other high quality irrigated land in the area.

9.16 Thus, the varied soils and landscape has evidently provided the agricultural sector with a diverse yet strong foundation on which farming businesses have thrived and adapted to pressures of changes of scale and climate. Arable agriculture dominates the area. Year-round access is key to the flexibility of arable land around the proposed development area, where soils, are well-drained, extending the working seasons by allowing early access for sowing and late access for the harvest of sugar beet and potatoes.

9.17 Yields of sugar beet, wheat and potatoes achieved in the area are consistently at or above national average yields. Figure 1 below shows that local yields of high value crops such as potatoes and carrots are significantly higher than national averages and long-term cereal production is in the region of 10% more than the national average.

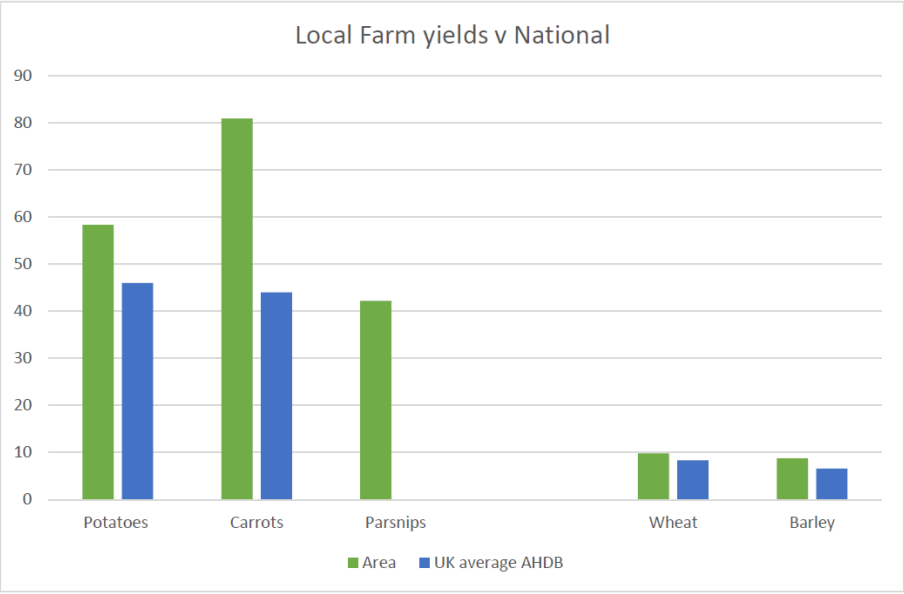


Figure 1 Comparison of local crop yields with national average production

9.18 Cereals and sugar beet are not generally irrigated crops in the area, although sugar beet may be irrigated when water is available in drought years, or at the end of the main irrigation season when resources remain after high value root crops have been harvested.

9.19 In order to assess the economic outputs from the land the crop areas in the area affected by the proposed development have been estimated using the UK Land Cover® plus map. Gross margin data is taken from Nix 2022 and the outputs for 'other' crops are taken from the Agriculture Budgeting and Costing Guide 2022, based on an average of average outputs and values for maincrop carrots and onions. This estimates takes no account of cropping with parsnips, and specialist potatoes crops known to be grown in the area.

9.20 Table 2 below sets out the estimated economic output from crops grown on the proposed development area based on average cropping areas in the locality from 2017 and 2021, inclusive (above), using average national outputs and gross margins for crops where values are available. Gross margins achieved in the locality are very likely to be significantly better than those shown in Table 2.

9.21 The average gross margin across the proposed development area is thus estimated to be £1,603/ha. This is to be compared with a gross margin of £2,170/ha on similar, adjacent land farmed by A G Wight & Son (Farms) Ltd as set out in the Witness Statement of Nicholas Wright. The Agricultural Budgeting and Costing Guide estimates that the rental value for land used for solar farms is between £1,250/ha and £2,500/ha for leases of between 25 and 40 years, a value of between £1,226,000 and £2,452,500 per annum.

Crop	Area (ha)		Yield t/ha	Yield t		Value	Average GM (£)		
	Total	Affected	Average	Annual	40 years	£/t	Average	Annual	40 years
Sugar Beet	904.6	121.1	77	9,324	372,974	25.55	1019.00	123,396	4,935,856
Field Beans	164	22.0	4.3	94	3,776	195.00	545.00	11,965	478,599
Grass	435.8	58.3	35	2,042	81,675	?	?		
Maize	328.8	44.0	40	1,761	70,424	?	?		
OSR	124.6	16.7	3.5	58	2,335	380.00	822.00	13,711	548,430
Other*	937.8	125.5					6000.00	753,240	30,129,586
Vining Peas	62	8.3	4.8	40	1,594	270.00	734.00	6,092	243,680
Maincrop Potatoes	514.4	68.9	50.4	3,471	138,824	165.00	4646.00	319,928	12,797,108
Spring barley	624.4	83.6	5.7	476	19,058	157.00	540.00	45,137	1,805,462
Spr Oats	2.2	0.3	5.6	2	66	142.00	521.00	153	6,138
Spr Wheat	199.2	26.7	6.2	165	6,613	171.00	629.00	16,773	670,921
W barley	717	96.0	7.3	701	28,027	142.00	566.00	54,326	2,173,038
WW	2243	300.3	8.6	2,582	103,290	160.00	833.00	250,119	10,004,744
Solar farm	176	23.6							
	7328.2	995.1						**1,594,839**	**63,793,562**

Table 2: ***Estimate of economic output from crops grown on the proposed development area based on average cropping (2017-2021) and gross margins (Nix, 2022) (*ABC, 2022 – average GM maincrop carrots and onions) (subject to rounding errors)***

9.22 Notwithstanding rental income, the loss to the local economy of agricultural output is likely to be in the region of £1,595,000 per annum for the next 40 years at 2022 values, plus an unknown added loss associated with the processing and packaging agricultural crops in the area, and other losses associated with the loss of productive land that are not quantified by the Developer.

Irrigation

9.23 Appendix 12B to the ES, the Soils and Agriculture Baseline Report acknowledges that irrigation allows farmers on light, free draining soil to mitigate for drought stress and grow a range of high value crops. All six of the affected holdings have irrigation facilities, three of which have made significant investment in winter storage reservoirs. None of these provisions for sustainable

irrigation, nor the irrigation command areas, are identified in the ES. Whilst irrigation can be costly in terms of both fixed and variable costs, the benefits accruing from it far outweigh both.

9.24 All six of the farm businesses affected by the proposed development grow irrigated crops that are described in the baseline as being dependent, heavily dependent or reliant on irrigation, or that irrigation is critical for cropping. If the proposed development is to proceed the resources associated with irrigation, including underground infrastructure serving the irrigation command areas, reservoirs and the water resource itself will be redundant in terms of their association with the land they serve, for at least 40 years.

9.25 It is anticipated that advances in irrigation technology, practice and water management will compensate for changes in climate that are likely to change patterns of rainfall and soil droughtiness. In land use terms, the basic quality and versatility of the soils of the proposed development area are extremely likely to mean that agricultural production, supported by irrigation where required, will continue.

9.26 The EIA accompanying the Application fails to take into account the significant effect on the agricultural productivity of land within the development area in terms of local and regional impacts and national food security.

Irrigation and ALC

9.27 A summary of the development of the ALC system in England and Wales in the context of land use planning prepared by Howard Elliott is attached at Appendix 7 (with references) and is summarised here.

9.28 In common with many other established systems of land classification used around the world, the ALC system for England and Wales has historically been based on the assumption that land is managed satisfactorily to grow climatically suited crops. With this in mind, irrigation was recognised as necessary for crops to achieve their maximum potential in some climatic areas of the UK and the original 1966 guidance stated that:

> *"Where water is available for irrigation an area may need to be up-graded; the extent of up-grading will depend on soil and crop factors as well as water availability"*

9.29 This guidance persisted with negligible change through revisions of the system in 1976 and 1988. In 1996, MAFF announced its intention to change the treatment of irrigation in the guidance and to consult on that and other changes. The draft document did not contain any reference to irrigation.

9.30 This draft of 1998 reflected PPG7 of 1997, Annex B of which states that the ALC system:

"was devised and introduced in the 1960s. Revised technical guidelines and criteria for grading using this system will be published in 1997, under the title 'Agricultural Land Classification of England and Wales'. These guidelines update the system without changing the original concepts."

This document was never taken out of draft and published.

9.31 PPG7 went on to describe other factors that should be taken into account when considering the impact of development on agriculture, irrigation is identified as one such factor at paragraph B11:

"Where irrigation is practiced and water supplies are adequate and reliable, the productive capacity of agricultural land and its importance relative to non-irrigated land of the same grade will often be significantly increased."

9.32 The PPG was updated in 2001 with redrafted paragraphs setting out policy on the protection of BMV agricultural land. No reference was made to the putative revised guidelines anticipated in Annex B of PPG7 1997, Annex B having been removed in the revision. The Department of the Environment, Transport and Regions indicated that the procedural arrangements described Annex B would continue, pending the repeal of certain of the statutory rights of MAFF to intervene in planning decisions.

9.33 Subsequent revisions of planning guidance (Planning Policy Statements and the National Planning Policy Framework (NPPF)) have reiterated the same basic approach to the protection of agricultural land, culminating in paragraph 174 of the NPPF[22], which states that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

[22] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; …"

9.34 Thus, whilst it was evidently the intention of Government that ALC grading should not take account of irrigation, see correspondence between FRCA and Reading Agricultural Consultants at Annex 2 to Appendix 7 of this report, the unvaried 1988 guidance referred to in the baseline assessment still requires that irrigation be taken into account in grading land.

9.35 However, whilst the intention of Government appears to have been to remove irrigation as a grading criterion, it is clear in the NPPF that irrigation should be retained as a factor when considering the impact of development on agriculture. The NPPF requires that sufficient land of the right type is available in the right place to support productivity and development, whilst protecting and making effective use of land and natural resources, such as soil, to deliver wider benefits to society, including the wider benefits arising from soil and agricultural land in terms of ecosystem services. The use of sustainable supplies of water in the production of food from land in any ALC grade should clearly therefore be included in any EIA, rather than in the assessment of the physical and locational characteristics of the soil itself as has historically been the case.

9.36 The EIA submitted in support of the Application explicitly[23] fails to take into account food production from the development area in the context of impact on local businesses food security at any scale, or the impact of irrigation on the productivity or versatility of the soils of the proposed development area. This flies in the face of current guidance on the inclusion of agricultural productivity and irrigation in government guidance.

Continuing irrigation

9.37 Paragraph 5.9.6 of Appendix 12B suggests that specialist farm infrastructure, including for irrigation, can still be productive or benefits associated with it can be transferred. For instance, it states that

"the right to abstract a volume of water can be traded to other water users within an aquifer, and the irrigation ring mains installed on the farms with reservoirs, can be used to transfer any surplus reservoir capacity for irrigation on neighbouring units".

[23] Paragraph 12.4.4 of Sunnica Energy Farm Environmental Statement Chapter 12: Socio-Economics and Land Use

This statement fails to take adequate account of limitations on the transfer of abstractions and use of distribution infrastructure and any long-term impacts on abstractions.

9.38 Irrigation abstractions in the proposed development area fall into two types: licences to abstract directly from the Chalk aquifer underlying the area (direct abstraction); and licences to abstract surplus winter flows from surface waters and store it in a reservoir until the irrigation period (winter storage). Abstractions are licensed from one or more points and water applied to a command area specified in the Abstraction Licence.

9.39 The trading of rights to abstract water is most commonly carried out where a buyer acquires a temporary interest in land where there is an irrigation licence, this is a simple trade. Transfers that include a change in the location of an abstraction or application are complex trades. The ability to effect a complex trade depends on water resource availability and the locations of the buyer(s) (receivers) and seller(s) (donors). In this area, the Environment Agency's (EA) strategy for abstractions is set out in the Cam and Ely Ouse abstraction licensing strategy[24].

9.40 Traded water is generally used for the same purpose and at the same pumping rate and the volume of water available for trade will be limited to the average annual volume abstracted by the donor licence during 2007 and 2012. If the entire licenced volume is traded, the donor volume would be reduced to the annual average volume of water abstracted between 2007 and 2012 before the trade and the donor licence would cease to exist.

9.41 In the case of surface water abstractions, the donor and recipient licences should be from the same watercourse and for the same abstraction period. As with the groundwater trade the volume of water traded would be reduced to the annual average volume of water abstracted between 2007 and 2012 before the trade.

9.42 Given the current and likely future state of water resources, it is extremely unlikely that a licence to abstract water for irrigation would be granted when the land was returned to agriculture at the end of the forty-year life of the solar farm. It is therefore very likely that, should the proposed development go ahead the land would be permanently lost to agriculture of the type practised today and the volume of water available for irrigation elsewhere would be reduced to the average volume abstracted in the proposed development area between 2007 and 2012. This impact on the availability for water for agriculture in the area has not been assessed.

[24] https://www.gov.uk/government/publications/cam-and-ely-ouse-abstraction-licensing-strategy/cam-and-ely-ouse-abstraction-licensing-strategy

9.43 If an abstraction were to continue from the current licensed point(s) and transferred outside the command area identified on the licence it would be likely to require variation to allow the change. The transfer of water would also require construction of a new transfer main and/or reinforcement of any existing distribution system, which would have been designed to irrigate land within the original command area and may require planning permission.

9.44 Alternatively, if water were to be transferred downstream in the local surface network, it is very likely that in the region of 20% or more of the volume discharged to for transfer would be lost to seepage through the riverbed or evaporation during transfer. In dry seasons, flows in much of the local surface water network are negligible or in a dry year, zero and transfer by surface watercourses would be impractical.

9.45 Cumulatively or separately, the impacts described above have negative effects in terms of water permanently lost to agriculture generally and/or the permanent loss of production from versatile agricultural land.

Irrigation security

9.46 Security of water supply is critical to the security of food production in the United Kingdom and water resources have been under intense stress from recent droughts and competing uses. Whilst food production is the largest global user of water, irrigated agriculture in the UK is small in terms of water consumption. In the UK, irrigation is of economically high value to maximise crop yield and quality.

9.47 The role of irrigation in UK agriculture has shifted in the past 50 years, driven by the intensification and transformation of farming it has become an ‘essential’ use in areas such as the proposed development area. Anticipated policy incentives to sustainably increase domestic food production and improve food security will need to be underpinned by measures to increase water use efficiency and ensure agricultural intensification can continue to drive rural economies.

9.48 Whilst it is possible to import irrigated produce, this exports water use, often to areas with poorer resources and greater climate risks. UK farmers can generally be more water efficient than those overseas because of soils, climate and well-developed management practices.

9.49 The Environment Agency published its national framework for water resources in 2020[25], which anticipates increases in demand for water generally and for spray irrigation in particular. Such demand increases require a strategic approach to the management of resources, where agriculture, and food production more widely, have a significant part to play.

9.50 In recent years, pressures on irrigation water supplies from surface waters in the area have been addressed by the construction of winter storage reservoirs. These structures enable water abstracted from surface waters during periods of high rainfall to be put in store for use in the crop growing season and have historically been eligible for grant aid from the Rural Development Programme for England and the European Regional Development Fund. More recently, the Farming Transformation Fund Water Management Grant has been made available for capital items to improve farm productivity through more efficient use of water for irrigation, and to secure water supplies for crop irrigation by the construction of on-farm reservoirs and the adoption of best practice irrigation application equipment.

9.51 Whilst the baseline assessment of soils and agriculture accompanying the ES identifies total licensed volumes, in a range of units, and some irrigation infrastructure associated with farms that would be affected by the proposed development, it fails to identify in detail the irrigation resources available, how businesses make use of those resources and how they might beneficially be deployed elsewhere in mitigation, as suggested in the baseline.

9.52 Appendix 9B to the preliminary environmental information report is identified as dealing only with groundwater abstractions, although the labelling in Table 9B-1 suggests that it also lists surface water abstractions. The mix between groundwater abstractions and surface water abstractions for direct use or winter storage for irrigation are not identified in the EIA and the volumes listed in Table 9B-1 do not tally with the baseline assessment.

9.53 Information gathered by SNTS (Appendix 6) and set out in Table 3 below shows that 31.5% of the irrigation resource available to farmers in the proposed development area is from groundwater, applied directly to crops, 41.4% of the resource is taken from surface water and applied directly to crops and 27.1% abstracted in the winter, from either ground or surface water, for application to crops in the dry period.

25 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1088417/National_Framework_for_water_resources_main_report.docx

Landowner	Volume (m^3)	Direct Irrigation Ground (m^3)	Direct Irrigation Surface (m^3)	Winter Storage (m^3)	Total (m^3)
Chippenham Park Farm	531,848		304,576	227,272	531,848
Moulton Manor Farm	116,000		71,000	45,000	116,000
Moulton Manor Farm (Holdings)Ltd	68,000			68,000	68,000
R F Tilbrook & Sons	80,200	80,200			80,200
S J P Mortlock Ltd	36,000	36,000			36,000
T R & J R Waters	933,964		622,643*	311,321*	933,964
Upton Suffolk Farms	642,239	642,239			642,239
Totals		**758,439 (31.5%)**	**998,219 (41.4%)**	**651,593 (27.1%)**	**2,408,251**

Table 3: Irrigation water sources and season of use

*Approximate, abstraction Licences for direct spray irrigation only

9.54 The majority of the proposed development area lies in the catchment of the River Lark, between its headwaters on chalk around Bury St Edmunds and its confluence with the River Ouse near Littleport, the dominant land use in the area is arable agriculture. Run off from the catchment is influenced by groundwater abstraction and recharge, effluent discharges, and industrial/ agricultural abstraction.

9.55 The catchment is under pressure from summer abstraction and the abstraction of surplus flow into storage reservoirs for subsequent use for irrigation of crops in dry periods is a well-established way to avoid restrictions on water use at times of greatest need. Generally, applications for abstraction licences with flow and pumping constraints to ensure minimal impacts on surface waters are viewed positively by the Environment Agency.

9.56 It is clear from Table 3 that of the farms affected by the proposed development three have winter storage for a total of about 651,593m^3 of water, the majority of which is abstracted from surface waters. That is 27.1% of the total volume of water licensed for irrigation in the area, 2,408,251m^3, and 65.3% of the 998,219m^3 abstracted from surface waters for direct spray irrigation.

9.57 This demonstrates that there is significant potential for greater volumes of water to be abstracted in periods of high flow and stored to be used in sustainable ways for the irrigation of crops in the development area.

9.58 In addition to putting water into storage, irrigation water use can be managed better by adopting application and management practices to reduce consumption by reducing losses to evaporation and over watering by placing water so that plants can make optimum use of

applications. These techniques include irrigation scheduling and soil moisture monitoring, to better target applications, and buried drip tape to reduce evaporation and place water in the root zone.

The impact of solar PV on agricultural soils

9.59 Solar PV is a relatively new use of agricultural land and little work has been carried out on the long-term impact of such developments on agricultural land and soils, particularly on likely recovery times following decommissioning. The majority of studies have been supported by the solar sector and have focussed on wider environmental impacts and gains likely to be achieved during the lifetime of developments.

9.60 The Welsh Government has funded an independent evidence-based study of the impact of PV on BMV land and associated soils[26], which identified two published papers of the impact of solar PV sites on ecosystems. Whilst these papers identified a negative impact on vegetation under solar PV and work is ongoing to optimise solar PV site design for delivery of ecosystem services, there are no relevant long-term studies to demonstrate the extent or magnitude of benefits that might accrue from the use of land for solar parks.

9.61 In the Netherlands, researchers at Wageningen University have undertaken work on behalf of the Dutch Government that showed that only three out of 25 solar parks studied in the country were optimally managed for biodiversity[27]. In September 2020, there were 229 solar parks in the Netherlands and the Dutch government has recognised the need to respond to the lack of evidence of the impacts and effects of solar developments on, *inter alia*, biodiversity and soils. This is manifest in Wageningen's Solar Research Programme, which sets out to provide an evidence-based foundation for sustainable solar PV developments, and the Netherlands Organisation for Applied Scientific Research (TNO) innovative work to understand and mitigate impacts of solar PV on soils.

9.62 Early findings of this work has shown that the orientation of solar arrays can have a significant impact on soil quality. By orienting arrays with east-west facing panels rather than south, research has shown that increased amounts of sunlight reach the ground whilst delivering the same amount of solar output[28]. Where the level of sunlight incident on the ground is reduced

and panels are close together, vegetative growth is suppressed and rainfall concentrated reducing carbon capture in the soil and increasing the risk of run off and associated erosion. TNO has recognised that:

> "*If a solar farm is then cleared after 25 years according to the current standard, there is a good chance that the soil will be difficult to use for agriculture or environmental development. It will then take a great deal of time and effort to restore the soil quality that existed before the solar farm was constructed.*"

9.63 The absence of a comprehensive agricultural baseline, including the measurement of organic matter content of soil and estimates of current soil carbon stocks makes it impossible to assess the success or failure of the site construction, management and dismantling regimes to deliver the benefits claimed in the ES, should the development go ahead.

9.64 The ES describes the impacts of the development on soils at Chapter 12, Socio-Economics and Land Use (12.4.37 *et seq.*) and assesses the effects associated with those impacts on agricultural land and soil resources generally as 'negligible'. These conclusions fly in the face of Government research[16] that indicates that there is little or no evidence of the long-term impacts of solar PV developments on agricultural land and soils but that where it does exist they are generally assumed to be negative.

9.65 No apparent attempt has been made to identify measures likely to mitigate the impact of the use of the land as a solar park. For instance, the proposal is to orient all panels on the development area to the south, whilst it has been found by TNO and Wageningen University that East-West facing arrays allow more light into the area below panels so increasing vegetative growth above and below ground and improving biodiversity. Also, no attempts have been made to mitigate the likely risk of focussed run off from arrays causing soil erosion on what are identified by the ES as soils that are vulnerable to erosion associated with surface run off.

Additional plant

9.66 Since the ES was written, it has been decided by National Grid that its proposed extension to its Burwell sub-station is uneconomic. This change is likely to result in the upgrading of proposed transmission lines between sites from 132kV to 400kV, an increase in the size of substations on the sites and installation of shunt reactors to stabilise voltage during load variations.+

10 Conclusions

10.1 The dominant land use in the proposed development area is arable agriculture, which uses irrigation and associated infrastructure to support the production of high value crops including potatoes, onions, carrots and parsnips.

10.2 The ES accompanying the application is based on an EIA which fails to address food production from the development area, the impact of irrigation on production, the loss of irrigation resources should the development go ahead and is supported by a soils assessment that is insufficiently robust to support the conclusions of the EIA, specifically:

- The loss of agricultural output across the development area, plus unknown added losses associated with reduction in the processing and packaging of agricultural crops in the area, and other losses associated with the loss of productive land are not quantified by the Developer.
- The agricultural baseline does not include sufficient information to assess the success or failure of the site construction, management and dismantling regimes to deliver the benefits claimed in the ES.
- The proposed development is likely to have cumulative or defined negative impacts that will result in the permanent loss of water for agriculture in the development area generally and/or the permanent loss of production from high quality agricultural land.
- The Environmental Statement fails to identify measures likely to mitigate the impact of the use of the land as a solar park on agricultural production or soils

10.3 Thus, the ES is inadequate in its consideration of agriculture and soils in the proposed development area.

Appendix 1
Curricula Vitae

Peter W Danks

Key Experience

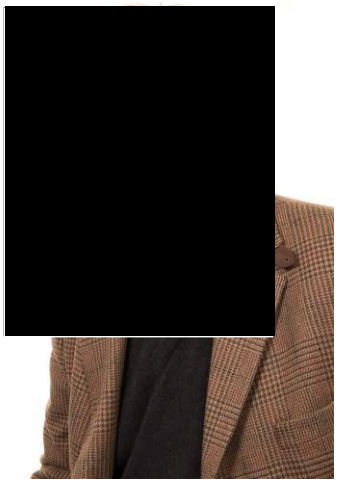
Peter is an agri-environmentalist, with a practical background in agricultural engineering gained through working for two major international suppliers of irrigation and pollution control equipment. Since joining Reading Agricultural Consultants (RAC) in 1986 he has mainly been concerned with the impact of agriculture on the environment principally through livestock and related developments, and pesticide use, and of the impact of environment on agriculture through studies of resilience to climate change, and the impact of change on agricultural production and its mitigation. He also has considerable experience in the fields of waste management, spray irrigation, water supply and crop-soil-water matters, latterly working on environmental research projects. As a Director of RAC, Peter is responsible for the consistency and quality of advice and reporting by the RAC team, with particular responsibility for environmental planning, agricultural litigation and insurance-related outputs.

He has presented expert evidence at Planning Inquiries and in the Magistrates, Crown, County and High Courts and prepared evidence to support cases in the European Court.

Peter is a Chartered Environmentalist, a Director of Reading Agricultural Consultants and Director of RACEnvironment, past Chair of the British Institute of Agricultural Consultants' Environment Division, of the National Farm Waste Management Register, and member of the Environment Agency's Thames Regional Environmental Policy Advisory Committee. For 17 years until 2007 he was an elected Trustee and member of the Board of Management of the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust. He is a member of the Institute for Apprenticeships and Technical Education's Route Panel for Agriculture, the Environment and Animal Care.

With colleagues, he has undertaken research for the Environment Agency, Water UK and UK and Irish Water Companies into: catchment scale phosphorus management; resilience of agricultural measures to climate change; catchment-based pollution prevention measures; future pesticide use; and the impacts of outdoor pig production and pesticide use on groundwater. He has led projects to identify the flow of materials and resources in the UK pig and poultry supply chains, and to estimate the likely future use of a range of commonly-used agricultural pesticides.

Working with AHDB Pork and its predecessor bodies, he has prepared an Environment Strategy for the UK pig industry and researched water supply on pigs farms, and for the National Farmers Union has produced an analysis of the likely impact of a proposed Nitrates Action Plan on livestock farmers.



Specialism

Agri-Environment

Current Position

Director

Joined RAC

1986

Academic Qualifications

BSc(Hons) Geography, Aberystwyth 1977

PgCE Education, Cambridge 1978

Professional Affiliations

Chartered Environmentalist

Member of the Institution of Agricultural Engineers

Fellow of the British Institute of Agricultural Consultants

Practitioner Member of the Institute of Environmental Management and Assessment

Professional History

1998 – date	Director, Reading Agricultural Consultants Ltd
2007 – 2011	Member of the Environment Agency Thames Regional Environmental Protection Advisory Committee
2002 - 2011	Director, RACEnvironment Ltd
1986 – 1998	Associate, Reading Agricultural Consultants Ltd Associate RACEnvironment
1982 – 1986	Bauer Irrigation, Area Sales Manager

1979 – 1982	Wright Rain Ltd, Design Engineer, Technical Representative
1978 - 1979	J H & P E Nicholson, General Agricultural Worker

External Involvement

2017-date	Member of the Institute for Apprenticeships' Agriculture, Environment and Animal Care Route Panel
2005	Chartered Environmentalist
2003-date	Member of the Institution of Agricultural Engineers
2001-date	Associate of the Institute of Environmental Management and Assessment
2013-2016	Member of Advisory Panel for CIRIA Report 126 (Update). Farm Storage Infrastructure.
2009-2011	Member of the Environment Agency's Thames Regional Environment Protection Advisory Committee (REPAC).
1996-2011	Chairman of National Farm Waste Management Register, a body founded to establish and promote professional standards of plan production and encourage the use of farm waste management plans in association with the application to land of agricultural and controlled wastes.
1996	Member of MAFF R&D Advisory Panel on the practical utilisation of animal manures and other agricultural residues.
1996-2011	Member of Council of the British Institute of Agricultural Consultants.
1993-date	Fellow of the British Institute of Agricultural Consultants and past Chairman of the Institute's Environment Division.
1991-2007	Elected Member of the Board of Management of the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust.

Selected Projects

Planning

Prepare evidence to support appeal against Green Waste Composting site – Working for third party objector to appeals against the refusal of planning permission for the use of field production and maturation of green waste compost. Interactions between waste regulatory and Town and Country Planning regimes: throughputs and need for compost in agronomic terms; working practices.

Environmental Oversight Consultant Topic Lead: Agriculture, Forestry and Soils – with Arup+: Responsible for the oversight of inputs to the Environmental Statement and Additional Provisions for HS2 Phase 2b; Birmingham to Manchester/Wigan and Birmingham to Leeds/York.

Change of Use of Land from Agricultural to a Combined Use for Agriculture and Waste Disposal – Instructed to review and comment on the lawful agricultural use of land for the importing, storage, handling and application to land of materials, including processed animal slurry, arising from Anaerobic Digestion.

Construction of Winter-Storage Reservoirs for Irrigation Water Supply – Instructed by Cambridgeshire and Essex County Councils to consider applications for planning permission for water storage reservoirs and assess against planning policy.

Unauthorised Expansion of Agricultural Anaerobic Digestion Facility – Instructed by the local authority to produce evidence for a Public Inquiry considering an appeal against refusal of a retrospective planning application for the increase in capacity and change of use of an AD plant located on a dairy farm.

Local Development Order for Horticulture – Preparation of a draft Local Development Order for Arun District Council to extend permitted development rights to selected areas of the District for horticultural developments.

Study of agricultural land quality around development areas – Preparation of a report for Arun District Council on the quality of agricultural land around settlements in the district to be used in the development of a new Local Development Plan.

Odour impact assessment for proposed relocation of 250 cow dairy unit – retained by farmer client to assess odour impacts likely to be associated with a relocated 250 cow dairy unit and compare anticipated impacts with baseline conditions.

Impact of Feedlot Beef Production Unit on Neighbours – retained by District Council Environmental Health Department to assess the likely impact of a proposed beef feedlot and ancillary structures on sensitive receptors.

Unauthorised expansion of a dairy unit – retained by a private client in Carmarthenshire to prepare and submit a retrospective planning application for the unauthorised expansion of an existing 800-cow dairy farm to accommodate 1,600 cows.

Expansion of dairy units – Retained by private clients in West Wales to plan and obtain necessary consents for dairy unit expansions to between 600 and 2,400 cows.

Slurry storage – retained by Pembrokeshire County Council to undertake a review of a planning application for a slurry storage facility for EIA Screening.

Environmental Statement – retained by a Local Authority (Worcestershire) to provide a critical appraisal of the Environmental Statement (ES) for a +20% expansion of an existing 150,000 bird broiler unit.

Dairy herd expansion – retained by a private client to design and submit a planning application for a 1,000-cow (expanded to 1,500 and subsequently 2,000-cows) Lancashire dairy farm on a green-field site, including environmental impact assessment.

New dairy unit – retained by a private client to manage a turnkey project to design, plan and undertake an Environmental Impact Assessment of a proposed 8,000-cow dairy farm on a green-field site in Lincolnshire.

Dairy herd expansion – retained by a private client (Cambridgeshire and Carmarthenshire) to provide designs and a planning application for 600-cow dairy farms.

Slurry handling systems – retained by a private client to design and submit planning applications for slurry handling and storage systems for 600-cow dairy herds in Devon.

Slurry storage – retained by a private client to negotiate on the environmental management-related conditions to accompany planning permission for slurry storage and handling at 500 cow dairy unit in Mid Glamorgan.

Slurry storage, handling and distribution – retained by a private client to prepare proposals and negotiate with the Environment Agency, District Council and landlord for the development and planning for slurry storage, handling and distribution infrastructure for 600-cow dairy farm in Wiltshire.

Change of use of agricultural land – retained to prepare evidence for and appeared at a Planning Inquiry into the change of use of agricultural land resulting from the importing and application to land of non-agricultural wastes. Subsequently prepared evidence to support an application for a Court Order

Dairy herd expansion – retained by a private client (Oxfordshire) to provide a planning application for a 250-cow accommodation building to facilitate the expansion of an existing dairy unit in an AONB.

Slurry storage – retained by a private client to design and prepare a planning application for slurry storage and distribution infrastructure for 400-cow dairy unit in Wiltshire.

Potential impact of nearby composting operations – retained by private client in Cheshire to report on the potential impact on dairy cattle in neighbouring fields.

Potential adverse impact – retained by private clients to report to Aylesbury Vale District Council on the likely adverse impacts on neighbouring properties; clients objecting to a proposed free-range laying unit.

Dairy unit expansion – retained by private clients to liaise with planning authority and manage the scope of an Environmental Impact Assessment to accompany of a proposed 1,500-cow dairy farm on a green-field site in Lincolnshire. Undertake options appraisal for mitigation techniques and prepare technical design.

Proposed pig unit – retained by private client to prepare a report on the likely impact of a proposed pig unit on neighbouring properties in the South Hams.

Extension to existing broiler units – retained by the Forest of Dean District Council to investigate and report on a planning application and supporting Environmental Statement in the case of the proposed extension of two existing broiler units. The report specifically addressed emissions of NH_3 & NO_x to air and NO_3 to water.

Public Inquiry – retained by Staffordshire County Council to give expert evidence at Public Inquiry regarding enforcement against unauthorised change of use of land for waste disposal.

Public Inquiry – retained by Bournemouth Borough Council to present evidence at Public Inquiry regarding the likely impact of the re-establishment of an 8,000 pig fattening unit on neighbouring properties.

Public Inquiry - Instructed by Ryedale District Council to investigate and give evidence at a Public Inquiry on the impact of soil movements during construction works on neighbouring mushroom farm.

Public Inquiry – retained by the Isle of Wight Council Environmental Health Department to present evidence at a Public Inquiry involving an appeal against enforcement action against farm waste storage facilities and nuisance arising from their use.

Proposed poultry unit – retained by South Shropshire District Council to assess the agricultural need for and potential environmental impact of a proposed poultry unit for planning determination.

Public Inquiry – retained by Sevenoaks District Council to provide expert support and evidence at a Public Inquiry relating to the impacts of an unauthorised pig unit on neighbouring properties.

Proposed intensive poultry unit – retained by a private client in Wiltshire to prepare a report on the likely environmental impact of proposed intensive poultry unit on the property of a private individual.

Public Inquiry – retained by a Buckinghamshire farmer to present evidence at a Public Inquiry relating to the impact of livestock farming on a proposed housing development.

Lands Tribunal – retained to give evidence at a Lands Tribunal in North Devon regarding tenant refurbishment of silage storage facilities to meet requirements of legislation.

Bernard Matthews Ltd. - Produced a series of environmental compliance appraisals for various production units.

Assessment of emissions to air, water and soil environments associated with intensive livestock developments for dairy, poultry and pig enterprises and local authorities across the United Kingdom.

Study of water use and effluent production at a food processing plant. Undertook this study in order to negotiate with the Environment Agency over rationalisation of multiple abstraction licences and the storage and application to agricultural land of waste waters arising.

Slurry odour – retained by Eden District Council (Cumbria) to work with the District Solicitor and a local farmer to produce scheme to minimise odour arising from a slurry store in the village centre.

Impact of odour – retained by a private client (Cheshire) to assess the impact of odour from a proposed earth-banked slurry lagoon on surrounding properties, using meteorological data in support of a planning application.

Proposed 1000 sow pig unit – retained by private client (Shropshire) to assess the impact of a proposed 1000-sow pig unit on the environment and neighbouring residents. The report included proposals for the spreading of manure on available land and the impact of odour from the unit on local residents.

Livestock odours – retained by a private client to give evidence on the influence of management on odours arising from pig and cattle housing and the impact of the development on local residents.

Proposed livestock building – retained by a Cumbrian solicitor on behalf of a neighbour. Written evidence on the impact of a proposed new livestock building and silage clamp on neighbouring properties for Cumbrian solicitor on behalf of neighbour.

Silage storage – retained by a private client (Surrey) to report on the impact of silage storage on neighbouring property for submission to local planning authority.

Air and water pollution – retained by a private client (Sussex) to prepare a report into the impact of air and water pollution arising from a proposed beef unit on soils and neighbouring properties.

Odour sources – retained by South Buckinghamshire District Council to assess the odour sources on a village-centre pig unit and recommend management changes to reduce odour arising from the unit.

Proposed calf rearing unit - retained by a private client (Cheshire) to assess the impact of a proposed calf-rearing unit on local environment for inclusion in Planning Application.

Litigation and Insurance

Causation of pollution incident and mitigation of future risks – Instructed by the Environment Agency in the prosecution of an agricultural college under the Environmental Protection Act for the pollution of surface waters with slurry from slurry storage. Present evidence on regulatory compliance and likely causation of the incident.

Impact of odour from AD digestate application to land – Instructed by Borough Council Environmental Health department in an appeal against enforcement to present evidence on Best Practicable Means in relation to the production, storage and application of PAS110 digestate to agricultural land. For the Respondent.

Offences under Section 33 and 34 of the Environmental Protection Act 1990 – Instructed by the defence in a case involving the application of septic tank waste to agricultural land and its impact on soil conditions and pollution risks. Definition of 'controlled waste' and description of working methods in the

context of good agricultural practice, expert report on the historic application of septic tank waste to land. For the Defendant.

Investigation into failure of trickle irrigation system – investigation into and report on causation of liability for lateral failures in drip irrigation systems in soft fruit production. For the Claimant.

Report on soil erosion in maize – site soil investigation and collection of evidence in connection with preparation of report for insurers on causation of flooding and associated erosion event.

Preparation of report on pollution event – collect evidence and write a report for the Environment Agency in connection with a prosecution under Regulation 12 of the Environmental Permitting Regulations 2010.

Investigation into pollution event – undertake investigation on behalf of the Defendants into the causation of a pollution event in response to anticipated prosecution under Regulation 12 of the Environmental Permitting Regulations 2010.

Report on likely causes of soil erosion in orchard – desk top study of causes of erosion following the establishment of a new orchard.

Expert report on the Construction, Management and Operation of an Anaerobic Digestion plant and associated facilities – Report on the construction standards and management of an anaerobic digester with specific reference to a pollution event.

Expert report on the likely duration and impact of a discharge from a Permitted Anaerobic Digestion plant on receiving waters – Report on the magnitude and likely duration of a discharge from facilities at a Permitted site on local surface waters.

Investigation of the source and impact of spray drift on long cane raspberries – testing for spray residues and growing on of plants to identify and assess the impact of alleged herbicide spray drift on raspberry canes.

Investigation of the source and impact of spray drift on vines – assessment of evidence of the impact of alleged spray drift on vines.

Impact of biosolids application on grass production – instructed by farmer to examine the impact of biosolids application to grassland on the production of haylage over a two year period.

Investigation into feedstock for AD Plant – Investigate contamination in externally-sourced feedstock for on-farm anaerobic digestion facility and losses of revenue resulting from reduction in plant performance. For Loss Adjuster.

Rhizoctonia in brassicas – Expert for Claimant with respect to the causation of and liability for losses incurred in a crop of brassicas due to infection with *Rhizoctonia*. Calculation of quantum.

Change of use of farmland – Expert Witness for Staffordshire County Council in planning hearing and subsequent Judicial Review of alleged material change of use of agricultural land to waste disposal facility.

Impact of odour from Pig farm – Single Joint Expert instruction to consider the impact of odour arising from activities at a pig farm on the occupant of a neighbouring property, the implementation of Best Available Techniques and possibilities of mitigation of releases to atmosphere.

Impact of odour from proposed beef feedlot – study of likely odour impacts from a proposed beef feedlot for East Lindsay DC. Mitigation of impacts and liaison with applicant to achieve mutually-satisfactory outcome.

Investigation of the catastrophic failure of AD Plant – Undertake an investigation for the insurer of an anaerobic digester of the catastrophic failure of the plant. Reported on causation of and liability for the failure.

Impact of Pig Production Unit on Neighbours – Single Joint Expert in Civil Dispute. Assessment of the stocking rates at an existing pig unit and the actual/potential of mitigation of impacts on a neighbouring property.

Assessment of the causation and impact of Rhizoctonia and Pythium infections in field scale brassica production – preparation of evidence of causation and quantification of losses in brassicas resulting from the supply of infected seedlings.

Alleged unpermitted use of land. Investigation of incident and providing written evidence on alleged unpermitted use of land for waste deposition contrary to s33(1)(a) & (6) of the EPA 1990 (Devon).

Odour emissions - developed a strategy to reduce odour emissions from an existing pig unit in response to threatened statutory nuisance action for a small farm in Derbyshire.

Unpermitted use of land. Gave expert evidence at Chippenham Magistrates Court regarding an incident involving unpermitted use of land for waste deposition contrary to s33(1)(a) & (6) of the EPA 1990.

Nuisance claim - Presented expert evidence in private action for nuisance arising from composting operations at Bristol High Court.

Pollution of controlled waters. Instructed by the Environment Agency (Anglian Region) to report on the pollution of controlled waters arising from application of wastes to land contrary to s85(1) & (6) of the Water Resources Act 1991.

Alleged unpermitted use of land. Investigated the evidence presented in support of the Defendant and presented expert evidence at St Albans Magistrates Court in a case of alleged unpermitted use of land for waste deposition contrary to s33(1)(a) & (6) of the EPA 1990.

Appeal against an Enforcement Notice. Presented expert evidence in Magistrates regarding best available techniques of manure management at an appeal against an Enforcement Notice served pursuant to S80(3) of EPA 1990.

Soil loss investigation. Undertook an investigation into and reporting on soil loss from agricultural land and subsequent alleged deposition in lake. Private nuisance action settled after mediation.

Pollution affecting controlled waters. Investigated and reported on a pollution incident associated with the application of off-farm waste to land in Wiltshire affecting controlled waters contrary to s 85(1) & (6) of the Water Resources Act 1991.

Nuisance relating to slurry storage. Provided expert support in a private action against a dairy farming business for nuisance arising from the treatment, management and storage of slurry. Settled after mediation.

Pollution incident retained by the Defendant (Northants) to provide a report on the circumstances surrounding a pollution incident on a newly-constructed dairy farm.

Impact of a pig unit on neighbouring properties – retained by the Defendant (Somerset) to provide Expert evidence which was presented in Court on the impact of an established pig unit on the amenity of the occupants of neighbouring properties.

Water pollution – retained by the Defendant (Cornwall) to provide Expert evidence on the events leading up to and consequences of water pollution arising from application of dairy slurry to land.

Slurry store leakage retained by the Defendant (Cornwall) to provide Expert evidence on the reasons for leakage from a slurry storage facility which lead to the pollution of surface waters.

Landfill restoration – retained by the Plaintiff (Gloucestershire) to report on valuation, containment and restoration to agricultural use of a former landfill site.

Silage effluent pollution – retained by the Defendant (Dyfed) to report into circumstances surrounding the pollution of a watercourse with silage effluent for submission to Court.

Alleged biological contamination – retained by the Plaintiff (Herefordshire) to provide an Expert report to support claims arising from alleged biological contamination by a dairy herd of an aquifer supporting a private water supply.

Assessment of odour impact - retained by the Plaintiff (Guernsey) to provide an assessment of odour impact of a dairy unit on neighbouring property with a view to private action against the farmer.

NVZ legislation – retained by the Appellants (East Anglia) to provide Expert advice on the interpretation of proposed NVZ legislation, analysis of long-term nitrate data and support to Judicial Review and legal challenge in the European Court.

Ammonia pollution – retained by the Defendant (Sussex) to provide Expert evidence presented in Court on the pollution of surface water with concentrated ammonia from a fertiliser storage facility.

Contamination of irrigation water – retained by the Plaintiff (Hertfordshire) to provide an investigation into the contamination of irrigation water with aquatic herbicide. Assessment of dilution and speed of downstream transmission.

Alleged pollution of surface waters – retained by the Defendant (Essex) to prepare report and present evidence at an Appeal against prosecution for alleged pollution of surface waters with run-off from a small livestock unit.

Abstraction licence variation – retained by the Plaintiff (Suffolk) to prepare evidence for an Appeal against Environment Agency decision to vary irrigation abstraction licence without consultation.

Flooding of the Somerset Levels – retained by the Plaintiffs (Somerset) to prepare evidence for action against Environment Agency in a case involving flooding in large areas of the Somerset Levels.

Grain drying installation - Single Joint Expert (Hampshire) – Prepare report on the impact of dust and noise emissions from grain drying installation on neighbouring properties. Advise on alternative locations and other mitigation.

Large scale battery egg production – retained as Single Joint Expert (Cornwall) to prepare a report and present evidence in Court on the likely historical and current impact of a large-scale battery egg production operation on a neighbouring property, and potential for mitigation.

Sewerage contamination – retained by the Plaintiff (Surrey) to investigate into the failure of sewerage and consequential contamination of vegetable crop with raw sewage.

Asbestos disposal – retained by Defendant (Wiltshire) to prepare a report and present evidence in Court regarding the origins of asbestos waste and the timing of its burial in a farm tip.

Breaker's yard – retained by the Defendant (Hampshire) to provide an investigation into historical contamination at a former breaker's yard.

Alleged pollution of controlled waters – retained by the Defendant (Wiltshire) to provide an investigation into alleged pollution of controlled waters arising from the application of dairy parlour washings to agricultural land.

Pig slurry pollution – retained by the Defendant (Oxfordshire) to report on pollution of surface waters resulting from the application of pig slurry to land during dry weather.

Dirty water runoff – retained by the Defendant (Wiltshire) to report on pollution arising from dirty water run-off from a dairy unit.

Investigation into failure of control system – retained by Morris Loss Adjusting for NFU Mutual to provide an investigation of the failure of component parts of a farm waste control system.

Microbiological contamination – retained by the NFU Mutual to investigate the possible sources of microbiological contamination of a private borehole water supply.

Salmonella typhimurium outbreak retained by the NFU Mutual to investigate the source of a waterborne *Salmonella typhimurium outbreak* in a dairy herd.

Alleged contamination of seed – retained by the NFU Mutual (Isle of Wight) to provide an investigation into the quantum of loss arising from allegedly contaminated seed.

Uneven fertiliser application –retained by the NFU Mutual (Warwickshire) to provide an investigation into the quantum of loss arising from alleged uneven fertiliser application.

Flooding investigation – retained by the NFU Mutual (Surrey) to investigate the likely causes of flooding of residential property.

Fuel oil contamination of surface waters – retained by the NFU Mutual (Buckinghamshire) to provide an investigation into pollution of surface waters with agricultural fuel oil.

Alleged contamination of public water supply – retained by the NFU Mutual (Dyfed) to investigate the alleged contamination of public water supply with slurry.

Contamination of borehole water – retained by the NFU Mutual (Oxfordshire) to provide an investigation into diesel contamination of borehole water supply and formulation of proposals for an alternative sustainable supply.

Giardia sp contamination retained by the NFU Mutual (Norfolk) to provide an investigation into the possible contamination of a borehole water supply with *Giardia sp*.

Contamination of a farm water supply with coliform bacteria – retained by the NFU Mutual (Derbyshire) to provide an investigation into the causation of contamination of a farm water supply with coliform bacteria.

Re-establishment of an 8,000 pig fattening unit – retained by Bournemouth Borough Council to give Evidence at Public Inquiry into the impact of the re-establishment of an 8,000 pig fattening unit on neighbouring properties.

Impact of soil movements – retained by Ryedale District Council to report on various aspects of the impact of soil movements during construction works on neighbouring mushroom farm.

Farm waste storage – retained by the Isle of Wight Council to provide Evidence at Public Inquiry relating to an appeal against enforcement action against farm waste storage facilities and nuisance arising from their use.

Proposed poultry unit – retained by South Shropshire District Council to provide an assessment of the agricultural need for and potential environmental impact of a proposed poultry unit for planning determination.

Impact of a pig unit on neighbouring properties – retained by Sevenoaks District Council to give Evidence at a Public Inquiry relating to the impacts of a pig unit on neighbouring properties.

Proposed poultry unit – retained by neighbour (Wiltshire) to report on the environmental impact of a proposed intensive poultry unit.

Impact of livestock farming on a proposed housing development – retained by the Applicant (Buckinghamshire) to provide Evidence at Public Inquiry relating to the impact of livestock farming on a proposed housing development.

Dairy expansion – retained by neighbour (Cheshire) to prepare report on the impact of intensification of dairying operation on neighbouring residential properties.

For NFU Mutual Insurance – Numerous investigations into causation of and liability for incidents of botulism poisoning in cattle and sheep in Devon, Cumbria, Lancashire, Cheshire, Shropshire and Herefordshire.

Statutory Nuisance – retained by Wakefield MBC to provide an Appraisal of evidence in a Statutory Nuisance case in Magistrates Court.

Statutory Nuisance – retained by Burges Salmon (Somerset) Evidence prepared for defence against Statutory Nuisance case brought against a pig farm.

Unauthorised slurry lagoon – retained by Carrick District Council (Cornwall) Evidence given at Public Inquiry supporting effects of unauthorised slurry lagoon on neighbouring properties and the local environment.

Environmental Statement – retained by Buttery and Watson (Buckinghamshire) to provide input to the Environmental Statement for a proposed 50,000-bird broiler unit near Haddenham. Air, soil and water pollution.

Odour impact – retained by a private client (Guernsey) to provide an assessment of the odour impact of a dairy unit on neighbouring property.

Impact of existing pig unit on local aquifer - retained by the National Trust (Gwent) to determine the impact of an existing pig unit on the local aquifer for inclusion in an Environmental Impact Assessment.

Mitigation of odour generation – retained by Dover District Council to prepare a report for the District Council Environmental Health Department on odours arising from poultry manure spread adjacent to a residential area.

Management

Assessment of likely impact of construction dust on housed calves – Investigation and reporting of risks associated with the impact of construction dust on sensitive receptors for HS2 Ltd.

Assessment of impacts of agricultural drainage on proposed road scheme – Investigation into the incidence of agricultural drainage along a highway construction corridor and its likely impact on operations. Propose mitigation methods.

Feasibility study for on-farm AD plant – Study for private client for the construction and operation of a small-scale anaerobic digestion plant on a mixed farm in Buckinghamshire.

Design and installation of slurry management system - for a 200-cow herd comprising a free-flow collecting channel, mixing and subsequent separation, and storage of liquid and solid fractions.

Design of a 200-sow integrated farrow-to-finish pig breeding and rearing operation - including pig handling and all aspects of pollution control.

Design and supervised renovation of a 250-cow dairy unit in Warwickshire - including milking parlour and collecting yard, loose housing, feeding and loafing areas, and handling systems. New silage clamps with effluent recovery for feeding to cattle and a passive waste water treatment system.

Compost pack barns - investigated the use of compost pack barns for loose-housing of dairy cows in herd sizes of between 10 and 400 animals, using robotic milking technology.

Large scale dairy unit - worked in close cooperation with the Client on the design and layout of a very large-scale dairy unit, including various aspects of cow flow and accommodation, with a 'cascade' pollution control system to minimise risks of escape of potentially polluting material. The site was also to be served by multiple slurry storage lagoons and anaerobic digesters and included ground and passively-treated surface water supplies for use for by stock and in milk production.

Research and Policy

Development of Remote Sensing Tools for sustainable agriculture – Member of the MASSAT project team, building satellite earth observation tools for developing sustainable agriculture in the UK and in Mongolia. Focusing on monitoring agricultural practices and crop rotations, which are designed to improve soil quality for improved carbon sequestration and water management.

Improving Farming Practice using Remote Sensing Applications – Working with the Institute of Remote Sensing and Digital Earth (RADI) of the Chinese Academy of Sciences on the STFC Newton Agri-Tech China programme considering technologies to enable the use of remote sensing information, sustainable

intensification and climate smart agriculture. The study adopts a practical approach with a view to developing agricultural services for different users including farmers, advisers, private and government organisations.

Horizon Scanning for Pesticide Use – Working with WRc plc to carry out a horizon scan of future issues that could impact on the risk of pesticides contaminating surface and groundwater supplies of drinking water. Multiple scenarios devised including: likely innovations; changes in land use and cropping patterns; trends in farming practices; changes in regulation; and the withdrawal of active substances.

The Efficacy and Scalability of a Payment for Ecosystems Services (PES) approach to the management of metaldehyde use – working with AECOM and the University of Hertfordshire for Affinity Water to design, implement and monitor a PES scheme to control metaldehyde use in part of the Loddon catchment.

Adverse Impacts on Food Safety following the phasing out of Plant Protection Products (PPPs) and Biocidal Products with Endocrine Disrupting Activity – Working with WRc plc to produce a working document for use by the UK Food Standards Agency.

Horticultural Energy Hubs – Study for West Sussex Growers Association and Horticultural Development Board considering the feasibility of the establishment of horticultural hubs including industrial, commercial, leisure and residential development based on efficient use of energy arising from renewable power generation.

Natural Approaches to Flood Risk Management – Study with Wallingford HydroSolutions to consider the likely impacts of the implementation of natural flood risk management techniques on farm businesses and flooding in the Clwyd catchment. For NRW and Cadwyn Clwyd.

Sustainable Catchment Management for Phosphorus – Study for UKWIR to consider the efficacy of catchment management measures for the control of diffuse phosphorus pollution from agricultural land.

Support tool to identify climate resilience of catchment land management to aid selection of appropriate methods to build adaptation into river basin management. The project used a combination of literature review, expert elucidation and modelling, to compare robustness of the range of 200+ rural catchment management methods available to achieve the objectives of the WFD at the catchment scale.

What's in it for you...Profit from a good environment: best farming practices. An Environment Agency publication informing farmers and land managers on the environmental and economic benefits of improved land management.

Source understanding and options for action on phosphorus. This project researched the current data and understanding relating to phosphorus pollution issues in English surface waters, and produced a decision-making framework to assist with selecting programmes of measures and actions during the second round of river basin management planning.

Survey to determine the potential impact of outdoor pig units on ground and surface waters for the Environment Agency

Expert support for a group of farmers challenging the UK Government's implementation of the EU's Nitrate Directive – retained by Barker Gotelee Solicitors to carry out research into the implementation of Directive in other member states and measures taken to reduce the impact of intensive livestock production on surface and ground waters. Liaison with EC DGIV and DGXI and researchers in other Member States.

Research to establish the distribution of outdoor pig production in England and Wales - Project co-ordinator for Environment Agency-funded research. The project involved the completion of questionnaires by employees of firms associated with the pig industry, identified by research collaborators.

Whole-farm environmental risk plan for 3,000acre estate in Leicestershire – retained by CWS Agriculture to provide a report which included the identification of risks attached to the spreading/use and storage of a wide range of potential pollutants and description of the fates of materials involved in pollution incidents at any location on the estate.

Farm diversification – retained by J Bibby Agriculture to prepare proposals for farm diversification involving the production of compost from animal manure produced on site and at neighbouring intensive livestock units.

Co-composted sewage – retained by Thames Water plc, Southern Water plc and Wessex Water plc to report on the implementation of yield trials to assess the economics of using co-composted sewage sludge and other biosolids as an agricultural fertiliser.

Farm waste handling – retained by Yattendon Estates Ltd to design dedicated farm waste handling and storage facilities for pig and dairy units and recommendation of land application machinery for slurries.

Publications

Adverse Impacts on Food Safety following the phasing out of Plant Protection Products (PPPs) and Biocidal Products with Endocrine Disrupting Activity. With WRc for Food Standards Agency

Catchment Sensitive Farming Alert System (China)

Impact of Pesticides on Groundwater

Climate Resilience of Catchment Control Methods

Source Understanding and Options for Action on Phosphorus (in England)

EA Waste Protocol with WCA Environment RAC4065 Input to protocol to assess risks associated with inclusion of waste products within manufactured to BS for topsoil

Estimation of environmental limits in agricultural production RAC4137

1997	'Sustainable Systems of Outdoor Pig Production', joint author with Tom Worthington, Environment Agency R & D Report.
1995-1996	Published book reviews on 'Alternative Uses of Sewage Sludge' and 'Irrigated Crops and Their Management' in Agricultural Progress.
2000	Co-author of 'Diffuse Pollutants in Groundwater: Economic Appraisal' for Water UK with Rudd and Ozdemiroglu.
2000	'Sludge Strategy Implementation' – *A Review of Innovative Sludge Recycling Solutions*', with Consultants in Environmental Science.
2006	'Poultry UK' A Resource Flow Analysis of the UK Poultry Industry for Biffaward.
2006	'Pigs UK' A Resource Flow Analysis of the UK Pigmeat Industry for Biffaward.
2007	Author of draft Environmental Strategy for the Pig Industry in England and Wales, for the BPEX Ltd.
2008	Author of 'Best Farming Practices' a best practice guide for farmers in England and Wales, for the Environment Agency.
2011	Co-author of Technical Note on Water Management Reservoirs for Arun District Council

A Howard Elliott

Specialism

Planning

Current Position

Associate

Joined RAC

1993

Academic Qualifications

BA (Hons), Geography, Sheffield, 1969

MSc, Applied Geomorphology, Sheffield, 1970

Certificate in Environmental Impact Assessment, Oxford Brookes, 2000

Professional Affiliations

Fellow of the British Institute of Agricultural Consultants

Practitioner Member of the Institute of Environmental Management and Assessment

Key Experience

Howard has over 40 years' experience of the competing interests in the countryside, drawn from a research background in land resource evaluation, some 13 years' service as a senior officer of the National Farmers Union, and from private consultancy involving a wide range of rural planning and environmental issues. He has worked extensively with public and private interests in commissions concerning the assessment of the impact of urban developments and infrastructure proposals on agricultural and other rural resources; rural projects related to the development of the rural economy and conservation and recreational initiatives, and the appraisal of related policy frameworks; and individual agricultural and rural planning proposals, principally relating to commercial and residential developments in the countryside. He has extensive experience as an expert witness, having given evidence at over 100 public inquiries and planning hearings.

Professional History

1993 – date	Associate, Reading Agricultural Consultants Ltd
1986 - 1993	Director, Travers Morgan Planning
	Senior Associate, Travers Morgan Planning
	Director, Michael Boddington Associates
1974 – 1986	Head of Land Use Department, NFU
	Assistant Director, Parliamentary and Professional Services Division, NFU
	Secretary, Land Use and Countryside Sub-Committee and the Welsh Land Use Panel, NFU
1970 – 1974	Research Demonstrator, Department of Geography, University of Reading

Selected Projects

Planning

Deep water container port - Project manager of survey of agricultural land quality and agricultural/forestry impact of a 250+ha site for a new deep water container port facility and associated off-site road and rail links, with land management implications for the New Forest. Technical report and input to ES, and evidence to public inquiry for Associated British Ports

Extension to research complex - Project manager for survey of agricultural land quality and farm impact for proposed extension to Genome Campus at Hinxton. High quality farmland, disturbed ground, soil transfer issues. Technical input to ES and evidence to public inquiry for the Wellcome Trust.

Sewage sludge pipeline- Project manager for survey of agricultural land quality and farm impact of an option to transport sewage sludge by pipeline between improved wastewater treatment works at Margate and existing sewage treatment works at Weatherlees. Technical input to ES for Southern Water Services

*Corporate Headquarters, Surrey)*Project manager for agricultural survey of site for new corporate headquarters and research facility in Green Belt in Surrey. This involved high quality farmland producing intensive irrigated production of salad crops, large glasshouse complex and contaminated land for TAG MacLaren.

South Oxfordshire Reservoir - Project manager for survey of agricultural land quality and agricultural holdings of an area (1900 ha) proposed for the development of a major surface water reservoir and pipeline connection to the River Thames. Technical input to ES for Thames Water Utilities.

A458 Improvements - Stage 1 assessment of the agricultural implications of the A458 Buttinton Cross to Wollaston Cross improvement *(Symonds Group for National Assembly for Wales)*

Dibden Container Terminal - Negotiation of mitigation measures with landowners and assessment of the impact of proposed improvements to the A326 as part of the Dibden Container Terminal proposals. Preparation of agricultural technical statement and contributor to Environmental Statement. Expert witness on agricultural matters at Public Inquiry (*Associated British Ports*)

A1(M), Junctions 6 to 8 - Contributor to the base-line studies in the A1(M) corridor and to the environmental assessment of alternative widening options *(Dept of Transport)*

A57/A628 Mottram-Tintwistle Bypass: Agricultural consultant to the contractor, providing the agricultural input to the environmental assessment of a scheme for the bypassing of villages on the edge of the Peak District National Park. Evidence presented to public inquiry.

Wrexham Industrial Park Access: Agricultural consultant to the contractor and Wrexham County Borough Council, responsible for agricultural studies necessary to complete land use reports for Stages 1, 2 and 3. Assessment of routes for new northern and southern access roads connecting the existing Wrexham Industrial Park to the A534 and A252. Presented evidence to CPO inquiry and negotiated with landowner objectors.

M6 Improvement Carlisle to Guards Mill: Agricultural consultant to the contractor on behalf of the Highways Agency, providing the agricultural input to the environmental assessment of a scheme for the upgrading of the M6 to motorway standard between Carlisle and the Scottish border. Contributed to environmental evidence presented to public inquiry. Negotiated a departure from normal engineering practice with DEFRA in respect of the protection of sensitive high quality soils affected by a construction and spoil storage site. Provided post-construction advice on restoration of construction sites.

A151 Weston Bypass, Lincs: Agricultural consultant to the contractor. Undertook agricultural studies and presented evidence to public inquiry into a combined housing and highway proposal, in which a bypass was being promoted by a housebuilder as enabling development. Consideration given to the operational and trading implications for a garden centre and leisure facility.

A6 Bypass Newtown – Bridgemont Section: Agricultural consultant to the Department of Transport. Co-ordinator of agricultural studies relevant to consideration of route options and selection and environmental assessment of a bypass proposal affecting sensitive urban fringe conditions in north-west Derbyshire.

A45 widening Cambridge: Environmental co-ordinator for the Department of Transport. Co-ordinator of land use and environmental studies for a Stage 1 constraints assessment of A45 corridor between the A10 interchange and the A1303 Quy Mill interchange as a precursor to the consideration of widening and junction improvement options.

Wainscott Northern Bypass: Agricultural consultant to Kent County Council. Contributor to a Green Belt/Urban Fringe study of the potential land use consequences of a bypass proposal in north-west Kent. Presented evidence to public inquiry on the agricultural impact of a bypass scheme affecting high grade farmland and agricultural interests engaged in fruit and field horticultural production.

Long Melford Bypass: Agricultural consultant to affected landowners. Presented evidence to public inquiry into bypass proposals on behalf of directly affected agricultural interests.

M40 London-Oxford-Birmingham Motorway (Waterstock to Wendlebury Section): Agricultural consultant to the local residents' association and affected landowners. Presented agricultural evidence to public inquiry in support of the objection made by a local residents' association, and contributed to the development and design of an alternative route promoted by the objectors at the inquiry. Presented evidence to public inquiry on behalf of a directly affected individual agricultural interest.

Proposed high speed rail link between the Channel Tunnel and London - Project Manager of the agricultural impacts studies forming part of the route selection and design process of the proposed high speed rail link and of the environmental assessment of the preferred scheme for Union Railways Ltd.

Morden Estate Company, Dorset - Preparation of a comprehensive estate plan, promoting the diversion of land and buildings to appropriate new uses in an area of national and international landscape and wildlife conservation importance.

Working with local councils, Bromley BC, Stratford BC, South Buckinghamshire DC, Crewe & Nantwich DC, Tewkesbury, Vale of White Horse DC, South Oxfordshire DC, Chiltern DC, Wycombe DC, East Hertfordshire DC, Congleton BC, Bridgenorth DC, North Yorks CC, Vale Royal BC, North Lincolnshire DC, Pendle BC, West Lancs DC, Hillingdon BC, Flintshire CC, Glasgow City Council, Warrington BC, Nottinghamshire CC and advising clients in respect of a variety of planning issues: appraisals, agricultural land classification, proof of evidence, suitability of replacement buildings, certificate of lawful use, removal of agricultural condition, footpaths and rights of way/access, Appeal statements, change of use and seasonal workers accommodation.

Planning applications, advice and assistance with: agricultural dwellings, buildings; storage & cattle, horticultural dwellings, shade hall for plants, glasshouses, temporary mobile dwellings, proposed riding centres, retention of temporary mobile dwellings, footpaths, Agricultural Ecological Appraisals, removal of occupancy conditions, landfill sites, change of use, farm diversification appraisals, Enforcement notices; Appeals & Planning contraventions, seasonal workers accommodation for a variety of agricultural enterprise types, which have included: equine – livery & stud for sport and competition stock, dairy, mushrooms, milking goats, pheasant rearing, alpacas, poultry, beef, sheep, pigs, ostrich, deer, fishery, crayfish farm, horticultural, nursery, vineyard, arable, quarry, golf and turf.

Southern Water – Margate and Broadstairs Urban waste water treatment scheme Providing an environmental assessment technical report, also Providing an Environmental Statement for West Sussex bulk transfer scheme.

A23 Coulsdon Town Centre Improvement - Agricultural Assessment - preferred option for the disposal of surplus spoil and soils from the construction trace of the realigned A23 as it passes through a Coulsdon Area Farm.

Racecourse redevelopment & Golf - Providing a Racecourse with an agricultural impact study.

Welsh Assembly - Contributor to Tan6.

Mineral working business – production of an environmental statement and Agricultural Land Classification, Worlington, Suffolk, on behalf of the client.

Restoration and aftercare – retained by Gloucestershire county council to provide proposals for the restoration and aftercare of a landfill site including landscaping for agricultural usage to comply with terms of planning permission conditions.

Waste disposal/land raising assessment – retained by Flintshire County Council to producing a Waste disposal/land raising assessment and various statements of evidence in support of appeals and proposed public inquiry.

Appraisal of a Free Range poultry development – retained by a private client to produce an assessment of the feasibility of re-siting of poultry houses and roaming areas.

Proposed flood relief scheme – retained by Glasgoe City Council to provide a mitigation of proposed flood relief scheme, at Kirkland Bridge site providing comments and a report on the agricultural objections from the local farming businesses.

Waste Local Plan- retained by Chelford Parish Council to submit an objection to the Cheshire replacement Waste Local Plan, producing the Appellant's Agricultural Statement for Appeal, and attendance at Local Plan Inquiry.

Luton Airport Expansion – working jointly with a leading planning consultancy.

Proposed landfill extension – retained by Warrington Borough Council to provide an appraisal and environmental statement of the agricultural content in respect of a proposed landfill extension.

Nottingham County Council – Environmental Statement for a new Visitor Centre at Sherwood Forest.

Crewe & Nantwich BC – Assessment of engineering works.

Chelford Parish Council – Consultation on Cheshire Minerals Development Framework, review consultation documents, attendance at meeting with County Council, and completion of consultation response.

High value residential property developer – Prepare an estate management plan to meet Conservation Plan strategies for the development of a historic park.

Anglian Water – Pipeline restoration investigations, preparation of Topsoil reinstatement method statement.

High Peak Core Strategy - producing a constraints assessment, attendance at public exhibition and discussion with planning officers, providing a response to consultation on Growth Options, attendance at consultation meeting with Residents Association and making representations on Draft Core Strategy.

Staker Hill Cycleway - attendance at site visit with Cycling England and Peak National Park representatives and advice, and monitoring of related planning applications.

Chelford Parish Council - Chelford Village Housing Strategy - the preparation of draft housing assessment and strategy, and making representations at Parish Council meetings and at public meeting.

Town Planning consultants & Medway Council – producing an agricultural impact study for a proposed road scheme.

Engineering consultancy - Investigation of agricultural land quality at Sowerby, for a proposed mixed residential and commercial development.

Renewable energy project - Preparation of an Agricultural Impact Assessment for a planned solar PV park at Asfordby, Leicestershire.

A2 Improvement Cobham-Singleton: Agricultural consultant to the contractor, providing the agricultural input to the environmental assessment of a scheme for the re-alignment and upgrading of the A2 across high quality farmland, some of which had been restored following disturbance by the construction of the

Channel Tunnel Rail Link. Managed subsequent advice on soil handling during the construction process to ensure retention of land quality on land required temporarily.

Research and Policy

Countryside Agency - Producing a questionnaire - agriculture in the urban fringe.

DOE - Contributor to the last of the Department of the Environment's series of studies of the use of earth science information in the statutory planning and land management process, namely that concerned with rural and upland planning aspects. (*with Symonds Travers Morgan)*

Countryside Commission - An assessment of the effectiveness of the Demonstration Farms Programme in terms of achieving its practical conservation objectives, of reaching the target audience, and of influencing agricultural and land use policy. *(with Llewelyn Davies Planning and Economic Development Unit)*

DEFRA - An ongoing three-year investigation with the Oxford Archaeological Unit of the means of reducing the adverse impact of arable agriculture on archaeological resources.

Countryside Commission - Report on Improving Countryside Around Towns. 1997

Groundwork Foundation - National Co-ordinator of a three-year pilot urban fringe project, the New Countryside Initiative, sponsored by MAFF, Countryside Commission and Business in the Community, concerned with innovative measures to stimulate the regeneration of rural economies and landscapes within the Groundwork Trust areas of St Helens, Rossendale and East Durham.

Countryside Agency - Report with Catherine Bickmore Associates on the state and significance of agriculture in the urban fringe. 2003.

Academic research experience in the field of land resource evaluation with particular reference to agricultural development schemes and associated infrastructure in Mediterranean environments (Southern Italy and Morocco).

Thirteen years as a senior officer of the headquarters' establishment of the National Farmers Union concerned with land use and planning issues. During this period engaged with management of academic research into the impact of road building on agriculture and the prosecution of a joint campaign by the NFU and RICS for improvements in compensation procedures. Involvement with important highway and other infrastructure proposals, including Oakhampton Bypass, Roadford Reservoir, and Stansted Airport. Represented the NFU at numerous public inquiries and structure plan examinations in public.

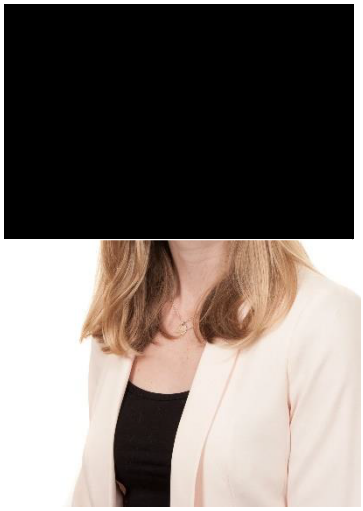
In conjunction with Travers Morgan Environment in association with the Centre for Agricultural Strategy of Reading University - Producing a study on economic assessment of the EU policy programme 'Towards Sustainability' in the agricultural sector" undertaken for OGXI-C-3 of the European Commission. Identifying major costs and benefits of different agricultural and environmental policy scenarios which reflect current practice, and objectives of the 5th Environmental Action Programme (5EAP). The study formed part of the comprehensive, multi-sectoral assessment of the full 5EAP undertaken for OGXI-C-3 of the European Commission.

Publications

Co-author of a guide for farmers and landowners to the planning issues involved in farm diversification proposals. 2000.

READING AGRICULTURAL CONSULTANTS

Sophie Webb



Key Experience

Sophie is a soil surveyor and scientist with experience of assessing soil and agricultural land quality across England and Wales. As well as Agricultural Land Classification reports, she has tailored assessments for inclusion in ES Chapters, restoration progress reports and contaminated land investigations. Sophie is a full member of the Institute of Soil Science.

Her independent research has considered the impacts of farming practices on soil compaction and subsequent greenhouse gas emission, and in a separate project, the behaviour and ecotoxicity of ionic and nanoparticulate zinc in the soil environment.

She has been intensively involved in Phases One, 2a and 2b of High Speed 2 from London to West Midlands, from West Midlands to Crewe, and West Midlands to Leeds. Her specialist input into the EIA has comprised collection of baseline data through soil surveys, with involvement throughout the process, from selecting priority sites and organising the surveys, to the final production of reports.

She takes particular interest in land restoration projects, involving surveys of available soil resources, creating target restoration profiles and monitoring the progress of restored land. Her understanding of the importance of soil resources and the need for its protection enabled her to contribute expert written evidence to the Government's Soil Health Inquiry. The Environmental Audit Committee referenced her individual contribution in its First Report of Session 2016-17.

Specialisms

Soil surveys; agricultural land and soil resource impact assessment; soil restoration and aftercare

Current Position

Associate

Joined RAC

2012

Academic Qualifications

BSc (Hons) Physical Geography, Queen Mary, University of London, 2010

MSc, Environmental Management, University of Reading, 2011

Professional Affiliations

Member, Institute of Soil Science

Professional History

2012 – date	Associate, Reading Agricultural Consultants Ltd.
2013 – 2017	Guest lecturer at the University of Reading
2016	Submitted expert written evidence to the Environmental Audit Committee's Soil Health Inquiry
2015	Panellist at Gender and Fieldwork Conference
2013	Completion of Soil Engineering, Contaminant and Nutrient Management training course at Cranfield University.

Selected Projects

Agricultural Land Quality

- Detailed agricultural land classification (ALC) and soil surveys covering over 4,500 hectares in England and Wales.

  Recent Notable Projects:
- A Soils and Agricultural Land Assessment produced to assess the likely quality of agricultural land in Arun district, and assisting in the development of local planning policies for soils, agriculture, horticulture and equestrian land - *Arun District Council*
- ALC and soil resources surveys spanning over 300 hectares on the Isle of Anglesey, to support the application for the redevelopment of a power station of national importance - *Jacobs*
- ALC and soil resources surveys of over 220 hectares in Kent for the siting of lorry parks in response to 'Operation Stack' - *Highways England*

Soil Resources

- Creating records of soil conditions prior to disturbance against which restored profiles can be compared and determination of the compatibility of soils being moved between sites.

  Recent Notable Projects
- Survey and sampling of woodland, including some ancient woodland, at multiple locations to record existing conditions prior to ecological work and translocation being undertaken – *HS2 Phase One Enabling Works*
- Determination of the compatibility of the available soil resource from a proposed development site for the creation of acid grassland habitat at a nearby receptor site – *Ecological Planning and Research Ltd*
- Development of a Soil Management and Reclamation Plan for a proposed mineral extraction site, to satisfy conditions set out by Natural England - *Hills Quarry Products*

Environmental Impact Assessment and Soil Resource Plans

- Production of ES Chapters covering soils, land and agriculture for large scale strategic and infrastructure development projects.

  Recent Notable Projects:
- Input to HS2 Agriculture, forestry and soils EIA (Phase One, London Metropolitan and Country South; Phase 2a; and Phase 2b, Lots 2 and 3), in particular establishing the environmental baseline and assessing the potential effects on soils and land quality.
- Agricultural land quality and soil resources impact assessment for the proposed A120 bypass and flood alleviation scheme at Little Hadham - *Arup/Hertfordshire County Council*.
- Agricultural land quality and soil resources impact assessment for the provision of a new rail chord under the East Coast Main Line at Werrington, Peterborough - *Network Rail*

- Soil Resources Plan for the management of the soil resource at a quarry prior and subsequent to mineral extraction, and supervision of the stripping works – *Smith and Sons (Bletchington)*

CURRICULUM VITAE

NAME: PATRICK JOHN STEPHENSON

ADDRESS: [redacted]

HOME TEL: [redacted] **WORK:** [redacted]27

E-MAIL: [redacted]

DATE OF BIRTH: [redacted]

NATIONALITY: [redacted] **MARITAL STATUS:** [redacted]

EDUCATION & QUALIFICATIONS

1970-77	Appleby Grammar School
1978-82	University of Newcastle - B.Sc. (Hons) Agriculture
1986	BASIS Qualification
1992	FACTS Qualification
1998	Integrated Crop Management Certificate
2003	BETA Qualification
2005	Standards of Professional Competence (SFEDI)
2006	Soil and Water management Exam
2012	NUTRIENT Management Plan
2016	ISO 17065 Training Awareness
2018	FACTS CPD Exam
2019/20/21/22	FACTS CPD Exam

ADDITIONAL AWARDS

2003 '**Agronomist of the Year'**, Reed Publication
2004/7 Chairman - **Association of Independent Crop**

	Consultants (AICC)
2007/8	‘**Arable Advisor of the Year’**, Farmers Weekly
2009-2015	**Member of the BASIS executive board**
2012- present	**Co-Founder and Chairman of the Global Alliance of Independent Agricultural Consultants**
2014-17	**Chairman AICC**
2016-	**UKAS Organic Technical Expert**
2018-	**BASIS Elected member Advisory Board**
2019-	**AHDB Cereals and Oil Seed BoarD**
2021-	**Member Expert Committee on Pesticides**

EMPLOYMENT HISTORY

1997 to present **P J Stephenson Independent Agronomist**
North Yorkshire and Cumbria

Agronomy based business providing advice on all aspects of agriculture covering 1600 ha. Servicing an area from the Lake District, Cumbria to North Yorkshire. Clients include individual farmers, farm businesses, contractors, landowners and tenants. Work includes, full agronomy service; including waste management plans, fertilizer regimes, soil assessments, whole business management, business appraisals, farm management work on behalf of banks and individuals, trial results interpretation, and telephone advice

Delivery of regular farmer training meetings and lectures, on a variety of agricultural arable issues. This work is undertake for clients and organisations, ranging from Bayer, BASF Agrochemicals, Footpath and Way leave Officers, National Parks, Renewable fuels association, BCPC annual weed review and for many farm discussion groups. I am also a registered Land based trainer for LANTRA groups.

Responsible for agricultural assessment work undertaken as part of the Environmental impact assessments, on major road improvement schemes, planning developments, Carbon capture scheme Yorkshire, and national utilities improvements. This involves the collection and analysis of farm data, the preparation of subsequent reports for inclusion in environmental statements, attendance at Public Consultations and subsequent Public Inquiries.
Detailed agricultural land classification work for utilities, large and small businesses.
Expert witness work for National Farmers Union including High Court representation in London.

A Defra employed sub-contractor to provide one to one and group specialist advice with regard to Good Agricultural and Environmental Conditions and Catchment Sensitive Farming practices.
Visiting lecturer at Newcastle University Agricultural faculty

I am also employed as the Northern Regional Consultant Agronomist for NIAB TAG. This involves initiating trials and disseminating information to the 2000 members particularly those in the North. This is delivered either via meetings field days or telephone contact.
International speaking appointments in Australia, Belgium, Spain, USA and New Zealand. Joint author of a white paper on 'Weed resistance problems around the world'.
Liaising with levy funded boards in New Zealand, Brazil and Australia
UKAS Technical Expert Assessor for Agriculture and Horticulture production in association with compliance to relevant ISO standards.
Past Board member on the AHDB Wheat recommended list committee. Current member of the Cereals and Oil Seed Committee
Immediate past Chair of the Association of Independent Crop Consultants and the current Chair of the Global Alliance of Independent Crop Consultants

1991-97 **East Yorkshire Farm Services/Agricultural Planning Consultancy Service**
Pickering, North Yorkshire

PARTNER -Independent consultancy service advising on all aspects of crop management involving giving technical advice on arable cropping, rotations, varieties, fertilisers and chemical applications. Farm business appraisal includes the monitoring and preparation of budgets, cash flows and C.O.S.H.H reports. Estate Management is also included in this role. Responsible for agricultural assessment on major road improvement schemes and planning development. This involved the collection and analysis of farm data, the preparation of subsequent reports for inclusion in environmental statements, attendance at Public Consultations and subsequent Public Inquiries.

1987-91 **P J Stephenson - Agricultural Consultant**
North Hertfordshire
Private consultancy business primarily working under contract with North Hertfordshire Agronomy Group.

1985-87 **Agricultural Advisor - MAFF**
Seconded to North Hertfordshire Agronomy Group.

Working independently and advising on all aspects of crop production and financial planning for the group on 2000 acres.

1984-85 **Agricultural Advisory Officer Grade III,**
MAFF, Bedford
Servicing farmers in Mid Bedfordshire District.

1983-84 **Agricultural Advisory officer Grade III,**
MAFF, Bury St Edmunds.
Servicing farmers in Breckland District and Suffolk.

1982-83 **Trainee Agricultural Advisory Officer Grade IV**
MAFF - Norfolk and Suffolk.
Training as an agricultural advisor with special reference to Farm Management, Agronomy, and Statutory & Grant Work

REFERENCES

Sarah Cowlrick CEO Association of Independent Crop Consultants
Independent View, PO Box 283, Petersfield, Hampshire GU32 9GD

[redacted]

Dr Paul Bilsborrow
Senior Lecturer

[redacted]

CURRICULUM VITAE: SJ FRANKLIN

1. **Education:**

Institution	Degree(s) or Diploma(s) obtained:
Newcastle University 1984-87	BSc (Hons)
Cranfield University 1993-4	MSc
Royal Forestry Soc 1993	Certificate
Chrtd Inst Marketing 1994	Diploma
Chartered Surveyor 1994	Diploma (MRICS)
Royal Horticultural Soc 2005	Certificate

2. **Membership of professional bodies:**

Presently		**Admission Date**
Member	Royal Institution of Chartered Surveyors MRICS	1994
Member	Institute of Professional Soil Scientists MISoilSci	1998
Fellow	Central Association of Agricultural Valuers FAAV	1995
Fellow	British Institute of Agricultural Consultants FBIAC	2001
Associate	Inst. of Environmental Management & Assessment PIEMA	2001

3. **Present position:**

Director of own business as chartered surveyor, agricultural consultant, land use and planning advisor[redacted] Family farm ([redacted] mixed arable, horticultural and livestock (pigs, sheep, goats, poultry and beef), on-farm butchery training.

4. **Key experience and qualifications:**

- From a family farm, Sam has a degree in Agriculture and considerable practical, farm-based agricultural, horticultural and soils management experience gained on mixed, livestock, horticultural and arable units. He holds the RHS Certificate of Horticulture.
- As a qualified chartered surveyor and agricultural consultant, he has over 35 years of experience across a wide range of property matters, including both commercial and housing projects, compulsory purchase, roads, rail and pipelines, development land, farming, property management, renewable energy, minerals, land restoration, archaeological surveys and EIA. He is a Professional Associate of the Institute of Environmental Assessment - since 2001.
- Sam is a Member of the Institute of Professional Soil Scientists and a Life Member of the British Society of Soil Science. He undertakes soil survey work for private clients, developers, local authorities and government agencies and has worked on soil restoration, flood risk, drainage and land improvement projects, as well as ALC for roads, development sites, renewable energy projects and EIA. and is currently a Panel Member of the Agricultural and Land Drainage Tribunal.
- He has an MSc from Cranfield University, attending Cranfield advanced training in Soil Matters, Land Evaluation, Soil & Water: Principles and Management in Production Systems and soil science courses of IPSS and Lancaster University. He has given talks, demonstrations and on-farm advice on ALC, soil and water management, land drainage, rainwater harvesting and soil husbandry. He is familiar with land drainage, irrigation scheduling and reservoir design.
- Sam has been managing director of a surveying and rural planning business since 2001. Previous employment includes five years at the RSPB, work for environmental and conservation organisations, local authority and overseas in dryland climates.
- He has undertaken soil and water management, soil husbandry and Catchment Sensitive Farming work for Natural England and since 2003 has given regular rural planning consultancy advice to over 20 Local Planning Authorities, across southern, eastern and midland England; acting as agricultural, equestrian and rural resource expert, regularly attending planning committees, public inquiries, hearings and examinations in public.

5. **Professional experience**

Date from - Date to	Location	Company	Position	Description
2001 - Present	UK	Landscope Land and Property Ltd	Director	Agriculture, environment, land use and buildings management. Town and country planning. Specialist soil, water and environmental advice given to clients regarding ALC, cultivations, soil husbandry, soil erosion, irrigation, and water management.
2001 - 2019	UK	Abacus Organic Associates	Associate/ consultant	Sustainable agriculture, farm and land management specialist to conventional and organic farmers. Agricultural business management services. Farm appraisals/reviews. Bank lending and financial restructuring matters.
2008-2016	UK	Speedwell Farming	Director	Organic and sustaianble farming and investment operation. Managing 150 Ha of arable and vegetable cropping, run as a demonstration farm for an ethical investment operation. Non inversion tillage, cover cropping and carbon sequestration.
2002-2004	UK	Countryside Foundation for Education	Woodland Manager (Pt time)	Supervision of 60 UK wide, mainly woodland sites for education and nature conservation. Training and demonstration to school age children woodland management techniques. Management of woodland including felling licences, applying for grant schemes, preparing and implementing planting schemes. Land acquisition and management.
1998 - 2001	UK	Sworders	Senior Consultant	Senior Consultant – Farm business appraisals, rent reviews, farm diversification. Farm business management. Preparation and submission of planning applications for rural based projects and farm diversification. Land, property, farm and agricultural management for clients.
1996-1998	Ukraine	Cargill Tech Services/LAPECO for DFID (Know How Fund)	Team Leader (Land and Assets)	Team leader of lead component on a long-term project working on the operation and restructuring of 100,000 hectare large state farms and community facilities, in the Odessa and Nikolaiev oblasts, with work in Crimea, Kiev and Donetsk.
1997-8	Turkey & Romania	Siberia Marketing for Monsanto plc	Consultant	Short term studies to report on project appraisal and feasibility for agribusiness
1994-1996	UK	Bedfordshire County Council	Principal Land Manager	Senior Property Manager of a local government property portfolio including schools, 5,000 hectares farms and smallholdings, demonstration woodland project and other general property.

1994	UK	Unilever (Brooke Bond)	Marketing Intern 3 months	Marketing research for Brooke Bond on tea and coffee - tastes/patterns of consumption. Qualitative research and quantitative analysis.
1988-1993	UK	Royal Society for the Protection of Birds	Land Manager	Property, natural resource and environmental management of 40,000 hectares of UK nature reserves, with RAMSAR, SPA and SSSI status, also woodland, agricultural and environmental land; including fishery and other wetland interests. Managing in-hand farming operations
1987-1988	UK	WS Johnson and Co	Assistant	Trainee auctioneer, agricultural valuer and chartered surveyor.
1980-1986	UK	Various Farms	Worker	General seasonal farm work on various farms to gain experience, including vegetable, sheep, beef, pig, poultry and arable holdings.

6. **Other relevant information (publications)**

- Agro-forestry in Hungary 1992 – Report and study tour looking at agro-forestry and on farm forestry in Hungary. Midland Bank funded award for National Federation of Young Farmers
- Central Association of Agricultural Valuers: Study of Agriculture in Ukraine 1998
- British Society of Soil Science, Review of The Cranfield University Soils Matters course 2014

7. **Technical courses studied**:-

- Deakin University: Gender and Development
- Cranfield University: Soil and Water Management
- Cranfield University: Soil evaluation
- Cranfield University: Soil Matters Course
- Lancaster University: Global Food Security
- Lancaster University: Soil Management
- Exeter University: Natural Capital
- Institute of professional Soil Scientists**:** Soil Classification

Appendix 2
Welsh Ministers' review of solar application

The Planning Inspectorate

Appeal Decisions

Inquiry Opened on 16 February 2021

Site visits made on 22 March 2021

by David M H Rose BA(Hons) MRTPI

an Inspector appointed by the Secretary of State

Decision date: 13th April 2021

APPEAL A: (The proposed Vale of York Motorway Service Area (MSA))
Appeal Ref: APP/E2734/W/20/3245778
Land Comprising OS Field 3300 Marton Le Moor YO51 9DP

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant outline planning permission.
- The appeal is made by Applegreen Plc against the decision of Harrogate Borough Council.
- The application reference 18/00123/EIAMAJ, dated 10 January 2018, was refused by notice dated 22 November 2019.
- The development proposed is: 'Outline application for proposed Motorway Service Area to the West side of the A1(M) with vehicular over bridge to and from southbound carriageway and partial diversion of the A168, including associated infrastructure and staff access from B6265'.

APPEAL B: (The proposed Ripon Motorway Service Area (MSA))
Appeal Ref: APP/E2734/W/20/3261729
Land Comprising Field At 435074 475842 Hutton Conyers North Yorkshire

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant outline planning permission (access and layout not reserved).
- The appeal is made by Moto Hospitality Limited against the decision of Harrogate Borough Council.
- The application reference 18/02713/EIAMAJ, dated 5 July 2018, was refused by notice dated 9 October 2020.
- The development proposed is: 'Construction of new Motorway Service Area ("MSA") to comprise: Amenity Building, Lodge, Drive Thru Coffee Unit, associated car, coach, motorcycle, caravan, HGV and abnormal load parking and a Fuel Filling Station with retail shop, together with alterations to the adjacent roundabout at Junction 50 of the A1(M) to form an access point and works to the local highway network. Provision of landscaping, signage, infrastructure and ancillary works'.

Decision (Appeal A)

1. The appeal is allowed and planning permission is granted for an 'Outline application for proposed Motorway Service Area to the West side of the A1(M) with vehicular over bridge to and from southbound carriageway and partial diversion of the A168, including associated infrastructure and staff access from B6265' at Land Comprising OS Field 3300 Marton Le Moor YO51 9DP in accordance with the terms of the application, reference 18/00123/EIAMAJ, dated 10 January 2018 subject to the conditions (1 – 42) set out in Annex A to this decision.

Decision (Appeal B)

2. The appeal is dismissed.

Preliminary matters (General)

The Inquiry

3. The Inquiry sat for 14 days on 16 – 19 February; 22 - 26 February; 2 - 5 March; and 11 March 2021. A number of local residents spoke during the Inquiry, mainly during an evening session on the first day of the Inquiry.

4. I carried out unaccompanied site visits, following agreed itineraries to specific and representative viewpoints, including night-time views, on 22 March 2021.

5. Formal evidence was presented on landscape and visual impacts; agricultural land quality; and planning policy and the planning balance. A 'round-table' discussion was held on the need or otherwise for an additional Motorway Service Area (MSA); and on draft planning conditions and obligations. All other matters took the form of written statements.

Context

6. In 2012 the Secretary of State issued decisions (the 2012 appeal decisions) on proposals for four competing MSAs, and a Truck Stop Service Area (referred to as Coneygarth Truck Stop, Leeming Bar), which took a wide range of factors into account in determining the most suitable site for an additional MSA along the A1/A1(M).

7. Three of the decisions are of particular relevance to the current appeals. First, the Secretary of State found that the twin-sided on-line MSA at Kirby Hill[1] (corresponding generally with the location of the current Applegreen Vale of York MSA proposal) had the following disadvantages:

> *'…… the fact that it is only just above 12 miles north of the fully operational Wetherby MSA weighs against it, as do the material considerations that it would have the greatest visual, environmental and heritage impacts as well as the greatest take of BMV[2] land. Furthermore, the need to resolve the drainage issue means the likelihood of some delay in commencing work'*.

8. Second, a site at Baldersby Gate[3] (corresponding generally with the location of the current Moto Ripon MSA proposal), located on the western quadrant of the A1(M) and A61 near the midpoint between, what were, existing services at Wetherby to the south and Barton to the north. The Secretary of State attached significant weight to this central location but noted that the proposal would be constructed in open country on a green field site, taking best and most versatile agricultural land and causing some visual impact, and it would not be in accordance with the development plan. He disagreed with the principal Inspector's[4] recommendation to allow this proposal in light of a preference for a third site which is summarised below.

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1 Submitted in December 2008 ('the 2008 application')
2 Best and Most Versatile
3 Submitted in June 2010 ('the 2010 application')
4 The original Inquiry was re-opened by a second Inspector and two reports were submitted to the Secretary of State (the principal Inspector and the second Inspector)

9. Third, the principal Inspector's report identified the proposal at the then existing Motel Leeming Services to be disadvantaged by its off-centre, and relatively remote location from the motorway (having been by-passed by the upgrade of the A1 to motorway standard), and that it would fall short of meeting the identified need for an additional MSA. However, the Secretary of State found advantage in the lack of encroachment into the countryside, no loss of agricultural land and deliverability which, overall, amounted to sustainable development and compliance with the development plan.

10. The Secretary of State therefore granted outline planning permission for a MSA at Motel Leeming Services and refused the other three MSA proposals.

11. The Leeming Bar permission, following the approval of reserved matters, has been implemented by nominal works. However, Leeming Bar remains as a signed Motorway Rest Area (MRA) with limited, poor quality, facilities.

12. For the avoidance of doubt, both the current Vale of York MSA proposal, in particular, and the Ripon MSA project are materially different to those that preceded them, notably in terms of illustrative layout and design. Also, the decisions of the Secretary of State, having regard to the Inspectors' reports, have to be read as a whole.

The Development Plan: The Harrogate District Local Plan (Adopted 2020)

13. The All Party Statement of Common Ground identifies some 20 policies that are relevant to the consideration of the proposals. The policies most relevant to the main issues are Policy NE4: Landscape Character and Policy NE8: Protection of Agricultural Land.

14. Reference was also made to Policy EC3: New Employment Development in the Countryside and Policy GS3: Development Limits. Other policies applicable to the main issues considered by written representations are noted subsequently where they are germane to those issues.

15. The applicability or otherwise of Policies EC3 and GS3 to MSA proposals was in dispute.

16. Policy EC3 indicates that new employment development will be permitted in the open countryside where a number of criteria are met including, in short, the re-use or adaptation of an existing building or small-scale new building which is well related to a rural settlement.

17. Although the interpretation of this policy was somewhat wide-ranging, in my view, on its face, the policy is aimed at modest projects for rural diversification. Although both of the appeal proposals would provide considerable new employment in the countryside, the primary function of a MSA is to support the welfare and safety of motorists and employment generation is an incidental consequence. In my view, EC3 is not a relevant policy.

18. Policy GS3, in general, identifies where new development will be accepted and indicates that *'Outside development limits proposals for new development will only be supported where expressly permitted by other policies of this plan or a neighbourhood plan or national planning policy'*.

19. In my view, Policy GS3 is very much aligned to the provision of new homes and jobs whilst protecting the character and appearance of the countryside. It would be difficult to conceive of a situation where a MSA could be accommodated within the limits of any settlement in the district given that the A1(M) cuts through open countryside.

20. To the extent that the phrase '*Outside development limits ……'* might be engaged, it is evident that neither the development plan, a neighbourhood plan (where there is none), or national planning policy expressly permit either of the proposed MSAs. In these circumstances, absent specific endorsement, the proposals are to be considered on merit having regard to all material considerations and the fundamental objective, for example, of safeguarding the character and appearance of the countryside.

Preliminary matters (Appeal A)

Reasons for refusal and the Council's Statement of Case

21. The Council refused planning permission citing 6 reasons:-

    1) *'The site is not allocated for a Motorway Service Area in either the 2001 Harrogate District Local Plan or the emerging Harrogate District Local Plan.*

    2) *The proposal would result in a second Motorway Service Area in the District contrary to Saved Local Plan Policy T7.*

    3) *The proposal represents an unsustainable development that would result in a significant encroachment into open countryside resulting in harm to the landscape and irreversible damage to agricultural land of the best and most versatile in conflict with Saved Policies C2 and T7 of the 2001 Harrogate District Local Plan, Policy SG4 of the Harrogate District Core Strategy Development Plan Document and Policies NE4 and NE8 of the emerging Harrogate District Local Plan.*

    4) *The proposed Motorway Service Area would cause economic harm to the town of Boroughbridge through the resultant loss of trade in conflict with Policy JB1 of the Harrogate District Core Strategy Development Plan Document and Policy GS5 of the emerging Harrogate District Local Plan.*

    5) *The development has a potential risk of environmental damage arising due to drainage and surface water issues contrary to Policy EQ1 of the Harrogate District Core Strategy Development Plan Document and Policy CC1 of the emerging Harrogate District Local Plan.*

    6) *The harm resulting from the proposed development would outweigh the benefits of the proposed Motorway Service Area contrary to paragraph 11 of the National Planning Policy Framework.'*

22. The Council, in its Statement of Case, confirmed that reasons 1, 2, 4 and 5 would not form part of its case as the 2001 Local Plan had been replaced; there was no evidence of adverse effects on the town of Boroughbridge; and statutory authorities had not raised objections in relation to drainage or surface water issues. In addition, references to Saved Policies in reason for refusal 3 were similarly superseded.

23. In short, the Council approached the appeal on the principal basis that the harm to the landscape, and the loss of best and most versatile agricultural land, would *'significantly and demonstrably outweigh the benefits particularly so when taking into account the existing service area at Wetherby at only 12 miles away from the site'*.

24. Nonetheless, Kirby Hill Residents Against Motorway Services (RAMS), a Rule 6(6) Party, representing the views of the local community and those of seven local councils, aligned itself with all of the reasons for refusal and presented evidence and written statements as applicable.

The appeal proposal

25. The Vale of York MSA, between Junctions 48 and 49 (J48 and J49) of the A1(M) is a proposed on-line service area with facilities and vehicle parking located on the western side of the A1(M). It is intended to serve both directions of travel on the motorway by means of a new junction with slip roads and an overbridge. The slip roads and junction arrangement serving traffic would necessitate a realignment of the existing A168 in an easterly direction.

26. The application was made in outline with approval sought for means of access. However, this matter was reinstated during the consideration of the application and the appeal is to be considered with all matters reserved for later approval. The area of the site was also reduced from 19.84 hectares (ha) to 19.1ha prior to determination of the application.

27. The application was supported by an illustrative masterplan and parameters plan, with the latter being consistent with the masterplan and defining the scope of the development for which planning permission was sought. The illustrative masterplan depicts the proposed development at the upper end of the range based on an illustrative design, with the proposed buildings and parking areas set below existing ground levels and new mounds planted with hedgerows. The use of 'green roofs' is also proposed for the new buildings.

28. The application was accompanied by an Environmental Statement[5]. I have had regard to the environmental information in considering the appeal.

Planning Obligation

29. A Unilateral Undertaking, under section 106 of the Town and Country Planning Act 1990, confirms payment of a Travel Plan monitoring fee in the sum of £2,500. The Undertaking is supported by a statement of compliance. I am satisfied that the deed meets the relevant statutory and policy tests.

Preliminary matters (Appeal B)

Reason for refusal and the Council's Statement of Case

30. Planning permission was refused for the following reason: *'The proposal is outside development limits and represents an unsustainable development that would result in a significant encroachment into open countryside causing harm to the landscape in conflict with Policies EC3 (A & C), GS3 and NE4 of the Harrogate District Local Plan.'*

31. The Council approached the appeal on the principal basis that the proposal would have a significant adverse effect on the character and appearance of the area and on views from the A61. As such, the resultant harm would outweigh any benefits from the proposed MSA, having particular regard to the distance between facilities serving the motorway at Wetherby and Leeming Bar.

[5] Including Addendum and 2nd Addendum

The appeal proposal

32. The proposed Ripon MSA lies on a site immediately to the west of J50 of the A1(M). It would be served from the existing roundabout junction of the northbound motorway slip roads with the A61 and the A6055.

33. The application was made in outline with access and layout to be determined as part of the application. However, at a late stage in the Inquiry, Moto requested that layout should be reinstated as a reserved matter, albeit by reference to the same drawings and supporting information presented with the application and which formed the basis of the Environmental Impact Assessment.

34. Neither the Council, nor any other party, opposed the amendment sought. I am satisfied that the development would not be so changed that it would deprive those who should have been consulted of the opportunity of such consultation and no third party would be prejudiced. Moreover, I conclude that there would be no impact on the environmental information underpinning the proposed development.

35. The Design and Access Statement explains that the larger amenity and lodge buildings are purposefully located close to the eastern boundary of the site where ground levels are generally below the adjacent highways and roundabout junction infrastructure. The related linear tree belt would be strengthened and other screening would be achieved by low mounds and tree and shrub planting.

36. The application was supported by an illustrative masterplan and parameter plans collated on a parameter site plan. It is said that the parameter plans, and particularly the heights noted, encompass the widest and the highest parts of each of the buildings with a small additional tolerance to account for some degree of flexibility.

37. The application was accompanied by an Environmental Statement and I have had regard to the environmental information in my consideration of the appeal.

Planning Obligations

38. Although Moto sought to enter into a Planning Obligation with Harrogate Borough Council and North Yorkshire County Council, with regard to a Travel Plan and its related monitoring fee, this was precluded by a potential legal impediment. However, the provision of a Travel Plan is provided for in one of the draft planning conditions and payment of the monitoring fee has been made. The County Council has confirmed that the funds would only be used for the purpose sought; and would be refundable should the appeal be dismissed.

39. Planning obligations, in the form of a Unilateral Undertaking, are made in favour of Harrogate Borough Council (in which the appeal site is located) and Hambleton District Council (in which the Leeming Bar MRA lies). The respective obligations seek to ensure that if the Ripon MSA appeal is allowed, the permission would not be implemented in the event that the approved scheme at Leeming Bar is continued to be constructed; and, if permission is granted and implemented, no reliance would be placed on the Leeming Bar permission.

40. However, Hambleton District Council has stated: *'…… Hambleton do not propose to be party to this agreement on the basis that we have concerns about its enforceability in the future. We also opine that supporting this agreement might prejudice development in Hambleton and therefore cannot agree to it.'*

41. In view of this position, whilst it is acknowledged that the Undertaking is necessary and otherwise lawful, and Harrogate Borough Council would be able to enforce the obligation made in its favour, the prospect of two MSAs within such a short distance, although highly unlikely, could not be discounted. The Unilateral Undertaking is therefore of limited materiality.

Main Issues

42. The main issues are:

a) whether or not there is a need for an additional MSA between Wetherby MSA and Durham MSA, having particular regard to other facilities along this stretch of the A1(M);

b) the effect of each of the proposals on the character and appearance of the area including landscape and visual effects;

c) the nature and acceptability of the loss of agricultural land at both sites;

d) the effects of the Vale of York proposal on highway safety; drainage, flood risk and climate change; the local economy; and designated heritage assets;

e) the relative merits of each of the proposals; and

f) the overall planning balance.

43. By way of explanation, it was common ground that there are only two possible outcomes of the Inquiry in that either both appeals are dismissed or one of them is allowed.

44. In this regard, if it is concluded that there is no need for an additional MSA, both appeals should be dismissed. Alternatively, if a need is shown to exist, and having decided the better of the two proposals, whether that need outweighs any conflict with the development plan and any other harm arising from the consideration of the other main issues.

Reasons

The First Main Issue: Need (Appeals A and B)

45. The National Planning Policy Framework (the Framework) states at paragraph 104 e) that planning policies should *'provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy'*.

46. A related footnote (fn42) indicates that *'policies for large scale facilities should, where necessary, be developed through collaboration between strategic policy-making authorities and other relevant bodies. Examples of such facilities include …… roadside services'*.

47. The recently adopted Harrogate District Local Plan does not contain any policies or references specific to MSA provision, notwithstanding representations made by Applegreen during the evolution of the plan.

48. The Council, in responding to Applegreen's representations stated:

'Detailed guidance on roadside facilities for road users on motorways is set out in DfT[6] Circular 02/2013. This includes matters relating to spacing and impact of roadside facilities on the strategic road network. This also sets out that new and existing roadside facilities are subject to the provisions of relevant planning legislation and regulation. Proposals for new MSAs will therefore need to take account of national guidance and policies in the relevant development plan.

Taking account of the existing policies in the Local Plan and national guidance, it is not considered necessary to include a policy in the Local Plan as any proposal received will be considered on its merits and subject to other provisions of the Plan such as impact on landscape character and the natural environment, designated and non-designated heritage assets and amenity'.

49. In short, any 'speculative' MSA proposal is to be considered on merit, having regard to other policies in the plan; the Framework; and Circular 02/2013 (the Circular), each read as a whole and in combination; and other material considerations. As Kirby Hill RAMS pointed out, both the Framework and the Circular have the objective of achieving sustainable development.

50. Turning to the Circular, this sets out policy on, amongst other things, the provision of roadside facilities on the strategic road network. It is recognised that MSAs and other roadside facilities perform an important road safety function by providing opportunities for drivers to stop and take a break in the course of their journey. Government advice is that motorists, not subject to a regime of statutory breaks, should stop for at least 15 minutes every two hours.

51. Based on the premise that opportunities to stop are provided at intervals of approximately half an hour, paragraph B6 of the Circular indicates that the recommended maximum distance between MSAs should therefore be no more than 28 miles, but it can be shorter. It is clear to me that the approximate 'time-based' criterion influences the maximum 'distance' criterion. However, neither is prescriptive or precise other than in the terms set out and the most definitive statement is *'no more than 28 miles'*.

52. In this regard, even though it is said that the A1(M) in the vicinity of the appeal sites is not susceptible to congestion and delays, the potential for unimpeded journeys does not undermine the maximum distance criterion which has particular applicability to vehicles governed by a statutory speed limit of 56mph (28 miles per half an hour).

53. All parties agreed that the measurement of the gap in MSA provision should commence from Wetherby MSA, to the south, at J46. The first operational MSA, to the north, is at Durham (J61), a distance of 60.8 miles.

54. Leeming Bar MRA at J51, and off the A6055, lies 28.8 miles to the north of Wetherby MSA as measured centre of car park to centre of car park following the methodology employed in the 2012 appeal decisions. Whilst Kirby Hill RAMS disputed this approach and hence the distance, nothing turns on the matter given that the Circular regards 28 miles to be a maximum distance between MSAs.

[6] Department for Transport

55. Moreover, Leeming Bar is not at present a MSA. The full implementation of its extant planning permission, irrespective of Hambleton District Council's ambivalence about enforcing the Unilateral Undertaking, seems a most unlikely prospect given its detachment and distance from the motorway; the obvious need for very substantial investment; and the unchallenged submission that it is not a viable location for a MSA.

56. In terms of other facilities, Coneygarth Truckstop, off J51 and served by the A684, is 28.6 miles from Wetherby MSA; and Scotch Corner MRA (J53) is at a distance of 38.8 miles. There is also a Truckstop at Barton Park (J56)[7], served from the A6055, some 40 miles north of Wetherby MSA. It has a historic permission for a MSA which has been lawfully implemented but not built out. Kirby Hill RAMS also pointed to the presence of Morrisons, for example, on the approach to Boroughbridge. There is also an undetermined planning proposal for a MSA at Catterick (J52) some 37.5 miles from Wetherby MSA.

57. In my opinion, none of the legacy facilities, relied on by the Council and Kirby Hill RAMS, which once served the needs of the A1 before it was up-graded to motorway standard, nor services of a local nature, can be considered to provide a MSA function within the terms of the Circular.

58. Overall, I consider that there is a need for a MSA to support the safety and welfare of road users to serve the A1(M) between Wetherby MSA and Durham MSA, and that either proposal would fulfil that need. It is common ground that only one of the two candidate sites could succeed whilst acknowledging that both could fail. If permission is to be granted, case law[8] establishes that the decision maker must consider which of the alternatives would cause the least planning harm.

59. In summary, the very recently adopted development plan concedes the consideration of any proposal for a MSA in the district to other policies in the plan and to national guidance. Policies EC3 and GS3 are not directly aligned at such proposals; the Framework is supportive of the provision of roadside facilities; and Circular 02/2013 regards 28 miles to be a maximum distance between MSAs. In my opinion need is firmly demonstrated.

The Second Main Issue: Landscape and Visual Effects

Appeal A: The Vale of York MSA proposal (Applegreen Plc)

The 2012 Decision and the current scheme

60. With regard to the proposal for a twin-sided on-line MSA, the subject of the 2012 decision, the principal Inspector's summary conclusions were[9]:

> '*The site is not covered by any formal landscape quality designation, but it has been assessed in the district's landscape character appraisal. It is a uniform large-scale agricultural landscape that would not easily mitigate the harmful effects of the large scale MSA. The development would be seen from closer viewpoints, mostly in the context of introduced large scale woodland planting and a 450m long mound up to 9m high that would mostly surround the development. Both would be alien features in the countryside here that would significantly harm the character of the surrounding open landscape …….*

[7] J56 is the next junction beyond J53 – there is no J54 or J55
[8] *Secretary of State for the Environment v Edwards (P.G.) (1995) 69 P. & C.R. 607*
[9] IR 14.3.79 – 14.3.81

The views of the MSA from the A1(M) would be of lesser importance, but there would be clear views from the LRN [local road network] and Ripon Road roundabout which lie on a tourist route. I consider that the visual effect of the MSA on the tourist route would be moderate to slight adverse. The MSA and mound would cause slight visual harm to views from a number of residential properties in Church Lane and moderate to slight visual harm to residents near Skelton Windmill particularly in the early years and in winter. There would also be a slight detrimental visual effect from nightglow.

I conclude that the proposal would have a significant detrimental effect on the character and appearance of the surrounding landscape.'

61. In terms of the current scheme, there is little or nothing of direct comparison in that it consists of a single-sided facility on the western side of the northbound carriageway. Access for southbound vehicles would be achieved by new slip roads to and from an elevated 'dumbbell' roundabout junction and bridge crossing the motorway. The A168 would be realigned further east to accommodate the new junction. The scheme relies on substantial ground excavation and remodelling to integrate the service area into its new land-form aided by green roof construction and landscaping to maintain open views across the site.

Valued Landscape

62. Local Plan Policy NE4 identifies nine 'Special Landscape Areas' that are valued locally for their high quality landscape and their importance to the settings of Harrogate, Knaresborough and Ripon. Neither the appeal site, nor its surroundings, fall within the terms of the policy. In addition, Applegreen and the Council agree that the area of the appeal site is not to be regarded as a 'valued landscape' within the meaning of paragraph 170 a) of the Framework.

63. However, Kirby Hill RAMS contended that the local landscape is a valued landscape using the methodology and criteria set out in the Guidelines for Landscape and Visual Impact Assessment (Third Edition) (GLVIA3). The document points out that *'landscapes or their component parts may be valued at the community, local, national or international levels …… the fact that an area of landscape is not designated …… does not mean that it does not have value'*.

64. Box 5.1 of GLVIA3 identifies a number of factors which are generally agreed to influence value. Kirby Hill RAMS highlighted the presence of Skelton Windmill; a historic coach road; expansive views of the Vale of York, Hambleton Hills and the White Horse of Sutton Bank; the Grade I Listed All Saints' Church in Kirby Hill; historic associations by the presence of the Roman Road known as Dere Street which borders the east of the site; and at least one of the two sacred Neolithic 'pathways to purity' linking the Devil's Arrows with the Thornborough Henge complex running close to, or through, the site itself[10].

65. All of the above are capable of influencing value. However, the windmill has lost some integrity with the removal of its cap and sails; the historic coach road is of narrow interest; and the expansive views are not restricted to the immediate locality. The village Church is of importance in its own right, but its overall influence in the landscape is limited. The historical significance is

[10] With particular reference to KH1.1 and the Statements by Dr Rose Ferraby, Archaeologist and Chris Thirkell

by association rather than through physical manifestation. Taken together, in the context of a typical lowland farming landscape, and the visual and audible presence of the A1(M) motorway in particular, I consider that these locally cherished attributes do not take the landscape out of the ordinary and elevate it to a valued landscape for the purposes of the Framework.

Parameters and Visualisations

66. Although the Vale of York proposal was submitted in outline, the principles of its design, as illustrated in the Parameters Plan and the Design and Access Statement, could be secured by planning conditions. The illustrative masterplan depicts the proposed scheme at the upper end of the development parameters, albeit based on modelled design principles aimed at integrating the buildings and related facilities into the landscape.

67. The Council's approach of assessing the proposal to the full extent of the parameters effectively ignores the overall design concept and footprint parameters and exaggerates the reasonably likely worst case effects. Moreover, the Council's wireframe overlays were superimposed on an amalgam of photographic images with resultant distortion and inaccuracy. Overall, I find Applegreen's visual material to be the preferred basis to assist my assessment.

Landscape character

68. Policy NE4 contains five guiding criteria to protect, enhance, or restore the landscape character of the district. In particular, criterion B requires, in short, development proposals to be informed by, and to be sympathetic to, the distinctive landscape character areas as identified in the Harrogate District Landscape Character Assessment.

69. The appeal site is located in Landscape Character Area 81 (LCA81) 'Dishforth and surrounding farmland'. The Guidelines for the area aim to maintain the extensive views across and beyond the area; to integrate existing development; and to reinforce the diverse landscape pattern of the field systems.

70. The principles within the Guidelines recognise the difficulty of accommodating large scale development without further detriment to landscape character; confirm the inappropriateness of extensive large scale tree planting required to screen any new development; and seek to avoid highlighting the A1(M) and A168 corridors as linear planting does not respect the pattern of the landscape.

71. An adjacent Landscape Character Area (LCA74) 'Skelton on Ure rolling farmland' lies generally to the west of, and some 220m at its closest point from, the Applegreen appeal site. The character area is noted as being attractive and pleasant, with particular reference to Newby Hall and Skelton Windmill. The character area is extremely important to the setting of Newby Hall and its associated Registered Historic Park and Garden and tourism is stated to be a major source of income for the Hall.

My appraisal

72. There are two distinct, yet inextricably linked, elements to the Applegreen proposal, namely the MSA facilities to the west of the A1(M) and the new highway infrastructure to the east of the motorway.

73. Taking each in turn, the site to the west of the motorway falls, in very general terms, from a north-westerly to south-eastly direction. The southern boundary, forming part of the rising embankment to the existing B6265 overbridge, is a well vegetated and strong delineating feature.

74. The western boundary is marked by an almost continuous substantial hedgerow with two mature oak trees. The hedgerow more-or-less coincides with the horizon when viewed from the motorway, other than at its southern end where there is a limited rise in landform to the crest on which the windmill sits.

75. The eastern boundary coincides with the margins of the motorway and its limited screening of the appeal site. The tapering northern edge is the most exposed, albeit an intermediate hedge within the site and the nature of the landform contain views to some degree.

76. It is common ground that the proposal would be large scale development and that it would cause some landscape harm and some visual harm arising from effects on openness and on views. That said, the crux of the issue is to what extent and degree would that manifest itself.

77. The illustrative plans demonstrate that lowering ground levels, as shown generally, would ensure that the proposed buildings and ancillary areas would be capable of assimilation into the resultant landform.

78. In particular, the combined amenity building and fuel filling station would be sited close to and parallel with the southern boundary with the highest part of the building illustrated as coinciding more-or-less with the carriageway level of the B6265. Established roadside planting would provide further screening, and the curvilinear green living roof would reinforce integration. The smaller and lower HGV re-fuelling facility and the drive-through coffee shop, also illustrated with curved green roofs, would be sited more centrally within the site but, again, generally contained by the existing and proposed engineered and natural landscape framework.

79. In terms of the representative viewpoints, and the additional locations to which I was directed, the aspect from the existing B6265 overbridge towards the site is heavily influenced by the presence of the motorway. Although the proposal would undoubtedly extend the impact of the motorway at this point, the development itself would not have any broader effect on the character and appearance of the landscape, having particular regard to the intended landform, internal landscaping, building composition and the backcloth of the reinforced western boundary.

80. The B6265 is an important tourist route and a proportion of motorists may, as a result, have an enhanced sensitivity. However, in my opinion, the proposed MSA, to the limited extent that it would be apparent, would be perceived as a related and complementary adjunct to the motorway in both form and function. Whilst the rear staff access would provide a fleeting, oblique and downward view into the site, I am satisfied that appropriately designed internal landscaping would be capable of minimising any adverse effects and shielding views into the HGV parking area.

81. Further to the west, the aspect from the direction of the junction with High Moor Road is influenced by the overbridge, with its lighting columns and signs, and traffic on the motorway comes increasingly, and fully, into view on the approach to the site.

82. The illustrative details demonstrate the feasibility and effect of recontouring of the western boundary, to form a rising berm topped by a new hedgerow, and the manner in which it would substantially curtail views into and across the site. The green-roofed buildings, particularly the means by which that of the amenity building would sweep up from ground level, would also be a significant factor in rendering the development to be relatively unobtrusive.

83. Although it was conceded that the upper parts of some high-sided vehicles would not be fully obscured from view (Year 1 and 5), and the fascia supporting the green roof of the HGV refuelling facility would also be visible (Year 1), these elements would, in my opinion, appear less intrusive than current views of the traffic along the motorway. I also believe that the lighting columns, atop the new junction to serve the proposed MSA, would not be unduly striking, having regard to those that already exist at the B6265 roundabout.

84. Moving to Moor Lane (south), and the public footpath at Cottage Farm, the view northwards towards the appeal site, where it exists, is curtailed by the boundary screening of the B6265. In the presence of the existing overbridge and related traffic, and the influence of the motorway, I am satisfied that the proposal would have no perceptible additional adverse effect.

85. Turning to the 'Coach Path' and Moor Lane, to the north of the B6265 and linking with Cocklakes Lane/Chapel Lane, neither was assessed in Applegreen's Landscape and Visual Impact Assessment as they were not identified as Public Rights of Way. However, both are the subject of a recent Application for a Definitive Map Modification Order. Kirby Hill RAMS held that the omission overlooks 'receptors' with a high degree of sensitivity.

86. Having that in mind, the Coach Path affords extensive sideways views over and beyond the appeal site to the North York Moors. The middle ground contains the motorway corridor. Walking northwards, the B6265 overbridge is visible as is the motorway carriageway and attendant vehicles. Whilst landform offers some subsequent screening, the gantry signs and overbridge linking Highfields Lane and Moor Lane come into view, and vehicles reappear, thus accentuating and extending the influence of the motorway.

87. From Moor Lane there are direct views towards the motorway and the Marton-le-Moor overbridge and, from the bridge itself, there are long views over and along the motorway. From Cocklakes Lane/Chapel Lane, Moor Lane, and the bridge, and also from Highfields Lane to the east, the most visible elements of the project would be the proposed southbound slip roads, the new dumbbell roundabout, and the bridge over the motorway. Lighting columns and traffic movements would be an added factor.

88. However, notwithstanding the claim that the scheme would result in the highest concentration of road bridges in LCA81, I consider that the addition of what would be an 'infill' bridge, between two existing closely-spaced bridges[11], could not be said to be uncharacteristic or visually incongruous in this setting. The associated earthworks to the west of the motorway, subject to gentle gradient and rounded profile, would reflect the characteristic undulating topography, and appropriate new tree planting would assist assimilation. Importantly, where views would remain across the site, the backdrop of the western and southern boundaries would ensure that the development was visually contained within a robust landscaped setting.

[11] The proposed overbridge is shown to have a deck level some 0.5m higher than that of the B6265 bridge

89. Finally, on the western side of the site, the nearby seven-storey landmark Skelton Windmill has an extensive panoramic outlook. The illustrative scheme takes account of the view-lines from the windmill and, in my opinion, demonstrates through a combination of topography, landscaping, building locations and built form that the overall effects on visual amenity could be substantially mitigated.

90. Turning now to the proposed new highways infrastructure, the proposal would involve the repositioning of the A168 further east of its current route[12]. The existing alignment benefits, in substantial part, from linear tree belts and hedgerows although the lead up to the B6265 roundabout is relatively open to view. The construction of the proposed southbound off slip road would include the removal of established vegetation and replacement planting on its outer edge which would take some years to screen the slip road as it rises to the new junction.

91. The junction infrastructure would be the most notable element, again with the loss of established vegetation to accommodate the works. Although some replacement planting would be feasible, the eastern-most dumbbell roundabout would be located atop a steeply graded embankment rising from the A168.

92. Looking first at impacts on road users, the A168 is already strongly influenced by its proximity to, and intermittent views of, the adjacent motorway. It passes under the Marton-le-Moor overbridge and rises up to the B6265 junction, albeit engineered topography is generally subtle in form.

93. Although the proposed eastern elevated roundabout, and circulating traffic, would stand some 6.7 metres above the A168, more measured grading would be possible, particularly to the north. Given the fleeting image on a route with fast moving traffic, and scope for planting adjacent to the lower carriageway level, I consider that the visual impact would not be of any material consequence. As to the abnormal load bays, these would have less elevation and greater separation and the effects arising from parked vehicles would be negligible.

94. Moving on to the wider locality, from the vicinity of Dishforth Airfield there are limited views of the motorway corridor; Marton-le-Moor overbridge is partially visible; and the lighting columns on the B6265 roundabout are also apparent. The introduction of the proposed new highways infrastructure and related traffic, although initially pronounced, would be capable of some amelioration over time and, in any event, the outcome would not be unduly uncharacteristic or intrusive in an already notable highways corridor.

95. Further to the south, rising topography removes the influence of the motorway. Views of the proposal would largely be limited to the lighting columns around the new dumbbell roundabout and its approaches. The existing lighting columns around the B6265 roundabout would also be visible a short distance to the south. The overall impact would be very minor.

[12] The realigned A168 at its most easterly point would extend 129m from the edge of the motorway compared to its current position of 75m (the eastern most point of the proposed bund associated with the 2012 decision was shown to be 253m east of the motorway)

96. From the direction of Kirby Hill, including the public footpaths to the north of the village[13], Millings Lane, the Churchyard, the public footpath from Church View and residential properties, the principal effects would be associated with the new roads infrastructure. In this regard, the existing view is across open fields, dividing hedgerows and the well-vegetated motorway/A168 corridor. The lighting columns in the vicinity of the B6265 roundabout can also be seen as elements breaking the skyline.

97. The realigned A168 would have a more open easterly aspect than the existing route and vehicles would be visible over a longer stretch than at present. However, vegetation in the foreground of both the motorway and the new slip roads would provide a dense backdrop to the repositioned road. In addition, new hedgerow planting, in the narrow strip on the eastern edge of the relocated A168, would offer some further mitigation in due course.

98. The proposed new embankments, the dumbbell roundabout and the new overbridge would be the most noticeable elements. There would also be the added effects of the lighting columns and the movement of vehicles. In combination with the realigned A168, the road corridors, and in particular that of the motorway, would become significantly wider and more apparent.

99. However, the new embankments could be, for the most-part, planted to assist assimilation. It was also said that the steepest gradient below the eastern roundabout could be grassed to maintain visual continuity. Nonetheless, even with the indicative landscaping, the lighting columns would remain as conspicuous vertical elements as would high-sided vehicles.

100. Taking account of the totality of the view, with the built-up area of the village visible in combination with other built elements within the wider landscape, I consider that the resultant adverse effects of the new highway works would not amount to a compelling degree of harm.

101. In addition, the associated new tree planting to the east of the motorway, acknowledged to be *'large scale tree planting'*, whilst predominantly linear in form, would imitate that which already exists. Moreover, the extent to which it might accentuate the motorway and the A168 corridors would be very limited as the routes are already an established influence on landscape character. In my opinion, the replacement and reinforcement planting would not result in a notable change to landscape character.

102. Considering next, in general terms, the likely night-time effects, there would inevitably be some surrounding locations from where the lighting of the main MSA would be evident. From the immediate west, along the B6265, individual light sources would be apparent, with some columns visible above screening features, resulting in a new source of artificial lighting and change to the night sky.

103. However, this would be in the context of the lighting columns in the vicinity of the B6265 roundabout and those of moving vehicles. At a greater distance from the site, for example from the north-west along Chapel Lane and to the south along Moor Lane, individual light sources would be less apparent but, in combination, would emphasise the already locally lit corridor.

[13] Representative viewpoints 6 and 7 in particular

104. Inevitably, the most likely effects would arise from the lighting columns in the vicinity of the new dumbbell roundabout and from taller columns within the site. Downward illumination would highlight circulating vehicles on the elevated junction and add to lights from traffic entering and leaving the proposed MSA. The effects would be most evident from an easterly direction, notably from Kirby Hill, appearing as a second cluster of lighting along the skyline.

105. From my site visit I was able to observe that the night sky is not inherently dark, in that there are sporadic light sources in the wider area with those at the B6265/A168 junction the most apparent. Whilst the proposed development would locally intensify the effects of artificial lighting, the generally dark landscape would remain as the predominant characteristic.

106. Moreover, the outline scheme of lighting shows that it would be possible to limit the level of sky-glow in accordance with the Institute of Lighting Professionals (ILP) (2011) Guidance Notes for the Reduction of Obtrusive Light. Precise details could be secured by a suitably worded planning condition.

107. Drawing together my findings, by returning to the Guidelines for LCA81, I consider that the illustrative details indicate that the proposed development would generally maintain the extensive views which characterise the area and that an appropriate scheme of landscaping would help to integrate the MSA with the landscape.

108. It cannot be denied that the proposal would change the character of the local landscape by the extent and nature of the development as agricultural land would give way to engineered land-form, buildings, related infrastructure, vehicles, intense activity, new planting and lighting. However, as demonstrated by the illustrative details, these effects would be relatively confined and very much related to the existing A1(M) and A168 corridors. Although the proposals would result in a localised widening, the parallel roads are already a notable element as they dissect the character area.

109. The Guidelines indicate that large scale development cannot be easily accommodated without further detriment to landscape character. It was agreed that this imposed a 'high bar'. However, I believe that, based on Applegreen's clear understanding of the landscape, it has been demonstrated beyond doubt that a MSA could be developed in a sensitive manner.

110. With reference to the aim to avoid highlighting the A1(M) and A168 corridors, the proposed works on each side of the motorway would demonstrably widen the presence of roads related infrastructure. However, given the established characteristics of this part of the highway network, and the manner in which the proposed development could be contained within the landscape through ground modelling and planting consistent with that which exists, the added effects would not be unduly significant.

111. Moreover, with reference to the aim in the Guidelines *'to reinforce the diverse pattern of field systems'* the overall balance of the scheme would provide an opportunity to improve hedgerow quality and extent. In addition, the underlying principle of the landscape proposals to the west of the motorway is to soften rather than screen adverse effects.

112. In terms of LCA74, it was agreed that there was a strong relationship between this character area and the appeal site due to rising landform. Although elements of the proposal would be visible, generally in combination with, or in the context of, the motorway, I am content that the development would not have any adverse effect on the approach to Newby Hall or on its character and setting. As such there would be no conflict with the published Guidelines for this character area.

113. Returning to the Local Plan, the proposed development would, in my opinion, protect the landscape character of the district in that the illustrative details demonstrate that the proposal has been informed by, and is sympathetic to, the distinctive relevant landscape character area. As such, it would accord with Local Plan Policy NE4, with particular reference to criteria B, C and E.

Appeal B: The Ripon MSA proposal (Moto Hospitality Ltd)

The 2012 Decision and the current scheme

114. The principal Inspector's summary conclusions included[14]:

> *'…… The landscape mitigation would retain and enhance planting around the site and introduce some native species woodland, avoiding large scale woodland blocks that would be inappropriate to the area's characteristics and would impact upon views. However, the site would appear as a landscaped box that contained development …… From most long views only the tops of the buildings may be visible. I conclude that the proposal would cause moderate harm to the landscape character, which would soften over the years to moderate to slight ……*
>
> *…… there would be clear views of the MSA from the A61, which is a tourist route. The visual impact would be no more than slight because of the context of a considerable area of highway infrastructure and paraphernalia in the immediate vicinity as well as large volumes of motorway traffic ……'*.

115. Unlike the previous proposal, with its buildings in the central and western parts of the site and extensive perimeter landscaping, the current scheme shows the main amenity building and lodge to be sited close to the eastern boundary of the site, below the adjacent roadside embankment, and with more modest screening in light of the Inspector's criticism of the *'landscaped box'*.

Parameters and Visualisations

116. In common with the Vale of York proposal, the Council assessed the proposed Ripon scheme on the basis of the maximum parameters without reference to other controlling factors. Similarly, Moto's illustrative scheme is well-developed in the sense that the indicative design of the proposed buildings is based on the company's latest (under construction) MSA at Rugby.

117. I therefore consider that the Council's approach ignores the overall design concept and footprint parameters and exaggerates the reasonably likely worst case effects. Overall, I find Moto's visual material to be the preferred basis to assist my assessment.

[14] IR 14.5.58 – 14.5.59

Landscape character

118. In my consideration of the Applegreen proposal I have made reference to Local Plan Policy NE4 and, in particular, criterion B and the applicable Landscape Character Area. The proposed Ripon MSA site is also located in LCA81 and the aims and principles of the Guidelines apply in the same way. There are no other relevant Landscape Character Areas.

My appraisal

119. The Moto site comprises part of a large block of arable land on the western side of the A61 and its dumbbell roundabout junction with the motorway and the A6055. The entire eastern boundary is defined by roads infrastructure with the site laying, to varying degrees, below a roadside embankment.

120. The southern and western boundaries are physically indeterminate whilst the northern boundary is delineated by a poorly maintained drystone wall containing a single mature tree. Arable farmland extends beyond the site in gently undulating form, interrupted by the Melmerby Industrial Estate in the middle ground, with the long ridge of the Nidderdale Area of Outstanding Natural Beauty and Yorkshire Dales National Park, generally, forming a more distant backdrop to the west.

121. From the evidence presented, and as a result of my site visit to agreed viewpoints and defined routes, the principal difference between Moto and the Council, in tandem with Applegreen, is the effect of the proposal on the character of the landscape and its visual impact from the immediate locality of the site itself.

122. My analysis from the wider locality confirmed that the area consists of a predominantly open, gently undulating landscape with extensive views to the east and west; complementary hedgerows with both intermittent and linear tree cover providing successive 'layers' to the landscape; and some blocks of woodland.

123. As a consequence, I am satisfied that occasional long views towards elements of the proposed development, from the north, south and west, with the principal buildings set against the boundary embankment, and supplementary foreground terrain modelling and landscaping, would not be of any real materiality. From the east, beyond the motorway, the highway corridor and topography would effectively conceal the proposed MSA.

124. Again, it was not disputed that the proposal would be *'large scale development'* and that, in particular, regard has to be had to openness and views; and to avoid large scale tree planting or large blocks of woodland screening. It was also accepted there would be some perception of impact on openness from some directions and that it would impact on some views by "closing off parts of the view".

125. The Moto site already benefits from a degree of planting arising from the landscaping works associated with the up-grading of the A1 to motorway, albeit the nature of the planting scheme and the developing effect on curtailing views to the west came under criticism. The vegetation is at its deepest, tallest, and densest in the vicinity of the roundabout and it progressively ebbs in effect as it runs alongside the A61.

126. Starting from the overbridge, irrespective of the immediate highway paraphernalia and mid-foreground planting, the landscape to the west of the motorway is perceived as a sweeping arc of open countryside, seemingly with little built-development, with rising distant hills and an elongated horizon under a large sky. The undeveloped nature of the appeal site is a foreground component of that vista.

127. From the western-most roundabout, the vegetation on the embankment rising up to the roundabout, is well-established and, even in early spring, provides heavy filtering of forward views to the north-west. The limiting effect would be the more apparent in summer months and with further growth over time. However, the openness of the site and the attributes of the wider landscape are more apparent immediately to the south of the roundabout where the planting is less intensive and significantly lower.

128. Progressing along the A61, although the landscaping buffer gains some greater presence over a short distance, it subsequently subsides to around one metre in height above road level before it disappears altogether. At the same time, the embankment that supports the roundabout runs out more-or-less to road and site level where roadside planting is least prevalent or of no real effect.

129. In my view, the overall extent, intensity and significance of the existing roadside planting, as the foundation for the proposed scheme, has been overstated by Moto. In this regard, even with increased height and some diminution of gaps with its anticipated growth over time, the relative openness of the appeal site would endure as an inherent component of the expansive landscape, and long views, albeit more restricted, would remain.

130. Moving on to look at the impact of the proposed development, it was claimed that the formation of the access from the roundabout into the MSA, and the removal of vegetation, would re-establish the once open vista. However, the true essence of the view would not be restored in a meaningful manner as the foreground characteristic landscape would give way to the proposed road infrastructure and the fuel filling station within the proposed MSA.

131. In terms of the amenity building and the lodge, the illustrative visualisation (Year 1), from the immediate south of the site, indicates that, even with new foreground modelling and planting, a significant part of the proposed amenity building would be visible. The upper part of the building, and its varying roof profiles, followed by the higher elevation of the lodge, would also be apparent from the road to and from the roundabout.

132. In my opinion, as the motorway is relatively well-shielded from the site, aided by its contemporary landscaping, the proposed MSA would lack any natural physical or perceptual affinity with it. To my mind, it would represent a very sizeable incursion into the rural landscape and seriously undermine its inherent characteristics.

133. In terms of longer term mitigation, the illustrative scheme relies on perimeter raised mounding, other than where the existing embankment contains the site; new hedgerow planting to the southern and western boundaries; loose-knit tree planting; dense tree planting in the south-eastern corner of the site; and reinforcement of the existing planting along the eastern boundary. With regard to the latter, the Design and Access Statement affirms:

'The eastern boundary development strategy is therefore a key factor in controlling visual impact in the site's wider visual setting ……. The visual screening effect of the eastern boundary is further enhanced by the inclusion of a strengthened linear tree belt, some 10m - 15m wide, between the eastern boundary line and the rear of the amenity building, service yard and lodge. This is extended at the southeastern corner of the site for approximately 70m along the southern boundary to assist in screening the service yard when approaching junction 50 along the A61 from the southwest'.

134. Although Moto has sought to resolve the previous Inspector's criticism of the *'landscaped box'*, by more subtle boundary treatment, the eastern and south-eastern boundaries would nonetheless take the form of a substantial band of planting with the sole purpose of screening the proposed development.

135. I recognise that the landscape in the vicinity of the site is enriched by the presence of hedgerow trees, avenues and woodland blocks. However, in the main, these appear to owe more to the evolution of the countryside landscape rather than being a necessary consequence of seeking to hide new built development.

136. The LCA81 Guidelines indicate that '*small woodland blocks associated with appropriately scaled development may help to integrate development with the landscape'*. However, I consider that the proposed MSA, in terms of the combined building footprints and the areas to be devoted to circulation and parking, within such a predominantly open rural setting, and its disconnection from the motorway, would be at odds with the overall context and setting of the site and the wider landscape.

137. In my view, it could not be said that the form and nature of the proposed landscaping to shield the development from the A61 would amount to a small woodland block. Rather, its overall configuration, with the proposed mounding, would fail to integrate the development with the landscape. Moreover, the intended continuous band of planting would, in itself, fail to take account of the aim within the Guidelines of maintaining the extensive views across and beyond the area.

138. I acknowledge that outlook across the site, effectively restricted to southbound motorists[15], is of short duration and in a sideways (westerly) rather than forward direction. Nonetheless, even on a glimpsed basis, and whilst such views are not unique to this length of the A61, the openness and qualities of the landscape are inescapable. Although elements of the motorway, and traffic on it, can be seen to the east beyond the gated 'lay-by' and adjoining field, it is the open views, rather than the motorway or the junction accoutrements, that are the dominant characteristic.

139. Moto's Landscape and Visual Impact Assessment confirms:

'The construction of an MSA on an open arable field will have a Major–Moderate Negative impact on the character of the field but the effect on the character of the wider landscape will be Minor Negative and this correlates with the Secretary of States [sic] *conclusions[16] when considering the previous application*.

[15] Noted as a tourist route where a proportion of motorists may have an enhanced sensitivity

[16] '*the proposal would cause moderate harm to the landscape character, which would soften over the years to moderate to slight ……. The visual impact would be no more than slight because of the context of a considerable area of highway infrastructure and paraphernalia in the immediate vicinity as well as large volumes of motorway traffic ……'*

Once the external mounding has been constructed there will be no significant negative effects on the visual amenity of residents, walkers or travellers'.

140. It will be apparent from my assessment, based on the evidence that I heard and from my site inspection, that the proposed development would impact on identified valued characteristics of openness, and it would not reflect the aim within the LCA81 Guidelines of maintaining the extensive views across and beyond the area.

141. Similarly, the proposed extensive tree planting to enlarge and reinforce earlier landscaping (which was generally agreed to be atypical), in order to screen the proposed MSA, would be a further contradiction of the Guidelines.

142. Moreover, it is evident that a development of the scale proposed, that would protrude uncharacteristically into an agricultural landscape that continues almost uninterrupted by development to a distant horizon, would have a very damaging effect on the character and appearance of the local landscape, the wider landscape and the Landscape Character Area as a whole.

143. Finally, whilst the proximity of the motorway corridor and the works associated with J50 are relevant factors, I consider that the Moto appeal site has very little direct affinity with those, in that it is truly embedded within the wider countryside landscape. The proposed development would, in my opinion, not only highlight the motorway corridor but also widen it in a disparate and illogical manner.

144. In terms of operational lighting effects, the existing motorway junction, and the roundabouts to the east of the site, are lit by lighting columns. The lighting of the proposed MSA would appear as a new source of artificial lighting within an otherwise dark location beyond these lights. However, the indicative lighting scheme shows that it would be possible to meet the standards set out in the Institute of Lighting Professionals (ILP) (2011) Guidance Notes for the Reduction of Obtrusive Light. In particular, light spill over the site boundaries and upward sky-glow could be minimised by careful design. Precise details could be secured by a planning condition.

145. However, this does not change my overall analysis and my firm conclusion that the proposal would neither protect nor enhance the landscape character of the district, and it would be in conflict with Local Plan Policy NE4 with particular reference to criteria B, C and E.

The Third Main Issue: Loss of Agricultural Land (Appeals A and B)

146. The Statement of Common Ground between Applegreen and Moto, on Agricultural Land Matters, confirms that the proposed Vale of York MSA site, contains some 14.35ha of best and most versatile agricultural land with a mix of Grades 2 and 3a.

147. The principal dispute on the classification of the Ripon site rests between Applegreen and Moto. In this regard, Applegreen claims that the Ripon site, some 13.34ha, is also best and most versatile agricultural land, in a mix of Grades 2 and 3a, whereas survey work to inform the Moto proposal (the 2020 Savills' Report) states that it is Grade 3b and therefore not of such quality.

148. There are four elements to Applegreen's challenge namely: survey work undertaken by, or on behalf of, the Ministry of Agriculture Fisheries and Food (MAFF) in the mid-1990s in connection with up-grades to the A1; a survey (the 2010 RPS Report) underpinning the previous planning application the subject of the 2012 decision; the quality of the 2020 Savills' Report; and a survey, carried out on behalf of Applegreen, on nearby land.

149. On the first, it is known that the entire length of the A1 through Harrogate Borough was surveyed and classified by MAFF prior to the route being up-graded to motorway status. The published A1(M) Agricultural Land Classification Map, for the sections from Wetherby to a point between J50 and Leeming Bar, covered a linear band of land with some 86% classified as best and most versatile agricultural land, predominantly Grade 2. That part of the appeal site within the mapped area was shown as Grade 2.

150. Notwithstanding the dispute on the provenance of the mapping, and whether or not parts were derived from desk-based assessment, the Environmental Statement for the A1 Dishforth to Barton Improvement confirms that *'detailed land classification surveys were undertaken by Defra (formerly MAFF) in 1993/94'*. Whilst this shows the eastern and south-eastern parts of the appeal site as Grade 2, consistent with other best and most versatile agricultural land in the locality, it is inconclusive in the categorisation of the appeal site as a whole.

151. Turning to the 2010 RPS Report, it was stated that a detailed site survey had been undertaken comprising 20 auger borings (1.0m auger) complemented by the digging of three soil pits. The site was found to consist of a mixture of Grade 2 and 3a quality land with the former (6.3ha) running north-west to south-east, through the central lower lying part of the site, with the latter (7.0ha) on the west and north-eastern areas.

152. It was recorded that '*the Grade 2 land is characterised by medium sandy loam topsoils overlying similar subsoils to depths of 45 – 60cm overlying sandier loamy medium sand lower subsoils to depth. The profiles contain limited amounts of total stone (<5%). These profiles are limited to Grade 2 by a slight susceptibility to droughtiness'*.

153. The Grade 3a land was found to comprise three different soil profile types. First, in short, medium sandy loam topsoils with 2 - 5% total stone located on the higher parts of the site, particularly to the north-east, and susceptibility to droughtiness. Second, similar sandy profiles on the western part of the site with notably higher percentages of stone, including large stones (>6cm diameter), and a main limitation due to susceptibility to drought and a similar stoniness limitation. Third, medium sandy clay loam soils overlying heavy clay loam upper subsoil and mottled and slowly permeable clay subsoil.

154. With one exception, the texture of the topsoil derived from the auger samples was described as medium sandy loam. Stone presence was generally low with only 3 points recording in excess of 5% (5 - 10%) stone content in the topsoil. The majority of the sample points were able to record profiles at or approaching the full depth of the auger with only two recording impenetrability beyond 60cm.

155. The three soil pits also revealed a top layer of medium sandy loam with two of the points recording less than 5% stone and the third recording 10% stone. This was broadly consistent with the nearest auger profiles. The results were further verified by two Particle Size Distribution samples which were taken for laboratory analysis.

156. The Savills' 2020 survey to inform the current proposal, the third of Applegreen's points of contention, was undertaken without knowledge or reference to the 2010 RPS Report. Moto's expert witness conceded that this was a robust piece of work, albeit he disagreed with the conclusions, and that the quality of agricultural land will generally prevail for decades.

157. Nonetheless, the survey carried out on behalf of Moto produced very different results. Although only 16 sample auger locations were chosen, the sample density was consistent with Natural England's Technical Information Note (TIN49) with one boring per hectare to a depth of 1.2m.

158. The summary outcome graded the entire site as Grade 3b land with a limitation of soil droughtiness. The sample point data identified five locations as *'Grade 3b on Drought'*; two locations of *'Grade 3b on Drought, close to 3a'*; four points of *'3a on Drought'*; and five assessments of *'Grade 4 on Drought'*.

159. Stone was found to be considerably more prevalent, varying between 8% and 20% in the top layer. In addition, at 9 locations penetration of the auger to its full depth was precluded by stone with two locations showing constraint at a depth of 35cm. The report made passing mention that the survey included trial pits but without corresponding record. Moto's witness at the Inquiry reported that the survey included a single inspection pit, close to an auger boring recording Grade 3a, albeit without reporting on the outcome.

160. Looking further at these findings, Moto's position was that the dominant limitation on agricultural land quality and versatility is soil droughtiness and that the presence of large stones was sufficient to impose a parallel limitation to Grade 3b. The two have different effects, in that the former is likely to inhibit yield and the latter restricts how the land is managed. Variability of soils and site conditions across a field can become a significant 'pattern' limitation resulting in classification to the lower or lowest of two or more grades.

161. In terms of droughtiness, the 2010 RPS Report found the site to consist of a predominance of medium sandy loam topsoils with inclination to droughtiness limiting classification to Grade 2 or Grade 3a at worst. By contrast, the 2020 Savills' Report described the predominant topsoil characteristic as loamy medium sand and the inability of the soil profile to hold water.

162. The difference in the recording of soil types is significant in that loamy sands contain a higher proportion of sand particles than sandy loams, and are thus unable to retain as much water in the soil profile to support crop growth.

163. Whilst Savills' 2020 assessment has to be taken at face value, the 2010 classification was supported by laboratory analysis whereas the more recent field survey was not validated in this way. Moreover, the assessment made in 2010 was consistent with the predominant soil type, in very general terms across the region, namely the Escrick 2 association.

164. By comparison, the finding of a concentration of loamy sand topsoils, whilst made by a competent soil consultancy, sits uneasily in my opinion with the earlier classification. Although I recognise that local disparity could influence site specific classification, Moto's evidence and assessment of droughtiness, whilst robustly defended, does nonetheless cast serious doubt on its primary conclusion that droughtiness imposes a restriction to Grade 3b.

165. It was said in evidence, that where the auger encountered resistance before reaching a depth of 0.5m, further attempts were made in the immediate locality to obtain a deeper core. Where this failed, an additional allowance of soil material was given for the drought calculation as crop roots were likely to penetrate to a greater depth than the auger. Without the allowance, a Grade 5 drought limitation would have been recorded at some of the sample locations.

166. However, it was not clear to me how, and to what extent, any adjustment had been derived or made. In particular, there was nothing to suggest that an allowance had been applied, in a transparent manner, consistent with the MAFF Agricultural Land Classification guidelines on crop-adjusted available water capacity to take into account the presence of stones, rock or a very poorly structured horizon.

167. In terms of stoniness, the guidelines indicate that: *'The degree of limitation imposed by stones depends on their quantity, size, shape and hardness. Stoniness can vary markedly over short distances and is time-consuming to measure'*. In this regard, the task is not one of simply recording total percentage stone content, as is reported in the majority of the 2020 sample points, as it is stones which are retained on a 6cm sieve that are likely to have a more negative effect than smaller stones.

168. For example, a 25% presence of stones in the topsoil, (15% between 2cm and 6cm and 10% larger than 6cm) would qualify as Grade 3a land on stone content. Similarly, a total of 15% stone (10% and 5% respectively) would be classed as Grade 2.

169. However, only three of the sixteen sample points record stone content in excess of 15%; and a lone auger point shows a total stone content of 30% (20% and 10% rendering that point Grade 3b). Whilst the two supplementary photographs[17] *'Prominent and common areas with significant large stone content found on the site'* seek to illustrate stoniness, these appear inconsistent, in my view, with the majority of the sixteen sample points. In addition, having walked around the periphery of the site, and along several tracks between bands of immature crops, I saw nothing of equivalence to support the proposition of prominent surface stoniness across the site.

170. Moreover, most of the results make no distinction on the relative percentages in the overall total (e.g. *'10% hard stone'* and *'15% hard stone and gravel'*). Put simply, the tabulated data is superficial, inconsistent in presentation and it does not follow the MAFF guidelines. In my opinion, despite one isolated record of above average stone, the survey provides no confident basis to conclude that the stone content of the topsoil limits the land to Grade 3b.

[17] Savills' letter dated 28 May 2020 to HBC Appendix 4

171. Reflecting on the 2020 Savills' Report in the round, I consider the two factors leading to its overall conclusion cannot be treated with any degree of confidence. Moreover, whilst it was said that the occurrences of Grade 3a land within the site did not form contiguous areas of a single quality to be mapped as such, this appears to be a consequence of the reservations that I have described leading to a singular perfunctory Grade 3b presumption.

172. I acknowledge that some differences are to be expected between field surveyors in applying professional judgement to survey points each with unique characteristics. Whilst Applegreen made much of Moto's approach, which I have discussed above, Moto's expert witness had little in the way of disagreement with the methodology of the 2010 RPS Survey.

173. However, in highlighting issues of fine judgement over subtle distinctions in soil texture, the 2010 RPS field work has the advantage of laboratory endorsement. Moreover, the allegation that the 2010 survey failed to adequately recognise the alleged *'significant presence of large topsoil stones'* appears to be highly improbable.

174. Turning briefly, to Applegreen's fourth strand, relating to its own recent survey of adjacent land to the east of the A61. The summary findings endorse the presence of sandy loams, supported by laboratory determination, rather than the droughtier loamy sands; consistency with the mapped soil type and earlier surveys; and reach an overall conclusion of Grade 2 in the northern part of the land and Grade 3a to the south. Whilst supportive of the wider characteristics of the locality, it does not have any real bearing on the evaluation of the appeal site.

175. In the final analysis, although the 2010 RPS Report was not 'tested' at the Inquiry, in the sense of having a witness available for cross-examination, its conclusions were not seriously challenged. Further, its provenance was in the nature of an assessment in connection with the promotion of the 2010 application for a proposed MSA on the site. Both the principal Inspector and the Secretary of State found the loss of best and most versatile agricultural land to be a consideration to be weighed in the balance. In my opinion, the conclusions of the 2010 Agricultural Land Classification are a significant factor.

176. On the other hand, the Savills' 2020 Report has a number of shortcomings. None of these, or its variance from the 2010 RPS Report, were resolved persuasively in the evidence presented to the Inquiry by Moto. As such, I find Moto's case to be largely unconvincing.

177. Accordingly, on a compelling balance of probability, the evidence points to the proposed Ripon MSA site being best and most versatile agricultural land.

178. Turning now to the Harrogate District Local Plan, Policy NE8 confirms, in short, that the best and most versatile agricultural land will be protected from development unless there is an overriding need; and if best and most versatile land needs to be developed, and there is a choice between sites in different grades, land of the lowest grade available must be used except where other sustainability considerations outweigh land quality issues.

179. It follows that the agricultural land resource of both the Applegreen and Moto sites is to be protected unless there is an overriding need for either proposal. The former, consists of some 14.35ha of best and most versatile agricultural land which, in the mix of Grade 2 and 3a, is predominantly Grade 2. The latter has an area of approximately 13.34 ha of which approximately half should be considered to be Grade 2 and the remainder Grade 3a.

The Fourth Main Issue: Highway Safety; Drainage, Flood Risk and Climate Change; the Local Economy; and Designated Heritage Assets (Appeal A)

Highway safety

180. Kirby Hill RAMS had two principal concerns. The first related to the use of the 'rear access' on to the B6265 which would be used during the construction phase and thereafter by staff and some service vehicles. The B6265 is a main tourist route from the A1(M) to Newby Hall, Ripon and its Racecourse and Fountains Abbey. The second concerned the realignment of the A168.

181. As the proposed MSA has been designed to be an on-line facility, with principal access from the A1(M), the proposed rear access on to the B6265 would allow local employees to access the site by car, cycle or on foot and for local deliveries to avoid a lengthy journey on the motorway.

182. Although Kirby Hill RAMS claimed that vehicles passing the proposed rear access are able to travel at 60mph, a speed survey conducted on behalf of Applegreen, at a location agreed with the Highway Authority, shows an 85th percentile speed of 42mph in a westbound direction and 47.6mph eastbound.

183. Whilst criticism was made of the positioning of the data point, the desirable minimum stopping sight distance of 215 metres, for a design speed of 60mph, can be achieved to the west in the direction of nearside on-coming traffic. The splay of 160 metres to the east would be consistent with the speed survey based on a design speed of 50mph.

184. Even if reliance were to be placed on the later survey by the County Council, to the west of the proposed access where vehicles are in free flow, and the 85th percentile speed of up to 58.9mph eastbound, the Highway Authority continues to endorse the proposed access and visibility splay arrangements.

185. This leads me to consider whether there are factors which would undermine this judgement and have an unacceptable impact on highway safety.

186. Kirby Hill RAMS pointed to published accident data in the vicinity of the proposed rear access, and more recent local knowledge, and claimed that this stretch of road is an 'accident blackspot'. Yorkshire Police has also confirmed that the B6265 is a 'Killed or Seriously Injured' (KSI) Route.

187. Nonetheless, from the evidence available, there is nothing to suggest any cluster of accidents in terms of either location or cause. Indeed, it is to be noted, from 'Crashmap', that the only recorded incident (slight), a significant distance to the east of the proposed rear access, was in the vicinity of the B6265 overbridge and roundabout. Similarly, the three documented serious incidents, to the west, were logged beyond High Moor Road.

188. Kirby Hill RAMS also expressed concern about how Applegreen would address three recommendations of the Stage One Road Safety Audit which I note was undertaken by, amongst others, representatives of the Highway Authority and North Yorkshire Police.

189. Firstly, the hidden dip in the road to the west of the proposed rear access has clear safety implications for vehicles leaving the site. Given that the details of the proposed access is a reserved matter, there is nothing to suggest that the recommendation of amending levels within the access and/or on the B6265 to achieve adequate visibility in the vertical plane could not be fulfilled. This would be subject to detailed design, a Stage 2 Safety Audit, and the approval of the local planning authority.

190. Secondly, the impeding effect of vegetation to the east of the proposed rear access would be readily resolvable by limited cutting back (without any material effect on its screening qualities) and subsequent maintenance free from obstruction secured by condition. This would be in addition to the repositioning of the highway advance direction signs to the east.

191. It was further suggested that pedestrians and cyclists using the proposed new shared facility running from the edge of Kirby Hill, and the relocation of the crash barrier, would obstruct visibility in the same direction. However, it has been confirmed that scope exists within land controlled by the Highway Authority to ensure that this matter would be resolved at reserved matters stage.

192. Thirdly, it is intended that the use of the proposed rear access would be on a restricted basis and controlled by security measures. This could be made clear by the provision of signs to inform passing motorists, in accordance with an overall scheme, to be agreed, to control the operation of the access.

193. Although Kirby Hill RAMS highlighted the regular incidence of fog across the Vale of York, thereby affecting motorists' visibility, one would expect drivers to adapt to the prevailing conditions and adjust their manner of driving accordingly. In my opinion, localised fog as described would not provide a good reason to preclude the provision of the proposed rear access, having particular regard to the advantage in local connectivity.

194. The B6265 inevitably experiences high traffic flows associated with local attractions and events. Whilst this is likely to be more relevant to the construction stage of the proposed development, the use of the proposed rear access by heavy goods vehicles could be managed through the approval of a Construction Management Plan, secured by condition.

195. It is acknowledged that employees walking or cycling from the direction of Kirby Hill would have to negotiate a busy roundabout junction, compounded from time to time by traffic diverted from the motorway. Whilst such a journey would have to be made with caution and awareness, the southerly limb of the A168 has a central refuge and, with reasonable care, there is nothing to suggest that the route would be inherently unsafe. Moreover, the design of the crossing points would be subject to approval at which stage additional measures to highlight pedestrian and cycle activity, if deemed to be necessary, could be secured.

196. It is also suggested that the location of the proposed rear access, at the furthest point from Kirby Hill, and the nature of the route, would make journeys on foot unlikely, contrary to the aims of sustainable development. However, given the type of development and its location, and the measures proposed in combination with a Travel Plan, I consider that appropriate opportunities to promote sustainable transport modes have been demonstrated. As such, there would be no conflict with Local Plan Policy TI1: Sustainable Transport.

197. Moving on to the concerns relating to the realignment of the A168, Applegreen's Highways and Highway Safety Supplementary Written Statement demonstrates that right turn protection to the area of the attenuation pond could be provided in accordance with the relevant standard[18], should it be so required, at detailed design stage.

198. In terms of the elevation of the proposed eastern dumbbell roundabout, relative to the A168 carriageway below, I note that the respective highway authorities raise no objections. It is apparent that safety could be secured by appropriately designed measures which would be subject to future approval and a Stage 2 Road Safety Audit. Similarly, relative to the roundabouts, arrangements for overrun areas to accommodate abnormal load movements have been endorsed by Highways England and I see no reason to disagree.

199. Overall, I am content that the highway matters raised by Kirby Hill RAMS are capable of mitigation. On that basis, I conclude that there would be no unacceptable impacts on highway safety.

Drainage and flood risk

200. In terms of drainage and flood risk, Kirby Hill RAMS raised three principal points. These were: local drainage infrastructure; the risk of flooding; and effects on groundwater.

201. In terms of foul drainage, a number of local issues, including infrastructure capacity and related pollution, have been documented. However, the drainage authority has confirmed, despite reservations in 2017, that the sewerage network and treatment works can, or will be able to, accommodate the proposed foul discharge from the site. Specifically, the on-site drainage is to consist of separate foul and surface water systems; and the foul drainage to be pumped from the site would be subject to a maximum flow rate. These elements could be secured by planning conditions.

202. Kirby Hill RAMS also pointed to a foul drainage issue at a MSA site operated by Applegreen. However, it has no direct bearing on the considerations before me and, in any event, documentary evidence shows it to have been resolved.

203. Turning to potential flood risk, the overall strategy is to drain surface water to the ground based on a Sustainable Drainage System (SuDS). Site investigation shows that the proposed SuDS could be designed to accord with the Council's 'Supporting Drainage Chart' and the relevant guidance in CIRIA[19] SuDS Manual C753. Where the site currently experiences periodic standing water, surface water would be collected and pumped up through the site to discharge to one of the proposed higher infiltration basins.

[18] Design Manual for Roads and Bridges Standards for Highways CD 123 – Geometric design of at-grade priority and signal controlled junctions

[19] Construction Industry Research and Information Association

204. Looking next at groundwater, the disposal of surface water would be managed using a series of water treatment processes including fuel interceptors, bypass separators and permeable paving. In addition, drainage during the construction phase would be managed and monitored through a Construction Management Plan.

205. Local Plan Policy CC1: Flood Risk and Sustainable Drainage explains, amongst other things, that development proposals will not be permitted where they would have an adverse effect on watercourses or increase the risk of flooding elsewhere. It indicates that priority should be given to incorporating SuDS to manage surface water drainage. The proposal would not be in conflict with this policy.

Climate Change

206. The principal point raised by Kirby Hill RAMS relates to greenhouse gas emissions caused by road transport. In this regard, it is noted that vehicles, slowing, idling, and accelerating discharge higher emissions than a vehicle travelling at speed. In addition, extra mileage is incurred by leaving and re-entering the motorway. Consequently, it is claimed that MSAs work directly against the Government's net zero emissions target; and its legally binding commitments under the Paris Agreement and the Climate Change Act 2008. Further, national policy in Circular 02/2013 takes no account of this material consideration or the more recent policy reductions in the UK's annual carbon emissions by 2030.

207. The matter of relative emissions is generally common ground. However, I consider the comparison to be somewhat artificial insofar as a break in journey would have been likely to occur, in any event, at an alternative facility. The approval of an additional MSA along a route would therefore have the tendency to redistribute emissions between locations rather than to result in a material increase and resultant harm. Overall, I find nothing inconsistent with commitments to reduce greenhouse gas emissions.

The Local Economy of Boroughbridge

208. Boroughbridge is said to be an attractive and vibrant place to live, work, visit and shop. There is no doubt that it is an appealing and popular tourist destination. Kirby Hill RAMS maintained that Applegreen has seriously underestimated the effects of displacement on existing local businesses and the resultant economic harm.

209. However, the travel to work area for the site is more extensive than Boroughbridge itself; and Applegreen's Travel Plan provides for an employee bus service, including potential pick-ups and drop-offs in Ripon and Harrogate. Moreover, Applegreen's economic assessment demonstrates potential available sources of labour. Part-time opportunities and shift patterns are also likely to be attractive to those seeking top-up jobs and/or flexible working.

210. As to the potential loss of trade to the 'Local Services' in Boroughbridge (signed at J48), it is conjecture that the proposal would take trade away from the town. In this regard, MSAs have a specific purpose of meeting the needs of motorists, generally engaged in long distance travel with a tendency to seek directly accessible facilities. Whilst some motorists may prefer to meander from their journey, in order to explore a more distinctive alternative, there is nothing to suggest that a nearby MSA would change that behaviour to a material degree or cause harm to the economy of the town.

211. I recognise that the type of jobs associated with a MSA would not reflect the Council's focus for economic growth, and the key sectors identified in Local Plan Policy GS5: Supporting the District's Economy. In addition, the Framework encourages planning policies to set a clear economic vision and strategy to positively encourage sustainable economic growth.

212. However, in my opinion, neither local nor national policy, in setting priorities, intends an exclusive economic focus at the expense of other employment opportunities. On the basis that MSAs are a consequence of need, related to the safety and welfare of motorists, it follows that the type and nature of the resultant employment is a corollary of that need. Whilst the jobs generated by the proposed development would not be in accordance with the local employment strategy expressed through Policy GS5, the 'one-off' inward investment is a factor to be considered in the overall planning balance.

Designated Heritage Assets

213. It is common ground between the Council and Applegreen that 'Heritage' is not at issue. Local Plan Policy HP2: Heritage Assets indicates that proposals for development that would affect heritage assets will be determined in accordance with national planning policy; and applicants should ensure that proposals affecting a heritage asset, or its setting, protect or enhance those features which contribute to its special architectural or historic interest.

214. The Framework indicates that in determining applications, an assessment should be made of the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset).

215. The Church of All Saints', Kirby Hill is Listed Grade 1. Its significance and the contribution of setting to significance is set out in the Environmental Statement. Principal facets include its location on the eastern edge of the village within an enclosed and partially screened churchyard. The appeal site lies to the north-west in the middle distance beyond undulating agricultural fields. The most notable element to be added to this setting would be the new highways infrastructure and moving traffic. However, having regard to the existing A1(M)/A168 corridors, I concur with Applegreen's assessment that the project would not materially affect the ability to understand, appreciate and experience the church and its value.

216. Skelton Windmill, to the west of the site, is Listed Grade II. Its significance and the contribution of setting to significance are also set out in the Environmental Statement. The windmill is situated on the summit of a low rise that provides commanding rural views. The main area of the proposed MSA would lie below eye-line from the upper parts of the building, although lighting columns and some elements of the green roofs are predicted to be visible. The new junction would be a further obvious element. Nonetheless, I agree that the immediate agricultural setting would remain legible, as would the building's commanding position, distinctive character, and wide-ranging views.

217. In both cases, I consider that the respective changes to the landscape would have a very minor adverse effect on the contribution of setting to the significance of these designated heritage assets. This would amount to less than substantial harm to be weighed against the public benefits of the scheme.

Other Considerations (Appeal A and Appeal B)

218. Both applications, and related appeals, generated a number of representations from people living in nearby local communities which raised a range of themes. I have considered many of those in connection with the main issues above. Some others relate to technical matters that I have assessed in light of responses from specialist consultees. There are also points which would be the subject of further assessment when reserved matters are submitted and/or subject to detailed planning conditions. A few concerns, although understandable, are not strictly material to the determination of these appeals.

The Fifth Main Issue: Relative Merits of the Appeal Sites

Landscape

219. I have found that the Applegreen proposal would, when considered against the relevant Landscape Character Area Guidelines, cause limited harm to the area's defining characteristics both in terms of landscape character and visual amenity. In my opinion, it has been demonstrated that the proposed illustrative scheme has been informed by, and would be sympathetic to, the Landscape Character Area in which it lies, and also to the adjacent Landscape Character Area, so far as material. It can therefore be said that the proposed development, in the manner as generally indicated, would protect the landscape character of the district. It would therefore accord with Local Plan Policy NE4.

220. By contrast, I consider that the Moto proposal, in its illustrative scheme, does not reflect the Landscape Character Guidelines, with particular reference to maintaining extensive views across and beyond the area, as a result of the proposed built form and associated screen landscaping. It follows that the proposal would not protect the landscape character of the district and the project would be in conflict with Local Plan Policy NE4.

Agricultural land

221. Both proposals would result in the loss of best and most versatile agricultural land. Local Plan Policy NE8 seeks to protect such land from development except where it can be demonstrated to be necessary. If there is a choice between sites in different grades, land of the lowest grade available must be used except where other sustainability considerations outweigh land quality issues.

222. The proposed Moto site would use marginally less best and most versatile agricultural land than its counterpart which would give it borderline advantage. If the policy is to be read as drawing a distinction between grades, rather than differentiating between best and most versatile agricultural land and land that is not best and most versatile, the proposed Ripon site could also have a marginal preference. That said, given that both sites are a combination of Grade 2 and 3a, it would be difficult to logically draw distinction.

On-line or at junction

223. Annex B of Circular 02/2013 indicates:

> *'On-line (between junctions) service areas are considered to be more accessible to road users and as a result are more attractive and conducive to encouraging drivers to stop and take a break. They also avoid the creation of any increase in traffic demand at existing junctions.*

Therefore, in circumstances where competing sites are under consideration, on the assumption that all other factors are equal, the Highways Agency has a preference for new facilities at on-line locations'.

224. The Applegreen proposal would be an on-line site in the sense that it would be located between existing junctions and it would have its own access from the motorway. The Moto proposal would be a junction MSA.

225. However, the approach/exit distances into and out of each of the facilities would be much the same. The Applegreen scheme, as a single-sided facility, would also require southbound vehicles to enter and leave the site indirectly by means of a grade-separated junction. In addition, in the case of Moto, J50 of the motorway with the A61/B6055 is not an unduly busy one and the increased traffic demand would not be significant. Junction MSAs have also become increasingly common.

226. On the face of it, there would be little material difference between the two projects. However, with exclusive access from the motorway, irrespective of the subsequent configuration and incidence of circulating roundabouts, the Vale of York MSA is likely to have a very slight advantage, particularly for northbound traffic, in encouraging motorists to take a break.

Where better to meet need

227. The Circular does not prescribe any minimum spacing between MSAs. However, logic would point to spacing at, or close to, the maximum of 28 miles in that most proposed MSAs are likely to encounter a range of planning constraints.

228. The proximity of the Applegreen proposal to the Wetherby MSA, at little more than 13 miles, places it at a minor disadvantage to the Moto proposal, which would be some 4.5 miles further to the north. However, the former would be capable of serving a greater volume of traffic, due to its position south of the A19 (J49), albeit the latter route has a combination of existing and proposed facilities within 28 miles of Wetherby MSA. Overall, the balance of advantage falling to either proposal would be inconsequential.

The Ripon MSA lodge

229. Whilst the offer of overnight accommodation at a MSA is not an essential requirement, the Moto scheme includes a 100-bedroomed lodge. This would provide an additional amenity capable of supporting the safety and welfare of motorway users. In that context, the proposed lodge would provide a modest benefit over the Applegreen scheme.

Comparative economic benefits

230. Applegreen and Moto predicted seemingly disparate employment opportunities at their respective sites, with some 300 full-time equivalent (FTE) posts at the proposed Vale of York MSA (disputed by Moto) and around 200 FTE posts at the proposed Ripon MSA. However, Applegreen's witness accepted that the two schemes would be very similar in scale and content. As such, it would be too complex a calculation to seek to draw any real comparison, and that any differences would not be significant.

Comparative biodiversity gains

231. Applegreen and Moto were each critical of the other's assumptions underlying their respective Biodiversity Metric Calculations. However, it is sufficient to note that, subject to detailed design, the Applegreen proposal could achieve in the order of a 20% increase in ecological value; and the Moto scheme would be capable of reaching a minimum 10% gain in value.

232. Local Plan Policy NE3: Protecting the Natural Environment offers general support for proposals that provide net gains in biodiversity. Criterion E requires proposals for major developments to avoid any net loss of biodiversity. The Environment Bill 2020 is also a material consideration in its quest for development to deliver at least 10% improvement in biodiversity value.

233. It was agreed that both proposals would be 'policy compliant'. On this basis, despite the difference in potential gains, I consider there to be no significant point of distinction.

Designated Heritage Assets

234. The relationship of the Applegreen proposal to two designated heritage assets, in terms of a very minor adverse effect on the contribution of setting to their significance, places it at a moderate comparative disadvantage.

Overall comparison

235. Determining the better of the two proposals to be carried forward into the overall planning balance is not a linear numerical exercise. In my opinion, there is one fundamental and determinative matter, namely landscape impact and related policy conflict. This clearly favours the Vale of York scheme and outweighs any cumulative advantage that the Moto proposal might garner from other considerations.

Consistency in decision making

236. At this point it is helpful to reflect on two extracts from the 2012 principal Inspector's report. First, in respect of what was known as the Kirby Hill proposal:

> *'The Kirby Hill proposal would conflict with its development plan in terms of encroachment into the countryside, not minimising the loss of BMV land, causing visual harm and adversely affecting the character of the landscape. It would also cause limited harm to the setting of two listed buildings. With regard to the character of the landscape, significant harm would be caused by the inclusion of a large mound and substantial woodland planting. There would be visual harm to receptors at more residential properties than at the other sites. The scheme also attracted more local opposition than the other sites ……. Of particular importance is that the site is considerably off-centre and close to the absolute minimum acceptable spacing of 12 miles advocated by C01/08'.*

237. Second, in terms of what is now known to be the proposed Ripon MSA site:

> *'The Baldersby Gate proposal would conflict with its development plan in terms of encroachment into the countryside, not minimising the loss of BMV land, causing visual harm and adversely affecting the character of the landscape. With regard to the landscape character, there would be moderate harm ……'*.

238. It is evident that the Inspector identified harm in common to both proposals in terms of conflict with the development plan, countryside encroachment, loss of best and most versatile agricultural land, visual harm and an adverse effect on landscape character. These broadly coincide with two of the main issues before me. The relevance of the Listed Buildings to the Applegreen proposal remains and, like the earlier scheme, the locality of the proposed Vale of York site has a significantly greater number of nearby residential properties and it has attracted considerably more opposition. The importance of the *'absolute minimum acceptable spacing of 12 miles'* was not carried forward into the successor Circular 02/2013 and is no longer of relevance.

239. Moreover, it must be remembered that the Baldersby Gate proposal was considered alongside three other MSA candidates. In light of the demonstrable need for a new MSA, it was recommended for approval, despite its shortcomings, as the best performing scheme.

240. The current Vale of York proposal is a fundamentally different proposition to its predecessor whereas the Moto scheme has undergone comparatively minor modification. Both have drawbacks which reflect the generality of those issues considered in 2012. However, it is the Applegreen illustrative scheme and its successful response to the landscape considerations, in particular, that decisively carry it into the overall planning balance.

The Sixth Main Issue: The Planning Balance

My appraisal

241. It was a conscious decision of the Council not to include any specific policy relating to MSAs in the recently adopted Harrogate District Local Plan as any application would be considered on merit, having regard to other policies in the plan and national guidance.

242. It is evident that the local community, at Kirby Hill in particular, has drawn considerable assurance from the Local Plan as a document that it supports, and one which shows the appeal site to be open countryside and outside defined limits where development is unlikely to be sanctioned. However, where such applications arise, they are to be determined in accordance with the development plan, unless material considerations indicate otherwise.

243. One such material consideration is Circular 02/2013 which recognises the important road safety function that MSAs, and other roadside facilities, perform by providing opportunities for the travelling public to stop and take a break in the course of their journey. The recommended maximum distance between MSAs should be no more than 28 miles; but it can be shorter.

244. From my consideration of the first main issue, relating to need or otherwise, I came to the firm conclusion that a need for an additional MSA between Wetherby and Durham MSAs had been established. Despite the proximity of the site to Wetherby MSA, such a need attracts significant weight.

245. As to the second main issue relating to landscape, I have acknowledged that the proposed development would cause some harm to the character, appearance, and visual amenity of the area. However, I have reached the conclusion that the illustrative scheme had been informed by, and would be sympathetic to, the relevant Landscape Character Areas. As such, the proposals would protect the landscape character of the district in accordance with Local Plan Policy NE4. Despite some harm as described, consistency with a recently adopted policy weighs substantially in favour of the project.

246. On the third main issue, the loss of best and most versatile agricultural land is itself a negative factor to which I attach moderate weight, having regard to the area so affected and that such land is a diminishing, non-replaceable, resource. Indeed, the Framework confirms that planning decisions should contribute to and enhance the natural environment by, amongst other things, recognising the wider benefits from natural capital and ecosystem services, including the economic and other benefits of the best and most versatile agricultural land.

247. However, Policy NE8 accedes that planning permission for development affecting best and most versatile agricultural land may be granted, exceptionally, if there is an overriding need for the development and, where there is no alternative lower grade land, the benefits of the development justify the loss.

248. Turning to the fourth main issue, I have found nothing to count against the proposal, or conflict with related relevant development plan policies, in respect of highway safety; drainage, flood risk and climate change; and the local economy.

249. In terms of designated heritage assets, the proposal would have a very minor adverse effect on the contribution of setting to the significance of two Listed Buildings amounting to *'less than substantial harm'*. However, any harm to, or loss of, the significance of a designated asset, including development within its setting, should require clear and convincing justification and this harm should be weighed against the public benefits of the proposal. Case law[20] has established that *'considerable importance and weight'* should be given to the desirability of preserving the setting of Listed Buildings. In this instance, I have identified a significant and overriding public benefit in my consideration of the first main issue.

250. Moving on to a range of benefits claimed by Applegreen, I consider that the most significant would be the likely inward investment and employment opportunities which merit substantial weight. The extent of the biodiversity gain attracts moderate weight.

251. Kirby Hill RAMS also pointed to social harm set against the social objective of sustainable development in supporting strong, vibrant, and healthy communities. In this regard, the local community has endured some 25 years of collective trauma arising from repeated MSA applications at Kirby Hill, and concerns about the loss of community identity in an open rural landscape.

252. Kirby Hill RAMS drew on the empowerment afforded by the Localism Act 2011 in shaping and influencing development in their local area. Although the opportunity to produce a neighbourhood plan has not been fulfilled, the local community has spoken 'as one' in opposing the proposed development.

253. Nevertheless, opposition by itself, however strong, does not determine the outcome of an application unless it is based on sound planning grounds. My analysis of the main issues, and other matters raised, demonstrates that a number of the concerns raised locally are not borne out following consideration of all of the evidence before me.

[20] *Barnwell Manor Wind Energy Ltd v East Northants DC, English Heritage, National Trust and SSCLG* [2014] EWCA Civ 137

254. Finally, Kirby Hill RAMS maintained that the Framework exists to deliver sustainable development and that Circular 02/2013 does not promote the safety and welfare of motorists above the requirement to deliver sustainable development.

255. However, the Circular sets out as follows:

'Operating an effective and efficient strategic road network makes a significant contribution to the delivery of sustainable economic growth ……

…… the Highways Agency supports the economy through the provision of a safe and reliable strategic road network, which allows for the efficient movement of people and goods. Such a network can play a key part in enabling and sustaining economic prosperity and productivity, while also helping support environmental and social aims by contributing to wider sustainability objectives and improved accessibility to key economic and social services.

A well-functioning strategic road network enables growth by providing for safe and reliable journeys. This can help reduce business costs by providing certainty, improving access to markets, enabling competition, improving labour mobility, enabling economies of scale, and helping attract inward investment'.

256. Two of those paragraphs include the word 'safe'. Further, Annex B goes on to explain that the primary function of roadside facilities is to support the safety and welfare of the road user. Thus, read as a whole, it can be inferred that roadside facilities are a component of the sustainability objectives described in the Circular.

The Overall Planning Balance

257. In summary, considerable weight attaches to the less than substantial harm relative to the identified designated heritage assets. Loss of best and most versatile agricultural land is also a further negative factor of moderate weight. However, individually, and cumulatively, the wider public benefit in meeting the demonstrable need for a MSA, for the safety and welfare of motorists, would outweigh that harm. In addition, the proposal would accord with Local Plan Policy NE4, in its recognition of landscape character, and economic and biodiversity benefits would also accrue.

258. In conclusion, I consider that the Applegreen proposal, as described and illustrated, would be in accordance with the development plan when read as a whole.

Planning conditions

259. The initial list of draft planning conditions underwent a succession of amendments during consideration of the appeal and in discussion during the Inquiry. The final version represents a generally agreed schedule, save for some unresolved matters for my further consideration and correction of minor omissions and/or typographical errors. I am satisfied that all of the conditions referred to below meet the relevant tests.

260. Conditions 1 and 2 identify the matters reserved for subsequent approval; and the time periods for the submission of related details and the commencement of development.

261. Conditions 3 and 4 define the content and scale of the facilities within the main amenity building for certainty.

262. Condition 5 regulates the permission by reference to the parameters plan, which includes the red-line boundary, and requires the subsequent reserved matters not to exceed those specified by reference to ground levels and the heights and internal floorspaces of the proposed buildings. This is to ensure that the proposed development is generally consistent with the evidence that was presented, and on which the appeal has been considered and determined.

263. Although draft condition 6 requires a green/living roof for the main amenity building only, I consider it necessary to extend this to the HGV fuel filling facility and the drive-through coffee shop, again to reflect the way in which the development was portrayed[21], and to ensure overall site cohesiveness. Condition 7 will ensure the use of appropriate external materials for the walls and roofs.

264. A comprehensive landscaping scheme is an important prerequisite with enhancements to biodiversity secured through an Ecological Mitigation and Enhancement Scheme. These are set out in conditions 8 – 12.

265. There are a number of highway conditions to ensure appropriate design, construction, safety, and safety audits. It is also appropriate to preclude the use of the site for other purposes, in the event that it ceases to operate as a MSA, in order to maintain the integrity and the safe and efficient operation of the strategic road network. Conditions 13 – 22 apply in this regard.

266. A comprehensive construction management plan, set out in condition 23, is required to protect and maintain the functionality, operation and safety of the motorway during the construction of the development; and to ensure that harm to protected species and retained vegetation and habitats is avoided.

267. I have extended sub-clause (f) by amending *'details of loading and unloading areas'* to read *'the management of deliveries of materials and plant to the site; the management of removal of materials and plant from the site; and the related unloading and loading areas'*. I have not included *'the routing and timing of deliveries'* in light of sub-clause (g) which requires details of proposals for routing by HGV construction traffic away from unsuitable highways, that is local roads, within a 16km radius of the site.

268. I also consider that restricting the timing of deliveries would be unduly onerous. In addition, it could lead to the unforeseen consequences of vehicles arriving outside designated times (within the overall permitted hours of working) and parking locally. However, the condition as reworded provides the means through *'the management of deliveries ……'* to influence movements when traffic flows on the B6265 are anticipated to be inflated by local events.

269. In view of the location of the site, it is essential that an external lighting scheme is designed and implemented to minimise impacts on the night sky and on wildlife. This is required by condition 24.

[21] Design and Access Statement Section 4: *'The roof will appear to be a floating plane of landscape covering the main parts of the Amenity Building with similar smaller discs covering the smaller elements of the HGV Fuel Filling Station and Drive through Coffee Shop'*

270. It is recognised that the site is of potential archaeological interest, as set out in Chapter 10 of the Environmental Statement. Further investigation, identification, evaluation, recording, assessment and any mitigation will be secured through conditions 25 – 28.

271. Conditions 29 – 32 are imposed to ensure that, in the event that any contamination is found during the course of development, agreed remediation measures are implemented without unacceptable risk to either individuals or the environment.

272. Water supplies, drainage and waste storage facilities are important public health, environmental and amenity considerations as reflected in conditions 33 – 37.

273. The preparation of a Travel Plan, and subsequent management and monitoring of its effectiveness in influencing employees' travel arrangements, is a requirement of condition 38.

274. Having regard to the scale of the project, and the proximity of the site to Kirby Hill in particular, it is essential that the local community has the opportunity to be heard and represented by means of a Local Liaison Group, especially during the construction phase and thereafter when the proposed facility is in operation. This is provided for in condition 39.

275. Local Plan Policy CC4 requires new development to incorporate energy efficient measures. The Council has indicated that the development should meet BREEAM[22] *'very good'* or higher. Conditions 40 and 41 refer.

276. Finally, paragraph 110 e) of the Framework signifies that new developments should be designed to enable charging of plug-in and other ultra-low emission vehicles. Condition 42 is imposed to secure the implementation of an agreed scheme.

Overall Conclusion: Appeal A

277. From my consideration of the main issues, and all other matters raised at the Inquiry and in writing, I conclude that the appeal by Applegreen Plc should be allowed subject to the schedule of planning conditions set out in Annex A to this decision.

Overall Conclusion: Appeal B

278. From my consideration of the main issues, and all other matters raised at the Inquiry and in writing, I conclude that the appeal by Moto Hospitality Ltd should be dismissed.

David MH Rose

Inspector

[22] Building Research Establishment Environmental Assessment Method

ANNEX A: SCHEDULE OF PLANNING CONDITIONS

Reserved matters

1. No development shall take place without the prior written approval of the Local Planning Authority of all details of the following reserved matters:

   (a) access;

   (b) appearance;

   (c) landscaping;

   (d) layout; and

   (e) scale.

   Thereafter the development shall not be carried out otherwise than in strict accordance with the approved details.

2. Application for the approval of the reserved matters shall be made to the Local Planning Authority not later than three years from the date of this decision. The development hereby permitted shall be begun on or before the expiration of two years from the final approval of reserved matters or in the case of approval on different dates, the final approval of the last such matter to be approved.

Use and floor space

3. No more than one room within the MSA shall be made available for the purposes of holding conferences or undertaking training, including use by the public. The room set aside for such purposes shall have a capacity to seat no more than 15 persons at any one time.

4. The amenity building shall contain no more than 500m² of retail floor space as defined by Class E(a) of the Town and Country Planning (Use Classes) Order 1987 (as amended) and not more than 100m² of adult amusement arcade floor space shall be made available to the public.

Parameters

5. The details to be submitted under condition 1 above shall accord within the parameters identified on the Parameters Plan (AFL-00-00-DR-A-00120 rev P08 dated 28.04.20) and the ground levels and the heights and internal floorspaces of the proposed buildings shall not exceed those specified.

Appearance

6. The details of appearance to be submitted under condition 1 above shall provide for a 'green / living roof' on the main amenity building, HGV Fuel Filling Station and Drive Through Coffee Shop consistent with the principles illustrated within Section 4.0 of the submitted Design and Access Statement (dated July 2017).

7. Before the first use of any materials in the external construction of the roof and walls of the development hereby approved, samples of those materials shall have been made available for inspection by, and the written approval of, the Local Planning Authority and the development shall be carried out in strict accordance with the approved details.

Landscaping

8. The details of landscaping to be submitted under condition 1 above shall include full details of:

   (a) excavations;

   (b) ground modelling (including existing and proposed contours);

   (c) any retaining walls and structures;

   (d) means of enclosure;

   (e) all hard landscaping;

   (f) minor artefacts and structures;

   (g) the extent of the existing trees and hedgerows on the land and details of those to be retained; and

   (h) soft landscaping, including the types and species, a programme of planting, and cultivation proposals.

   Thereafter the development shall be carried out in accordance with the approved details.

9. No operations shall commence on site in relation to the landscaping plan approved in accordance with condition 1 until a detailed scheme for sustainable tree planting has been submitted to and approved in writing by the Local Planning Authority. The scheme shall incorporate underground systems and provide a sufficient area of growth medium for long term tree growth where tree development is compromised by hard landscaping such as footways, highways, car park areas and structures (if there is hardstanding on more than one side of proposed tree planting then underground systems are to be implemented).

10. All planting, seeding or turfing comprised in the approved details of landscaping under condition 1 shall be carried out not later than the first planting and seeding seasons following occupation of the buildings or completion of the development whichever is the sooner and any trees or plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species, unless the Local Planning Authority gives written consent to any variation.

11. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use until a secure boundary fence has been erected in accordance with a scheme submitted to, and approved in writing by, the Local Planning Authority. The approved fencing scheme shall be retained for the duration of the use of the site.

12. Prior to the first occupation of any building of the Motorway Service Area hereby approved an Ecological Mitigation and Enhancement Scheme including details of native tree, shrub and wildflower planting, and provision of bat bricks and bird boxes/bricks shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall include arrangements for the provision for long term management and maintenance of biodiversity on the site. The Ecological Mitigation and Enhancement Scheme shall be implemented in strict accordance with the approved timescales and thereafter retained.

Highways

13. The details of access required by condition 1 above shall provide for:

(a) the 'rear access' from the B6265 as indicated on drawing 60534927-SKE-C-0300 rev H dated 30-07-2019;

(b) the accesses from and to the A1(M) comprising the dumbbell access roundabout, accommodation structure, and associated slip roads in strict accordance with drawings 60534927-SKE-C-3000 rev G dated 19-8-2019 'Proposed MSA Motorway Access Works (720/720m) 3D model' and 60534927-SKE-C-0202 dated 28-07-2017 'Dumbbell Arrangement with DMRB Roundabout Minimum Radius Bypass - With AIL Tracks';

(c) the realignment of the A168 including works to the A168 / B6265 roundabout and the agricultural access track to the east of that realigned highway as indicated on drawing AFL-00-00-DR-A-00101 rev P10 dated 22.08.19;

(d) the field access shown on drawings 60534927-SKE-C-3000 rev G dated 19-08-2019 and AFL-00-00-DR-A-00101 rev P10 dated 22.08.19;

(e) internal access roads;

(f) parking areas for 364 cars (of which 17 shall be disabled spaces), 90 HGVs, 20 motorcycles, 18 coaches, 10 staff cars (of which 3 shall be disabled spaces), 13 caravans (of which 2 shall be disabled spaces) and a staff drop off area;

(g) servicing, turning and manoeuvring areas; and

(h) footways, pedestrian areas and cycling provision, including the extension of the existing footway in Kirby Hill from its northernmost point to connect to the 'rear access', and including any modifications arising from the further conditions of this permission.

All shall be retained for the lifetime of the development.

14. No part of the development shall be open for public use until the related areas of access to be used in connection with that part are available for use. Once constructed, these areas of access shall be maintained clear of any obstruction and retained for their intended purpose at all times.

15. There shall be no excavation or other groundworks, except for investigative works, or the depositing of material on the site, until the construction of the 'rear access' to a standard appropriate for all uses including construction traffic has been constructed in accordance with the details approved in writing by the Local Planning Authority under condition 1.

16. There shall be no excavation or other groundworks, except for investigative works, or the depositing of material on the site in connection with the construction of the access road or building(s) or other works until the following have been submitted to and approved in writing by the Local Planning Authority and the reserved matters application for access has been approved in respect of the details:

(a) the design and construction details of the method by which the proposed development interfaces with the existing A1(M) highway alignment, carriageway markings and lane destinations; the carriageway widening, together with any modifications to existing or proposed structures, with supporting analysis; traffic signing, highway lighting and alterations and modifications to motorway communications and traffic data collection equipment, and the provision of written confirmation of full compliance with current Departmental standards (DMRB) and policies;

(b) the full design and construction details for the realignment of the A168 north of the B6265 roundabout including the realignment of the roundabout entry and exit;

(c) the full design and construction details of the 'rear access' to a standard appropriate for all uses including construction traffic based upon indicative design on drawing 60534927-SKE-C-0300 rev H dated 30-07-2019;

(d) the full design and construction details of the extension of the existing footway in Kirby Hill from its northernmost point to connect to the rear access including all necessary crossings works to provide a continuous footway cycleway link at the roundabout based upon the indicative design on drawing 60534927-SKE-C0300 rev H dated 30-07-2019;

(e) a programme for the completion of all of the above proposed works including proposals for maintaining the flow of traffic on the A168; and

(f) an independent Stage 2 Safety Audit has been carried out in accordance with GG119 – Road Safety Audit or any superseding regulations and the design amended in accordance with the findings of the Audit, have been submitted to and approved in writing by the Local Planning Authority and the reserved matters application for access has been approved in respect of those details.

The works shall be constructed in accordance with the approved details and programme and shall be fully opened to traffic prior to the opening of the site.

17. Construction of the A1(M) dumbbell access roundabout, accommodation structure, and associated slip roads solely (and no other development indicated therein) shall be carried out in strict accordance with drawings 60534927-SKE-C-3000 rev G dated 19-8-2019 'Proposed MSA Motorway Access Works (720/720m) 3D model' and 60534927-SKE-C-0202 dated 28-07-2017 'Dumbbell Arrangement with DMRB Roundabout Minimum Radius Bypass - With AIL Tracks' as replicated in the details of access required by condition 1.

18. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use prior to the completion and opening for public use of all the highway works referenced in conditions 16 and 17 above together with the provision of the agricultural access from the A168 / B6265 roundabout and the agricultural track parallel to the realigned A168.

19. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use until measures to restrict the 'rear access' to the site from the B6265 to use only by staff, prearranged deliveries and the emergency services has been submitted to and approved in writing by the Local Planning Authority and implemented. The measures shall be retained operational and in full working order for the duration of the use of the site.

20. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use until:

    (a) a signing agreement with Highways England for the A1(M) motorway is in place and direction signing for the Motorway Service Area from and to the A1(M) has been provided in accordance with that agreement. At any time a signing agreement is not in place no part of the development shall be open for use by users of the A1(M) motorway; and

    (b) a Stage 3 (completion of construction) Road Safety Audit has been carried out in accordance with DMRB HD19/15, and submitted to and approved in writing by the Local Planning Authority and any amendments to the works on site have been implemented.

21. A Stage 4 monitoring Road Safety Audit shall be carried out using 12 months and 36 months of accident data from the time the relevant schemes of works set out in Conditions 13, 16 and 17 become operational. The Audits shall be carried out in accordance with DMRB HD19/15 and shall be submitted to and approved in writing by the Local Planning Authority. Where necessary the amendments to the highway networks shall be implemented in accordance with a programme submitted to and approved in writing by the Local Planning Authority.

22. In the event that the implemented Motorway Service Area development hereby approved ceases to operate, the site shall not be used for any other purpose. All accesses to the A1(M) shall be removed and the former A1(M) features and highway boundaries restored in accordance with details to be submitted to and approved in writing by the Local Planning Authority.

Construction Management Plan

23. No construction of the development hereby approved nor any site preparation or access works shall commence until a Construction Management Plan has been submitted to, and approved in writing by the Local Planning Authority. Development shall be undertaken in strict accordance with the approved Construction Management Plan and a copy or copies shall be retained on site for access by site operatives at all times.

    The Plan shall:

    (i) include a Construction Traffic Management Plan based upon the submitted Draft Construction Management Plan;

    (ii) highlight environmental impacts resulting from the development and identify sensitive receptors to the construction team;

(iii) reduce and manage environmental impacts through appropriate construction methods and by implementing environmental best practice during the construction period, for example with regard to dust mitigation;

(iv) undertake on-going monitoring and assessment during construction to ensure environmental objectives are achieved;

(v) provide emergency procedures to protect against environmental damage;

(vi) provide an environmental management structure for the construction stage;

(vii) recommend mechanisms to reduce risks of environmental damage occurring; and

(viii) provide for consultation and liaison with relevant bodies throughout the works as required including, as appropriate, the Environment Agency, Natural England, North Yorkshire County Council, Harrogate Borough Council and other stakeholders including the public.

It shall also include arrangements for the following:

(a) details of any temporary construction access to the site including measures for removal following completion of construction works;

(b) any temporary or permanent restrictions on the use of accesses for construction purposes;

(c) wheel and chassis underside washing facilities on site to ensure that mud and debris is not spread onto the adjacent public highway;

(d) the parking of contractors', site operatives' and visitors' vehicles;

(e) areas for storage of plant and materials used in constructing the development clear of the highway;

(f) the management of deliveries of materials and plant to the site; the management of removal of materials and plant from the site; and the related unloading and loading areas;

(g) details of proposals for routing by HGV construction traffic away from unsuitable highways within a 16 Km radius of the site and highway condition surveys on the B6265 between the 'rear access' and the A168 roundabout;

(h) protection of carriageway and footway users at all times during construction;

(i) protection of contractors working adjacent to the highway;

(j) details of site working hours;

(k) erection and maintenance of hoardings, security fencing and scaffolding on/over the footway and carriageway;

(l) means of minimising dust emissions arising from construction activities on the site, including details of all dust suppression measures and the methods to monitor emissions of dust arising from the development;

(m) measures to control and monitor construction noise;

(n) there shall be no burning of materials on site at any time during construction;

(o) removal of materials from site including a scheme for recycling / disposing of waste resulting from construction works;

(p) details of the precautions that are to be taken to avoid harm to nesting birds, terrestrial mammals and amphibians;

(q) details of the measures to be taken for the protection of trees in accordance with the recommendations of the JCA Tree Report ref 13543a/SR including a protective barrier in accordance with BS5387:2012 to Root Protection Areas;

(r) a Soil Resource and Management Plan produced in accordance with the Department for Environment, Food and Rural Affairs *Construction code of practice for the sustainable use of soils on construction sites* (2009);

(s) the implementation of the protective barrier around all trees and shrubs that are to be retained and for the entire area as specified in accordance with BS 5837:2012 together with ground protection detail (no dig) before any development, site preparations or access works commence on site;

(t) the level of land within the areas contained by the protective barriers not being altered;

(u) details of all construction-related external lighting equipment;

(v) details of ditches to be piped during the construction phases;

(w) detailed drawings showing how surface water will be managed during the construction phases;

(x) a detailed method statement and programme for the building works; and

(y) contact details for the responsible person (site manager/office) who can be contacted in the event of any issue.

Lighting

24. The details of layout to be submitted under condition 1 above shall include an external lighting scheme. The lighting scheme shall:

(a) provide detailed specification of the luminaires to be used including location of the luminaires;

(b) detail the levels of average maintained illuminance that will be provided to different areas of the site, which should be generally in accordance with table 4.1 Indicative Lighting Criteria detailed in Appendix 4.1 of the submitted Environmental Statement dated July 2017;

(c) detail the environmental impact of the proposed lighting (i.e. light trespass and source intensity at residential receptors) which shall not exceed the criteria for ILP Environmental Zone E2 (post curfew) as detailed in part 2.3 of Appendix 4 of the submitted Environmental Statement dated July 2017; and

(d) take into account up to date advice from Natural England (and/or equivalent bodies) on the siting and illuminance of lights.

The lighting shall be installed in accordance with the approved scheme and retained thereafter.

Archaeology

25. No development shall take place until both:

(a) a scheme of Archaeological Investigation; and

(b) a Written Scheme of Investigation for archaeological mitigation

have been submitted to and approved in writing by the Local Planning Authority.

26. The scheme of archaeological investigation required by condition 25(a) shall provide for:

(a) the proper identification and evaluation of the extent, character and significance of archaeological remains within the application area; and

(b) an assessment of the impact of the proposed development on the archaeological significance of the remains.

27. The Written Scheme of Investigation required under condition 25(b) shall be prepared subsequent to the implementation of the approved scheme of archaeological investigation in accordance with conditions 25(a) and 26 and shall include:

(a) an assessment of significance and research questions;

(b) the programme and methodology of site investigation and recording;

(c) the programme for post-investigation assessment;

(d) provision to be made for analysis of the site investigation and recording;

(e) provision to be made for publication and dissemination of the analysis and records of the site investigation;

(f) provision to be made for archive deposition of the analysis and records of the site investigation; and

(g) nomination of a competent person or persons/organisation to undertake the works set out within the Written Scheme of Investigation.

Development shall take place in strict accordance with the approved Written Scheme of Investigation.

Ground Investigations

28. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use prior to the completion of the site investigation and post-investigation assessment in accordance with the programme set out in the Written Scheme of Investigation approved under condition 25(b) and the provision made for analysis, publication and dissemination of results and archive deposition has been secured.

Contamination

29. In the event that contamination is found at any time when carrying out the approved development that was not previously identified:

    (a) a report in writing shall be made immediately to the Local Planning Authority; and

    (b) an investigation and risk assessment shall be undertaken by competent persons and a written report of the findings submitted to and approved in writing by the Local Planning Authority.

30. Where remediation is necessary, a remediation scheme to bring the site to a condition suitable for the intended use by removing unacceptable risks to human health, buildings and other property and the natural and historical environment shall be submitted to and approved in writing by the Local Planning Authority.

31. Any such approved remediation scheme shall be carried out in strict accordance with its terms prior to the re-commencement of development, unless otherwise approved in writing by the Local Planning Authority. The Local Planning Authority shall be given two weeks written notification of commencement of the remediation scheme works.

32. Following completion of the measures identified in the approved remediation scheme, a verification report that demonstrates the effectiveness of the remediation carried out shall be submitted to and approved in writing by the Local Planning Authority.

Water Supplies

33. Development shall not commence until a scheme of water supply for the development has been submitted to and approved in writing by the Local Planning Authority. No buildings shall be occupied or brought into use prior to completion of the approved water supply works, which shall thereafter be retained.

Drainage

34. The site shall be developed with separate systems of drainage for foul and surface water on and off site. The foul water pumped rate shall not exceed 6 litres a second.

35. Prior to the commencement of any soil stripping or foundation works to any of the buildings, except for investigative works, drawings showing details of the proposed surface water drainage strategy shall be submitted to and approved in writing by the Local Planning Authority.

    The scheme shall be based on sustainable drainage principles and an assessment of the hydrological and hydrogeological context of the development, shall not discharge to the existing local public sewerage system and will include:

    (a) a drainage system designed with sufficient on site attenuation so that flooding does not occur on any part of the site for a 1 in 30 year rainfall event, nor any flooding for a 1 in 100 year rainfall event in any part of a building (including a basement) or in any utility plant susceptible to water (e.g. pumping station or electricity substation)

within the development, except within an area that is designed to hold and/or convey water. The design shall also ensure that storm water resulting from a 1 in 100 year rainfall event, plus an allowance of 40% to account for climate change, can be stored on the site without risk to people or property and without increasing flood risk off site. Due to the relatively low percolation figures a further factor of safety should be incorporated into the on-site attenuation requirements;

(b) full hydraulic calculations for the proposed surface water drainage design;

(c) proposed control measures to manage pollution from all areas of vehicle parking and hard standing areas, including from the forecourt of filling stations, areas used for the delivery of fuel, areas used for and immediately adjacent to vehicle washing facilities and/or other similar areas where detergents are likely to be used;

(d) an exceedance flood routing plan which shall demonstrate where flooding could potentially occur if the designed drainage systems were to be exceeded or fail for any reason including rainfall in excess of the 1 in 100 year event. The routing map should indicate direction of flood flows, highlighting areas that could flood and to what depth. The plan shall demonstrate that exceedance flows will not cause risk or flooding to property/people on or off site; and

(e) details with regard to the maintenance and management of the approved scheme to include: drawings showing any surface water assets to be vested with the statutory undertaker/highway authority and subsequently maintained at their expense, and/or any other arrangements to secure the operation of the approved drainage scheme/sustainable urban drainage systems throughout the lifetime of the development.

No piped discharge of surface water from the application site shall take place until the approved works to provide a satisfactory outfall has been completed.

36. Prior to the commencement of the development hereby approved details of a scheme for foul water drainage shall be submitted to and approved by the Local Planning Authority in writing. No buildings shall be occupied or brought into use prior to completion of the approved scheme for foul water drainage, which shall thereafter be retained.

Waste Storage

37. The details to be submitted under condition 1 above shall provide for full details of waste storage facilities and undercover secure cycle parking. The facilities shall be provided in strict accordance with the approved details prior to the first occupation of any of the buildings of the Motorway Service Area hereby approved and thereafter retained as such.

Travel Plan

38. Six months prior to the first occupation of any building of the Motorway Service Area hereby approved, a Travel Plan in general accordance with details set out in the submitted Framework Travel Plan shall have been submitted to, and approved in writing by, the Local Planning Authority. The

Travel Plan shall be managed by a pre-appointed Travel Plan Co-Ordinator and provide specific, measurable, achievable, relevant, and time-bound targets against which its effectiveness can be monitored and will include the provision of a staff shuttle bus, which shall commence operation no later than the opening day of the development, and other measures to discourage the unnecessary use of the private car. Should monitoring show that targets have not been met, an action plan for additional travel plan measures is to be agreed in writing by the Local Planning Authority within six months of the date of the monitoring report and implemented in accordance with any timescale(s) prescribed in the action plan.

Local Liaison Group

39. Prior to the commencement of the development hereby approved details of a Local Liaison Group to be established, including proposed membership and ongoing facilitating arrangements, shall be submitted to and approved by the Local Planning Authority in writing. The first meeting shall be arranged prior to the date of commencement of construction of the development. Subsequent meetings shall be arranged at three-monthly intervals during the construction phase and thereafter six-monthly intervals, or such other time period as agreed by the Local Planning Authority.

Sustainability

40. No development of buildings shall take place until a Design Stage Certificate issued by BRE has been submitted to and approved in writing by the Local Planning Authority. The development shall meet BREEAM 'very good' or higher. Thereafter the development shall be carried out in accordance with the approved details.

41. A Post Construction Stage Certificate issued by BRE for the development shall be submitted for the approval in writing of the Local Planning Authority within 3 months of the first occupation of the development.

42. Prior to the first occupation of any building of the development hereby approved, an electric vehicle (EV) charging scheme shall be installed in accordance with details that have been submitted to and approved in writing by the Local Planning Authority. The scheme shall include, as a minimum, 10 rapid EV charging points. The EV charging apparatus shall thereafter be retained in an operative state until superseded by any advanced technology.

End of Schedule

ANNEX B: APPEARANCES

FOR HARROGATE BOROUGH

Stephen Whale of Counsel	Instructed by Peter Atkinson Principal Planning Lawyer Harrogate Borough Council

He called

Nigel Rockliff BA Dip. LA, CMLI	Director DRaW (UK)
Mark Simmonds BA(Hons), Dip.TP, MRTPI	Planning Consultant
Mike Parkes*	Senior Development Management Officer Harrogate Borough Council

FOR NORTH YORKSHIRE COUNTY COUNCIL (LOCAL HIGHWAY AUTHORITY)

Pam Johnson* BSc, CEng, MICE	Technical Specialist Development Management North Yorkshire County Council

FOR APPLEGREEN PLC

Rhodri Price Lewis QC Leading and assisted by Gwion Lewis of Counsel	Instructed by Nick Roberts AXIS

He called

Alastair Field BA(Hons), MSc, PIEMA, FBIAC, MI Soil Sci	Director and Company Secretary Reading Agricultural Consultants Ltd
Jon Mason BSc(Hons), Dip. LA, CMLI	Technical Director AXIS
Nick Roberts BA(Hons), Dip LA, CMLI	Director AXIS

*Mr Parkes and Mrs Johnson were introduced to take part in the discussion on draft planning conditions

FOR MOTO HOSPITALITY LTD

Peter Dixon of Counsel	Instructed by Tony Collins Collins and Coward Ltd

He called

Daniel Baird M.I. Soil Sci	Daniel Baird Soil Consultancy Ltd
Sue Illman PPLI, HonFSE, HonFellow(UoG)	Managing Director Illman Young Landscape Design Ltd
Tony Collins MRICS, MRTPI, MCIT, MILT, MEWI	Managing Director Collins and Coward Ltd

FOR KIRBY HILL RESIDENTS AGAINST MOTORWAY SERVICES (KIRBY HILL RAMS) (RULE 6)

Gareth Owens MSc(Oxon), MBCS, CITP	Local Resident and Chair Kirby Hill RAMS

He called

Dr Andrew Ramsden	Local Resident
Geoff Harris	Local Resident
Lt.Col. (Retd) Ken Lawson, OBE	Local Resident and Chair Kirby Hill and District Parish Council
Councillor Robert Windass	Harrogate Borough Councillor for Boroughbridge Ward and Member of the Planning Committee

INTERESTED PERSONS

Colin Reid	Local Resident
Councillor Nicholas Brown	Harrogate Borough Council Ward Councillor for Bishop Monkton and Newby Ward
Reverend Canon Wendy Wilby	College of Canons at Ripon Cathedral and Local Resident
Richard Compton	HM Deputy Lieutenant for Yorkshire and Local Estate Owner

Dr Rose Ferraby	Affiliated researcher in Archaeology University of Cambridge; Co-Director of the Aldborough Roman Town Project; and Local Resident
Jayne Cove	Local Resident
Councillor Pat Taylor	Mayor of Boroughbridge
Councillor Mike Collins, MBE	Chairman of Langthorpe Parish Council
Joan Whittle	Local Resident
Chris Thirkell	Local Resident
Councillor Patrick Sanderson	Chairman of Maron-le-Moor Parish Council
Judith Owens	Local Resident
Craig Helliwell	Local Resident
Linda Dooks	Secretary, Boroughbridge Historical Society & Secretary, Boroughbridge Walkers are Welcome and Local Resident
Rt Reverend Clive Handford, CMG	Local Resident and former Anglican Bishop of Cyprus and the Gulf
Dr Clare Eisner	Retired GP and Local Resident
Geoff Harris	Obo John Watson, OBE Former MP for Kirby Hill and former NYCC Councillor for the Boroughbridge Area
Sandra Shackleton	Local Resident
Councillor John Foster	Chairman Melmerby Parish Council

ANNEX C: ADDITIONAL INQUIRY DOCUMENTS

ID01	Opening Statement: Harrogate Borough Council
ID02	Opening Statement: Kirby Hill RAMS (KH06)
ID03	Opening Statement: Applegreen Plc
1D04	Opening Statement: Moto Hospitality Ltd
ID05	Email from AXIS and attachment regarding drawing error of Parameters Plan (dwg. No. 162007-AFL-00-00-DR-A-00120 P08) (28th April 2020) (CD1.31)
ID06	Extracts from Harrogate District Local Plan – Policy EC3 and GS3 (CD4.1)
ID07	GLVIA Chapter 4 (CD7.1)
ID08	Email from Mr Colin Reid correcting timings of journey in vicinity of J50 proposal
ID09	Email from Mrs Linda Dooks enclosing correspondence from the Ramblers re Proposed Map Modification Order at Moor Lane and Coach Road, Kirby Hill, Boroughbridge
ID10	Letter from Richard Compton enclosing letters from the Police Designing out Crime Officer
ID11	Statement read by Mrs Sandra Shackleton
ID12	Statements of individual objectors to the Applegreen Kirby Hill scheme (KH07)
ID13	Email from Mr Colin Reid referring to MSA proposal at J52 of the A1(M)
ID14	A1(M) Junction 50 – Google Earth Image from October 2009 (CD7.19)
ID15	A1(M) Junction 50 – Google Earth Image from March 2012 (CD7.20)
ID16	Guide to the signing of roadside facilities for motorists (September 2013) (CD9.104)
ID17	Amended Visualisation NR7.3 and statement of clarification
ID18	Kirby Hill and District Parish Council: Comments on the Harrogate District Draft Local Plan (KH7.2)
ID19	Extract of ES chapter 8 for A1 Dishforth to Barton improvements (CD8.57)
ID20	Letter from Transport Infrastructure Ireland dated 1 March 2021 (Lusk MSA) (CD8.58)

ID21 Letter from Applegreen Plc dated 2 March 2021 (proposed transaction between Applegreen Plc and Causeway Consortium Limited) (CD8.59)

ID22 Vale of York MSA – East side of A1(M) measurements (CD8.60)

ID23 Note on behalf of Applegreen re Leeming Bar Unilateral Undertaking (CD8.61)

ID24 Email trail between Moto and Harrogate Borough Council re Leeming Bar Unilateral Undertaking (CD8.62)

ID25 Certified Copy of Unilateral Undertaking (Moto)

ID26 Statement of CIL Compliance (Moto)

ID27 Ripon MSA Travel Plan (Moto)

ID28 Agreed Travel Plan Condition (Moto)

ID29 Travel Plan Monitoring Fee (Moto)

a) Email confirming payment made
b) Email confirming receipt
c) Email confirming refund on request

ID30 Consultation reply from the Economic Development Team, Harrogate Borough Council (Moto) (CD9.105)

ID31 Email confirming layout to be a reserved matter (Moto)

ID32 Coneygarth Services:

a) Block Plan
b) Design and Access Statement
c) Sections
d) Officer Report
e) Decision Notice

ID33 Thirsk Services: (KH08 – KH10)

a) Committee Report
b) Master Plan
c) Decision Notice

ID34 Final Version of Draft Planning Conditions (Applegreen)

ID35 Final Version of Draft Planning Conditions (Moto)

ID36 Closing Submissions: Harrogate Borough Council

ID37 Closing Submissions: Kirby Hill RAMS (KH11)

ID38 Closing Submissions: Applegreen Plc (+ Forest of Dean v SSCLG)

ID39 Closing Submissions: Moto Hospitality Ltd (+ SoS v Edwards)

Appendix 3
Technical Review – Soils and land quality

READING AGRICULTURAL CONSULTANTS

August 2022

Say No To Sunnica Action Group Ltd

PINS Scheme Reference: EN010106
Environmental Statement Appendix 12B: Soils and Agriculture Baseline Report – Technical Review

at

Sunnica Energy Farm

Contents

1 Introduction

1.1 Reading Agricultural Consultants Ltd (RAC) is instructed by Say No To Sunnica Action Group Ltd to review the Soils and Agriculture Baseline Report[1] that has been produced as part of the Environmental Statement for Sunnica Energy Farm.

1.2 The report was prepared by Daniel Baird Soil Consultancy Ltd (DBSC). The conclusions of the report and the classification of the agricultural land at the site are derived from soil and Agricultural Land Classification (ALC) surveys primarily undertaken by DBSC in 2015, 2019, 2020 and 2021.

1.3 The concern expressed by the Action Group is that the ALC grades assigned do not correspond with the known condition and productivity of the land, hence the requirement for a technical review. This review has been completed by Sophie Webb. An associate of RAC for ten years, Sophie has undertaken detailed ALC and soil resources surveys across several thousand hectares of agricultural land spanning England and Wales. She routinely produces technical reports, ES chapters and technical/peer reviews and is a full Member of the Institute of Soil Science and fulfils the British Society of Soil Science (BSSS) criteria for Professional Competency in Soil Science[2].

1.4 This review also draws on information collected from land adjoining the proposed development sites on behalf of Say No to Sunnica by Patrick Stephenson and Sam Franklin, which is appended to this report.

2 Background to ALC

2.1 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

[1] **Daniel Baird Soil Consultancy Ltd (Baird Soil) (2021).** *Sunnica Energy Farm, EN010106, Volume 6,, Environmental Statement, 6.2 Appendix 12B: Soils and Agriculture Baseline Report.*

[2] **BSSS (2018).** *Working With Soil – Professional Competency in Soil Science.* Available online: https://soils.org.uk/wp-content/uploads/2021/02/WWS-2-ALC.pdf

quality of agricultural land[3], and summarised in Natural England's Technical Information Note 049[4].

2.2 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.

2.3 Grade 1 land 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 land 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.

2.4 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[5] as the best and most versatile (BMV) agricultural land.

2.5 As explained in Natural England's TIN 049[4], a definitive grading can only be obtained by undertaking a detailed survey according to the published guidelines, at an observation density of one boring per hectare.

3 DBSC Survey Work

3.1 In Section 2 of Appendix 12B: Soils and Agriculture Baseline Report produced by DBSC it is noted that the survey was undertaken in accordance with the long-established criteria for assessing the quality of agricultural land: the MAFF ALC guidelines (1988).

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

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

[5] **Ministry of Housing, Communities & Local Government (2021).** *National Planning Policy Framework.* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

3.2 Paragraph 5.3.3 refers to "*A detailed ALC field survey by Baird Soil, RAC and MAFF*" which suggests that the collective survey work was collaborative. It was not. Furthermore, no request was submitted to RAC for use of RAC data.

3.3 To achieve a sample density of one sample point per hectare, DBSC pre-determined survey points "*by positioning them at 100m intersections of the Ordnance Survey National Grid using a GPS*" (paragraph 2.1.5) and surveyed according to this strategy rigidly in order to avoid "*selection bias*". Failing to allow for any flexibility means that survey points commonly fall on or near field boundaries or other areas that are often atypical of the survey area generally and that elements of the proposed scheme have been missed altogether by the survey.

3.4 Drawing Number 60589004_ES_DRAFT_001 shows the locations of each of the numbered sample points and clearly demonstrates the first disadvantage of rigidly adhering to the 100m grid set out above. At least 30 observation points in the survey area are plotted on or overlap the red line boundary and an additional 24 observations are plotted on field edges, access tracks, in woodland or even on the public highways (ER69 on Elms Road and BF31 on Golf Links Road). At least 50 sample points are therefore not representative of agricultural land in the site, amounting to 8% of the points sampled.

3.5 The report notes at paragraph 1.1.6 that the Burwell National Grid Substation Extension area was not surveyed, solely due to the Ordnance Survey 100m gridlines not crossing within the applicable area. The assessment therefore has to make assumptions about the ALC within this area rather than establishing it by detailed survey.

3.6 The main survey work was undertaken in several batches. Of the dates known, the surveys were mainly carried out in November 2015 and October 2019 with single survey days in December 2015, July 2019 and July 2020. The dates of survey at Snailwell and Sunnica West are not provided.

3.7 According to the pit descriptions in Annex F, six pits were excavated on 23 and 24 September 2021; none were contemporary with the auger survey. Similarly, all of the soil samples sent to the laboratory were from the pits, with the results made available in October 2021; no samples were taken during the original survey, even though this occurred over a period of five years and there would have been little opportunity for the information derived from the pits and laboratory analysis to influence the findings of the survey, given that the ES was published less than a month after the receipt of laboratory results. It is standard practice to take samples for

analysis during a soil survey in order to verify the results of hand texturing and visual inspection, particularly when a survey is over an extended period.

3.8 Drawing Number 60589004_ES_DRAFT_001 shows the locations of 695 points across an area of 869.3ha of agricultural land surveyed by DBSC, giving an observation density of one per 1.3ha, including the c.50 atypical profiles. This is lower than the standard observation density.

4 Site Background

4.1 Paragraph 5.3.1 of the report notes the bedrock geology as chalk, predominantly of the Holywell Nodular Chalk and New Pit Chalk Formations, and "*some land with the Zag Chalk formation*". The Zig Zag Chalk Formation underlies over 200ha, around one-quarter of the surveyed area at a range of depths. The Zig Zag Chalk Formation belongs to the Grey Chalk Subgroup which the British Geological Survey (BGS) describes as clayey chalk without flint. The Holywell Nodular Chalk and New Pit Chalk Formations, which underlie other parts of the site, belong to the White Chalk Subgroup, which the BGS describes as chalk with flints. The former is generally described by the British Geological Survey as hard chalk and the latter as firm chalk.

4.2 DBSC notes at paragraph 5.3.1 that most of the area has no superficial deposits but that there are significant areas with river terrace deposits, as well as glacial till over the Zig Zag Chalk. Extensive and variable superficial deposits are mapped on the BGS Geology Viewer[6]. The river terrace deposits are mapped west of La Hogue Road and west of the A11; north and south of Elms Road; and south of Mildenhall Road. Superficial head deposits, not till, are mapped north of Freckenham and south of Worlington. The report does not identify the alluvium and peat deposits mapped north of Snailwell and north of Freckenham, or the blown sand deposits north of Elms Road. The presence of superficial deposits renders it very unlikely that solid bedrock will be within 120cm of the soil surface.

4.3 Paragraph 5.3.2 of the report identifies three soil associations mapped across the site (the Swaffham Prior, Newport 4 and Moulton associations) but fails to identify an additional four. Although not extensive, the Reach, Methwold, Newmarket 2 and Wantage 2 associations are also mapped at the site. The Adventurers' 1 association is additionally mapped at the site boundary at the northern end of Lee Farm.

[6] **British Geological Survey (2022).** *Geology of Britain viewer*, http://mapapps.bgs.ac.uk/geologyofbritain/home.html.

4.4 Each of these soil associations and their component soil series are described in a bulletin published by the Soil Survey of England and Wales[7].

4.5 Between Lakenheath and Cambridge, the Reach association mostly includes very calcareous, humose, sandy clay loam or clay loam topsoils, overlying clay loam or sandy clay loam and passing to soft chalk at moderate depth. The main Methwold soils are characterised by slightly stony sand over pale grey, chalk-sand drift. The Newmarket 2 soils are mainly shallow or moderately deep, calcareous, coarse loamy soils over light lithoskeletal chalk. The main Wantage association soil includes silty clay loam which passes to soft chalk at around 45cm.

4.6 The main Swaffham Prior soils are described as overlying soft shattered chalk, chalk rubble or very stony sandy silt loam from depths of 60cm, whilst the main Moulton soils are noted to have weathering chalk or marl from depths of 85cm. The Newport 4 soils are typically sandy to depth.

4.7 What is significant from all of these descriptions is that the material to 120cm depth is extremely likely to be rootable, which is not evident from the DBSC observations. Most of the profiles in Annex F of the Soil and Agriculture Baseline Report are noted to stop at depths much shallower than 120cm. The ALC guidelines require that soil profiles are assessed to 120cm depth as this is the typical rooting depth of wheat, one of two reference crops used in the calculation of a droughtiness limitation, the other being potatoes (which typically root to 70cm depth).

5 Survey Data and Results

5.1 Within the area surveyed by DBSC, 470.4ha is classified as Subgrade 3b, 390.1ha as Grade 4 and just 8.8ha as Subgrade 3a. Combined with other survey results, the work has described 90.4% of the 981ha site as Subgrade 3b and Grade 4, with 3.8% (37.3ha) as Subgrade 3a and 5.8% as non-agricultural land. Of the Subgrade 3a quality land, which is within the category of BMV, a majority was either identified in the MAFF survey, or has been assumed rather than formally identified by DBSC.

5.2 The main limitation causing this grading is droughtiness, associated with light-textured soils and chalk or sands and gravels from half a metre depth. The report also notes at paragraph 5.5 that "*In places there are also limitations to Grade 3b for restricted depth and high volume of large stones (retained by a 20mm sieve) in the topsoil*".

[7] **Hodge et al (1984).** *Soils and Their Use in Eastern England*. Soil Survey of England and Wales Bulletin 13, Harpenden.

Stones

5.3 One of the six pit descriptions provided includes the comment that "*when collecting bagged samples, the assessment of stone content is highly sensitive to the inclusion or omission of large stones, and the omission of such stones results in an under recording of the stone presence observed in the field*". Clearly this also works the other way whereby inclusion of such stones results in an over-recording of the stone presence in the field.

5.4 In this case, and if topsoil stone content is a limiting factor to the ALC, the surveyor would be expected to take a photograph of the stone at multiple affected points to demonstrate the relationship which has not been done. Therefore, the laboratory determination of the stone volume cannot be relied upon as the aforementioned inclusion or omission of large stone by DBSC is indeterminable.

5.5 As a topsoil stone limitation was noted in the auger surveys in 2015 and 2019, an experienced surveyor would have taken a 20mm sieve to the site visit in 2021, during which the pits were excavated, and measured the stone content in-situ, thus eliminating any bias such as may have been encountered when sub-sampling for laboratory measurement. DBSC failed to take this reasonable initiative. The claim that there is a limitation caused by the volume of stones "*retained by a 20mm sieve*" cannot be verified when no measurement by sieving was made.

5.6 The laboratory analysis for the sample taken from Pit 3 calculated the total topsoil stone content to be 16.9%. Pit 3 was located at auger point ER24, where DBSC has noted a total stone content of 10%. The stone contents of the other five samples taken from the pits range from 0.4% to 9.1% with an average of 4.6%.

5.7 In total, 29 profiles are noted to have a volume of stones in the topsoil larger than 2cm of 15%, 15% being the cut-off between Subgrade 3a and Subgrade 3b. A topsoil stone limitation is not identified in the associated profile logs.

Photographs

5.8 Not only is there an absence of photographs showing stone content, there are no photographs from the soil survey included in the report whatsoever. Two photographs of exposed archaeological trenches have been provided, with the caption "*Archaeological trenches open south west of Lee Farm (September 2021) illustrate the shallow nature of the soil over chalk common over much of the site. The photos below also illustrate the abrupt hollows that can be present in this chalk geology, that give rise to small areas of deeper soil profiles with a subsoil*".

5.9 Using two photographs from the same area to demonstrate the soil profile across nearly 870ha of agricultural land fails to provide an accurate representation across such a large and highly variable area. However, the hollows seen in the images show that the chalk is not un-rootable solid bedrock as inferred in the interpretation of results.

Droughtiness

5.10 The assessment of stone content and omission of photographs are minor issues compared with the droughtiness assessment.

5.11 The ALC grade according to droughtiness is determined from a series of calculations involving figures for the available water in each soil horizon, which itself is determined by the soil texture, stone content, structure and depth of that horizon, from which the values for the moisture deficit for the reference crops of wheat and potato, which are climatic measurements, are subtracted, resulting in a moisture balance. The calculation requires that soil profiles are assessed to a depth of 120cm, which is the typical rooting depth of wheat, however this information is not often available in the soil logs provided by DBSC.

5.12 The full methodology for calculating a droughtiness limitation is given in the ALC guidelines, where the moisture balance limits for each grade are given in Table 8, and are as follows:

Table 8 Grade according to droughtiness

Grade/ Subgrade	Moisture Balance limits (mm) *wheat*		*potatoes*
1	+30	*and*	+10
2	+5	*and*	-10
3a	-20	*and*	-30
3b	-50	*and*	-55
4	<-50	*or*	<-55

5.13 The moisture balances for several soil profiles from each of the several assessment areas logged by DBSC have been investigated. The calculations are appended.

5.14 Where DBSC has logged profiles to depths shallower than 120cm, RAC has replicated the available data and assumed no additional material to be present. None of the moisture balances for the profiles as logged by DBSC were found to correspond with the moisture balances for the profiles as calculated by RAC. Therefore, each profile selected by RAC for re-assessment has been considered under multiple scenarios whereby various plausible subsoil characteristics have been assumed to 120cm depth. For each profile assessed, the scenarios may include:

- The profile as logged by DBSC (all labelled 'A' in Appendix 1);
- The profile as logged by DBSC, but continuing the observed or likely characteristics to 120cm depth (typically labelled 'B' in Appendix 1);
- The profile as logged by DBSC, but assuming either chalk or sand and gravel beneath what was observed, depending on whether the profile was noted to have been stopped on chalk or stone respectively (typically labelled C in Appendix 1);
- The profile as logged by DBSC, with additions required in order to make the calculated moisture balances match DBSC's moisture balances (may be labelled C and/or D in Appendix 1).

5.15 It is clear that DBSC has assumed the presence of *some* soil material beneath what has been stated in the profile logs, but there is no explanation of what assumptions have been made in order to arrive at the conclusion. For example, the first profile investigated by RAC is LF4. The DBSC profile notes 30cm medium sandy loam topsoil with 10% hard stone, overlying another 20cm of medium sandy loam with 10% hard stone. The moisture balances are noted as -28mm for wheat and -24mm for potato.

5.16 If the profile is assessed as stated with no additional material below 50cm depth, the moisture balances are -48mm for wheat and -45mm for potato (too droughty). If the profile is assessed as stated, with the addition of a logical assumption of the subsoil becoming more stony and passing to sand and gravel at depth, the moisture balances are -18mm for wheat and -23mm for potato (not droughty enough). The DBSC moisture balances have assumed something between these two scenarios with no associated justification. RAC has managed to achieve the same moisture balances as DBSC in profile LF4, by assuming a lower subsoil of medium sandy loam with 35% hard stone overlying rock at the arbitrary depth of 77cm. There is no logical reason why 77cm would be selected.

5.17 This pattern is repeated across almost every profile investigated, with DBSC's moisture balances only being achievable by making assumptions on depths and stone contents that are seemingly random. Without any explanation as to what DBSC has assumed was below the observable depth of each profile, it has to be assumed that the DBSC droughtiness limitations have been derived without any sensible or consistent methodology being applied.

5.18 Other discrepancies exist in the data. Profiles LF87, LF99 and LF111 are each logged as having 30cm medium sandy loam topsoil with 15% flint, overlying another 20cm of medium sandy loam with 15% flint. The profiles are identical and yet the moisture balances for wheat are given as -

22mm, -33mm and -36mm respectively, and the moisture balances for potato as -18mm, -29mm and -33mm respectively.

5.19 Similarly, profiles BF3 and BF7 are logged as identical profiles but have moisture balances of -28mm and -19mm for wheat and -30mm and -23mm for potato respectively.

5.20 For profiles SW14 and S47, recalculating the moisture balances on the assumption that there is no profile available water below the observed logged depths (i.e. taking the DBSC profile logs at face value), results in moisture balances for potato that are higher than those stated by DBSC. There would need to be less than no available water at the base of the profile to achieve DBSC's balance. Put simply, the droughtiness limitation has been overstated.

5.21 The most extreme overstatement found in the spot-checks undertaken by RAC is in profile S69. DBSC notes the profile as comprising 40cm stoneless peaty sand, with a droughtiness limitation to Grade 4. Taking this at face value, the moisture balances are +36mm for wheat and +40mm for potato. This profile has no droughtiness limitation (Grade 1).

Mapped Classification

5.22 Within the soil profile logs as supplied by DBSC, 68 are classified as Subgrade 3a, representing about 10% of the area surveyed by DBSC. Additional points are noted to be "3a/3b". Of the 68 points of Subgrade 3a, several are isolated occurrences, however 58 of the points are not isolated and can be joined into mappable units. Given the observation density of one per hectare, it could reasonably be expected that this would result in the classification of 58ha as Subgrade 3a. It is therefore surprising that DBSC has only managed to map 8.8ha as Subgrade 3a.

5.23 It is not uncommon for profiles that are classified as Subgrade 3a in DBSC's logs to have been mapped as Grade 4, for example on the east side of Lee Farm and the north of Chippenham Park/Chippenham Park Additional Area. A continuous strip of six points of Subgrade 3a at Bay Farm on the west side of Worlington Road have been mapped as a strip of Subgrade 3b for no apparent reason, and yet DBSC has mapped a small area east of Worlington Road as Subgrade 3a in a square field parcel within which no observation of the soil was made.

5.24 It is noted that Pit 3 was located at the same point as point ER24 (Grid reference TL68700 71600). The soil profile log records that point ER24 comprises a 30cm-deep layer of medium sand topsoil with 10% stone only, stopping at 30cm for stone. The description of Pit 3, however, includes a description of 30cm of cultivated topsoil with a laboratory-determined texture of medium sand/loamy medium sand. The topsoil overlies a slightly stony medium sand upper subsoil which passes to stoneless medium sand excavated to 40cm but augered to 120cm depth.

5.25 The pit description and laboratory analysis are at odds with the auger observation which stopped at 30cm for stone. The laboratory result showing the topsoil to be on the boundary of medium sand and loamy medium sand is crucial to the grading: if the topsoil is loamy medium sand, the droughtiness limitation is to Subgrade 3b, not Grade 4 as it would be with medium sand.

5.26 A total of 29 profiles within the Elm Road survey area are logged with the same observation as ER24 (i.e. medium sand topsoil only) and classified as Grade 4. The logs do not acknowledge the findings of Pit 3 that clearly demonstrates upper and lower subsoil horizons to be present. It is apparent that the findings of the pit excavations have had no bearing on the soil profile logs or classification, which negates the purpose of the pits entirely. Therefore, the mapped area of Grade 4 land at Elm Road is extremely likely to have been significantly overestimated.

Verification of soil survey

5.27 In order to verify the findings of the soil survey carried out by DBSC, the Say No to Sunnica Action Group (SNTS) has repeatedly requested of Sunnica and individual landowner's permission for independent surveyors to access to land to carry out soil surveys. It is my understanding that there have been eleven refusals and several failures to respond to requests.

5.28 Furthermore, on 3rd August 2022, SNTS requested access to any soil samples retained after the soil survey and disclosure of DBSC observations and calculations underlying Moisture Deficit values used in the ALC assessment. In its response of 15th August 2022, Sunnica stated that no samples had been retained from the survey and that all of the information required to calculate moisture balances was publicly available within the ES Appendix 12B.

5.29 Given the findings of this report set out at paragraph 5.10 *et seq*. and in Appendix 1 to this report, this is clearly not the case and assumptions made in the calculation of droughtiness, which is critical to the grading of soils in ALC, are not transparent including in instances where grading is marginal between BMV and lower grades.

5.30 Regarding the retention of soil samples, it is common practice in contentious or marginal cases to retain soil samples to demonstrate the veracity of sampling and analysis. The sample destroyed in the laboratory is itself a subsample of a larger sample taken in the field and it is generally a second subsample that is retained although it is not unknown for larger samples to be retained.

5.31 In this case, where the grading of agricultural land derived from observations taken on site and unverified calculations is in conflict with information mapping published by Defra[8] and Natural England[9], it would be expected that compelling evidence to support those conclusions would readily be available. The Soils and Agriculture Baseline Report accompanying the ES fails to refer to published mapping on the grounds that they are at a scale (1:250,000) that provides sufficient accuracy for the assessment of fields or individual development sites.

5.32 The use of 1:250,000 scale maps in preliminary works in connection with large scale development is commonly used to identify areas with baseline conditions best suited to the proposed development. The failure to publish any such information as part of the EIA is strongly suggestive that no options appraisal was carried out as part of the assessment process that might be used to identify lower quality land that might be developed or justify the use of land identified by Natural England where more than 60% of the land is likely to be BMV, despite overall climatic limitations in the area[10].

5.33 In addition to desktop research, SNTS has also commissioned independent soil surveys of land adjoining the proposed development area in order to verify the findings of DBSC. A copy of this report is attached at Appendix 2.

5.34 The surveys were carried out in line the current guidelines for grading agricultural land and found that 78% of the land surveyed was classified as BMV, which is consistent with Natural England's assessment of the incidence of BMV land in the area.

6 BSSS Assessing Agricultural Land

6.1 The British Society of Soil Science (BSSS) has a published guidance document[11] that aims to help planners evaluate the validity of ALC reports. The note includes a checklist comprising questions relating to information that should be included, with three possible assessment outcomes: Pass, Concern and Fail. The checklist and responses in relation to the DBSC Soil and Agricultural Baseline Report for Sunnica Energy Farm are as follows:

[8] https://magic.defra.gov.uk/MagicMap.aspx

[9] http://publications.naturalengland.org.uk/file/4775489878622208

[10] http://publications.naturalengland.org.uk/publication/6292442749337600

[11] **British Society of Soil Science (2022).** *Guidance Document 1: Working with Soil Guidance Note on Assessing Agricultural Land Classification Surveys in England and Wales*. Available online at https://soils.org.uk/assessing-agricultural-land-jan-2022/

Background			
	Is the company / author a specialist in ALC?	Pass	
	Have published soil maps been mentioned[5]?	Pass	
Climate data			
	Is *interpolated*[6] climate data included for the site (esp. Field Capacity Days (FCD), Moisture Deficits (MD) and Maximum grade on climate)?	Pass	
	Is the data consistent with that expected for the area?	Pass	
Site and standalone limitations			
	Have gradients, micro-relief and flooding been considered / acknowledged?	Pass	
Soils and interactive limitations			
	Have topsoils and subsoils been field surveyed? References to soil pits, auger samples & lab samples should be included.	Pass	
	Are the soil types clearly described, including reference to gleying, slowly permeable layers (SPL), soil wetness class (SWC) and drought?	Concern	Very brief description
	Have the reasons for ALC grading been clearly described?	Concern	
	Have soil structure and porosity been described?	Pass	In pit descriptions only
	Have soils been described using Soil Survey Field Handbook (Hodgson 1997[7])?	Concern	Not stated
	Have soils been described using Munsell[8] soil colour notations?	Pass	
Conclusions and references			
	Is there a table clearly showing areas of ALC grades?	Pass	
	Is there a list of references (normally including Soil Survey of England and Wales mapping, the MAFF 1988 ALC guidelines, Munsell soil colour charts and the Soil Survey Field Handbook – Hodgson 1997)?	Pass	
	Have the limitations been justified when concluding the ALC grade(s) on the site?	Fail	
Schedule of auger borings and soil pits			
	Has a map of auger boring & soil pit locations been included?	Concern	Pit locations not shown
	Have laboratory analyses been included to confirm topsoil particle size distribution?	Pass	But only six total
	Has a schedule of auger boring information been provided?	Pass	
	Do the auger borings show horizon depths, colours and textures?	Pass	
	Do the auger boring records clearly show soil wetness class?	Pass	
	Do the auger boring records clearly show topsoil stone content?	Pass	
	Do the auger boring records clearly show depth to gleying and depth to slowly permeable layer (SPL)?	Pass	
	Do the auger boring records clearly show moisture balance (MB) values for drought (Wheat & Potatoes)?	Fail	Values are given but are shown to be unreliable
	Has detailed soil pit information been provided in the report and do the pit descriptions show horizon depths, colours and textures?	Pass	
	Do the soil pits / pit clearly show soil wetness class (WC)?	Fail	
	Do the soil pits / pit clearly show moisture balance (MB) values for drought?	Concern	Only in one of six pits
	Do the soil pit / pits clearly show soil structure and porosity in the subsoil?	Pass	

7 Conclusion

7.1 The Soils and Agriculture Baseline Report prepared by DBSC includes most of the necessary background information relating to the site. There are a few oversights, such as omitting a significant area of drift geology from the site description and only identifying three out of seven mapped soil associations, however these make no material difference to the conclusions of the report or the classification of the land.

7.2 The correct ALC methodology has largely been followed, however the omission of pit and laboratory data from the original surveys and the absence of any photographs are concerning. Only six pits were excavated and only six topsoil samples have been analysed, representing one pit and one sample per 145ha of agricultural land surveyed. Many more observations would normally be expected for a site of this size.

7.3 Although the auger surveys were mainly undertaken between 2015 and 2019, the pits and soil samples were obtained only eight weeks prior to the submission of the final ES was published in November 2021, suggesting that confirmation of critical factors such as soil texture and subsoil characteristics was not considered of high importance. It has been demonstrated that the data obtained from the pits has not been used to inform the remainder of the survey.

7.4 Approximately 50 observations are tentative as they are unlikely to be representative of ground conditions. Drawing Number 60589004_ES_DRAFT_001 shows these observations to have been made at field edges, in woodland, on farm tracks and, in two cases, on the public highway. The reader should not be required to manually check each individual grid reference supplied in order to know where the point really was. This could be avoided by mapping at a scale more appropriate than 1:18,000@A3.

7.5 DBSC has failed to map the correct land classification over much of the study area, even based on its own data. The soil profile logs classify 68 profiles (10% of the surveyed area) as Subgrade 3a, 58 of which are not isolated and can be joined into mappable units. DBSC has only mapped 8.8ha as Subgrade 3a, including a patch within one field parcel that was not surveyed.

7.6 The most significant concern with the DBSC report is the reliability of its droughtiness calculations. A majority of the calculations do not consider profiles to a full depth of 120cm, which is a requirement stated in the ALC guidelines. A check of several randomly selected profiles from each farm holding has revealed that the moisture balances stated by DBSC are not achievable when making logical assumptions about subsoil conditions. When logical assumptions are made, the droughtiness limitation is typically less severe than stated.

7.7 With no explanation or justification, it is not possible to understand how the figures for moisture balances, and therefore the droughtiness limitations, were determined.

7.8 Assessed against the BSSS criteria for reliability, the report fails on three counts. Additional information is required before the report can be considered acceptable and a reliable account of the baseline agricultural land quality.

Appendix 1: Profile Summaries and Droughtiness Calculations

All profiles labelled 'A' are based on the information as given in the DBSC soil logs.

Assumptions made for subsequent scenarios are mostly noted in the end column,

- cells highlighted in green indicate where a matching moisture balance value has been achieved;
- cells highlighted in orange indicate a very close, but not identical, moisture balance value; and
- cells highlighted red indicate disparity in one set of moisture balance figures, alongside a match for the other crop (wheat or potato).

Profile LF46 includes yellow highlighted cells to indicate how marginal the final grade is based upon various assumptions.

Lee Farm

Stone types			Climate Data	
%	TAv	EAv	MDwheat	121
hard	1	0.5	MDpotato	118
chalk	10	7		

Site No.		Depth cm		Texture	stone% hard	stone% chalk		APwheat mm	AP potato mm		DBSC Wheat	DBSC Potato
LF4	T	0	30	mSL	10			46	46			
A		30	50	mSL	10			27	27			
		50	120	Rock				0	0			
							Total	**73**	**73**			
							MB	-48	-45	DBSC MB	-28	-24
					Droughtiness grade (DR)			3b	3b		3b	3a
LF4	T	0	30	mSL	10			46	46			
B		30	50	mSL	10			27	27	Assuming similar to depth		
		50	120	mSL	20			62	24			
							Total	**136**	**98**			
							MB	15	-20	DBSC MB	-28	-24
					Droughtiness grade (DR)			2	3a		3b	3a
LF4	T	0	30	mSL	10			46	46			
C		30	50	mSL	10			27	27			
		50	70	mSL	30			16	22	Assuming sand and gravel at depth		
		70	120	mS	50			14	0			
							Total	**103**	**95**			
							MB	-18	-23	DBSC MB	-28	-24
					Droughtiness grade (DR)			3a	3a		3b	3a
LF4	T	0	30	mSL	10		-	46	46			
D		30	50	mSL	10			27	27			
		50	77	mSL	35			20	20	Illogical depth assumption		
		77	120	Rock				0	0			
							Total	**93**	**94**			
							MB	-28	-24	DBSC MB	-28	-24
					Droughtiness grade (DR)			3b	3a		3b	3a
LF35	T	0	30	mCL	15		-	46	46			
A		30	40	mCL	10			15	15			
		40	50	mCL		80		11	11			
		50	120	Rock				0	0			
							Total	**72**	**72**			
							MB	-49	-46	DBSC MB	-23	-19
					Droughtiness grade (DR)			3b	3b		3b	3a

LF35	T	0	30	mCL	15		-	46	46			
B		30	40	mCL	10			15	15			
		40	50	mCL		80		11	11			
		50	120	Chalk				49	20			
							Total	**121**	**92**			
							MB	0	-26	DBSC MB	-23	-19
					Droughtiness grade (DR)			3a	3a		3b	3a
LF35	T	0	30	mCL	15		-	46	46			
C		30	40	mCL	10			15	15			
		40	50	mCL		80		11	11			
		50	80	mCL		46		26	26	Illogical assumption		
		80	120	Rock				0	0			
							Total	**98**	**99**			
							MB	-23	-19	DBSC MB	-23	-19
					Droughtiness grade (DR)			3b	3a		3b	3a
LF46	T	0	30	hCL	20			44	44			
A		30	60	hCL		80		30	34			
		60	120	Rock				0	0			
							Total	**74**	**77**			
							MB	-47	-41	DBSC MB	-24	-27
					Droughtiness grade (DR)			3b	3b		3b	3a
LF46	T	0	30	hCL	20			44	44			
B		30	60	hCL		80		30	34	Profile notes "stop for chalk"		
		60	120	Chalk				42	10			
							Total	**116**	**87**			
							MB	-5	-31	DBSC MB	-24	-27
					Droughtiness grade (DR)			3a	3b		3b	3a
LF46	T	0	30	hCL	20			44	44			
C		30	60	hCL		80		30	34			
		60	65	hCL		80		4	6	Allowing +5cm below observed depth = up one grade		
		65	120	Chalk				39	5			
							Total	**116**	**88**			
							MB	-5	-30	DBSC MB	-24	-27
					Droughtiness grade (DR)			3a	3a		3b	3a
LF46	T	0	30	hCL	20			44	44			
D		30	60	hCL		80		30	34			
		60	86	hCL		40		23	14	Illogical assumption		
		86	120	Rock				0	0			
							Total	**97**	**91**			
							MB	-24	-27	DBSC MB	-24	-27
					Droughtiness grade (DR)			3b	3a		3b	3a
LF87,99,111	T	0	30	mSL	15			44	44	Same profile, different MBs		
A		30	50	mSL	15			26	26	DBSC MB		
		50	120	Rock				0	0	LF87	-22	-18

							Total	**70**	**70**	LF99	-33	-29
							MB	-51	-48	LF111	-36	-33
					Droughtiness grade (DR)			4	3b		3b	3a/3b
LF87,99,111	T	0	30	mSL	15			44	44			
B		30	50	mSL	15			26	26	DBSC MB		
		50	120	Chalk				49	20	LF87	-22	-18
							Total	**119**	**90**	LF99	-33	-29
							MB	-2	-28	LF111	-36	-33
					Droughtiness grade (DR)			3a	3a		3b	3a/3b
LF87,99,111	T	0	30	mSL	15			44	44			
C		30	50	mSL	15			26	26	Illogical assumptions		
		50	77	mSL	51			15	16	DBSC MB		
		77	120	Rock				0	0	LF87	-22	-18
							Total	**85**	**85**	LF99	-33	-29
							MB	-36	-33	LF111	-36	-33
					Droughtiness grade (DR)			3b	3b		3b	3a/3b
LF209	T	0	30	mSL	10			46	46			
A		30	50	mSL	10			27	27			
		50	70	LmS		20		12	18			
		70	120	Rock				0	0			
							Total	**86**	**92**			
							MB	-35	-26	DBSC MB	-13	-26
					Droughtiness grade (DR)			3b	3a		3a	3a
LF209	T	0	30	mSL	10			46	46			
B		30	50	mSL	10			27	27			
		50	70	LmS		20		12	18	Profile notes "stop for chalk"		
		70	120	Chalk				35	0			
							Total	**121**	**92**			
							MB	0	-26	DBSC MB	-13	-26
					Droughtiness grade (DR)			3a	3a		3a	3a
LF209	T	0	30	mSL	10			46	46			
C		30	50	mSL	10			27	27			
		50	70	LmS		20		12	18	Illogical assumption		
		70	120	LmS	30			22	0			
							Total	**108**	**92**			
							MB	-13	-26	DBSC MB	-13	-26
					Droughtiness grade (DR)			3a	3a		3a	3a

Elms Road

Stone types			Climate Data	
%	TAv	EAv	MDwheat	118
hard	1	0.5	MDpotato	114
chalk	10	7		

Site No.		Depth cm		Texture	stone% hard	stone % chalk	Struct-ure	APwheat mm	AP potato mm		DBSC Wheat	DBSC Potato
ER1-4/6/28/40-43 etc	T	0	30	mS	10			33	33			
A		30	40	mS	10			6	6			
		40	120	Rock				0	0			
							Total	**39**	**39**			
							MB	-79	-75	DBSC MB	-70	-66
					Droughtiness grade (DR)			4	4		4	4
ER1-4/6/28/40-43 etc	T	0	30	mS	10			33	33			
B		30	40	mS	10			6	6			
		40	120	mS	50			23	12			
							Total	**62**	**51**			
							MB	-56	-63	DBSC MB	-70	-66
					Droughtiness grade (DR)			4	4		4	4
ER1-4/6/28/40-43 etc	T	0	30	mS	10		-	33	33			
C		30	40	mS	10			6	6			
		40	55	mS	10			9	10			
		55	120	Rock				0	0			
							Total	**48**	**49**			
							MB	-70	-65	DBSC MB	-70	-66
					Droughtiness grade (DR)			4	4		4	4
ER63-65	T	0	30	LmS	10		-	35	35			
A		30	40	LmS	10			8	8			
		40	50	LmS		50		10	10			
		50	120	Rock				0	0			
							Total	**53**	**53**			
							MB	-65	-61	DBSC MB	-46	-42
					Droughtiness grade (DR)			4	4		3b	3b
ER63-65	T	0	30	LmS	10		-	35	35			
B		30	40	LmS	10			8	8			
		40	50	LmS		50		10	10	Assuming similar to depth		
		50	120	LmS		50		46	19			
							Total	**99**	**72**			
							MB	-19	-42	DBSC MB	-46	-42
					Droughtiness grade (DR)			3a	3b		3b	3b

ER63-65	T	0	30	LmS	10		-	35	35				
C		30	40	LmS	10			8	8				
		40	50	LmS		50		10	10	Random depth assumption			
		50	79	LmS		50		19	19				
		79	120	Rock				0	0				
							Total	**72**	**72**				
							MB	-46	-42	DBSC MB	-46	-42	
					Droughtiness grade (DR)			3b	3b		3b	3b	
ER94-99	T	0	40	LmS		8	-	51	51				
A		40	120	Rock				0	0				
							Total	**51**	**51**				
							MB	-67	-63	DBSC MB	-49	-45	
					Droughtiness grade (DR)			4	4		3b	3b	
										Reported as 3b/4			
ER94-99	T	0	40	LmS		8	-	51	51				
B		40	120	Chalk				59	30				
							Total	**110**	**81**				
							MB	-8	-33	DBSC MB	-49	-45	
					Droughtiness grade (DR)			3a	3b		3b	3b	
										Reported as 3b/4			
ER94-99	T	0	40	LmS		8	-	51	51				
C		40	61	Chalk				18	21	Random depth assumption			
		61	120	Rock				0	0				
							Total	**69**	**72**				
							MB	-49	-42	DBSC MB	-49	-45	
					Droughtiness grade (DR)			3b	3b		3b	3b	
										Reported as 3b/4			
ER94-99	T	0	40	LmS		8	-	51	51				
C		40	65	LmS		8		18	23	Random depth assumption			
		65	120	Rock				0	0				
							Total	**69**	**74**				
							MB	-49	-40	DBSC MB	-49	-45	
					Droughtiness grade (DR)			3b	3b		3b	3b	
										Reported as 3b/4			

Manor Farm

Stone types			Climate Data	
%	TAv	EAv	MDwheat	119
hard	1	0.5	MDpotato	115
chalk	10	7		

Site No.		Depth cm		Texture	stone% hard	stone% chalk	Struct-ure	APwheat mm	AP potato mm		DBSC Wheat	DBSC Potato
MF8/9/12/17/21 etc	T	0	30	mS	15			31	31			
A		30	120	Rock				0	0			
							Total	**31**	**31**			
							MB	-88	-84	DBSC MB	-75	-71
					Droughtiness grade (DR)			4	4		4	4
MF8/9/12/17/21 etc	T	0	30	mS	15			31	31			
B		30	60	mS	15			17	18			
		60	120	mS	15			26	6			
							Total	**74**	**55**			
							MB	-45	-60	DBSC MB	-75	-71
					Droughtiness grade (DR)			3b	4		4	4
MF8/9/12/17/21 etc	T	0	30	mS	15			31	31			
C		30	54	mS	25			13	13	Random assumed depth to rock		
		54	120	Rock				0	0			
							Total	**44**	**44**			
							MB	-75	-71	DBSC MB	-75	-71
					Droughtiness grade (DR)			4	4		4	4
MF8/9/12/17/21 etc	T	0	30	mS	15			31	31			
D		30	51	mS	15			13	13	Random assumed depth to rock		
		51	120	Rock				0	0			
							Total	**44**	**44**			
							MB	-75	-71	DBSC MB	-75	-71
					Droughtiness grade (DR)			4	4		4	4
MF56/57	T	0	30	LmS	10			35	35			
A		30	40	LmS		10		9	9			
		40	120	Rock				0	0			
							Total	**44**	**45**			
							MB	-75	-71	DBSC MB	-52	-48
					Droughtiness grade (DR)			4	4		4	3b
MF56/57	T	0	30	LmS	10			35	35			
B		30	40	LmS		10		9	9			
		40	120	Chalk				59	30			
							Total	**104**	**75**			
							MB	-15	-41	DBSC MB	-52	-48

					Droughtiness grade (DR)			3a	3b		4	3b
MF56/57	T	0	30	LmS	10			35	35			
C		30	40	LmS		10		9	9			
		40	65	LmS		10		18	23			
		65	120	Rock				0	0			
							Total	**63**	**67**			
							MB	-56	-48	DBSC MB	-52	-48
					Droughtiness grade (DR)			4	3b		4	3b
MF56/57	T	0	30	LmS	10			35	35			
D		30	40	LmS		10		9	9			
		40	71	LmS		25		22	28			
		71	120	Rock				0	0			
							Total	**67**	**72**			
							MB	-52	-43	DBSC MB	-52	-48
					Droughtiness grade (DR)			4	3b		4	3b

Stone types			Climate Data	
%	TAv	EAv	MDwheat	119
hard	1	0.5	MDpotato	115
chalk	10	7		

Site No.		Depth cm		Texture	stone% hard	stone% chalk	Struct-ure	APwheat mm	AP potato mm		DBSC Wheat	DBSC Potato
SW11,12	T	0	20	LmS	5			25	25			
A		20	40	LmS	5			17	17			
		40	50	LmS		50		10	10			
		50	120	Rock				0	0			
							Total	**52**	**52**			
							MB	-67	-64	DBSC MB	-45	-41
					Droughtiness grade (DR)			4	4		3b	3b
SW11,12	T	0	20	LmS	5			25	25			
B		20	40	LmS	5			17	17			
		40	50	LmS		50		10	10			
		50	84	LmS		50		22	19			
		84	120	Rock				0	0			
							Total	**74**	**71**			
							MB	-45	-45	DBSC MB	-45	-41
					Droughtiness grade (DR)			3b	3b		3b	3b
SW11,12	T	0	20	LmS	5			25	25			
C		20	40	LmS	5			17	17			
		40	50	LmS		50		10	10			
		50	78	mSL		70		23	23	Illogical assumptions		
		78	120	Rock				0	0			
							Total	**74**	**75**			
							MB	-45	-41	DBSC MB	-45	-41
					Droughtiness grade (DR)			3b	3b		3b	3b
SW14	T	0	20	mSL	5			32	32			
A		20	50	mSL	5			43	43	DBSC MB shows less than no available water		
		50	120	Rock				0	0			
							Total	**75**	**75**			
							MB	-44	-40	DBSC MB	-46	-42
					Droughtiness grade (DR)			3b	3b		3b	3b
SW14	T	0	20	mSL	5			32	32			
B		20	50	mSL	5			43	43			
		50	60	mSL	15			9	13	If the profile is over sand and gravel, it could easily be 3a		
		60	120	mS	50			17	4			
							Total	**101**	**92**			

MB	-18	-23	DBSC MB	-46	-42
Droughtiness grade (DR)	3a	3a		3b	3b

Chippenham Park

Stone types			Climate Data	
%	TAv	EAv	MDwheat	119
hard	1	0.5	MDpotato	115
chalk	10	7		

Site No.		Depth cm		Texture	stone% hard	stone% chalk	Struct-ure	APwheat mm	AP potato mm		DBSC Wheat	DBSC Potato
CP6/7	T	0	30	mSL	12			45	45			
A		30	40	mSL	12			13	13			
		40	45	mSL		20		7	7			
		45	120	Rock				0	0			
							Total	**66**	**66**			
							MB	-53	-49	DBSC MB	-28	-24
					Droughtiness grade (DR)			4	3b		3b	3a
CP6/7	T	0	30	mSL	12			45	45			
B		30	40	mSL	12			13	13			
		40	45	mSL		20		7	7			
		45	120	Chalk				54	25			
							Total	**120**	**91**			
							MB	1	-24	DBSC MB	-28	-24
					Droughtiness grade (DR)			3a	3a		3b	3a
CP6/7	T	0	30	mSL	12			45	45			
C		30	40	mSL	12			13	13			
		40	45	mSL		20		7	7			
		45	78	mSL		95		25	26	Illogical assumptions		
		78	120	Rock				0	0			
							Total	**91**	**91**			
							MB	-28	-24	DBSC MB	-28	-24
					Droughtiness grade (DR)			3b	3a		3b	3a
CP76-79	T	0	30	mSL	12			45	45			
A		30	45	mSL	12			20	20			
		45	120	Rock				0	0			
							Total	**65**	**65**			
							MB	-54	-50	DBSC MB	-55	-51
					Droughtiness grade (DR)			4	3b		4	3b
CP76-79	T	0	30	mSL	12			45	45			
B		30	45	mSL	12			20	20	Profile notes "stop for chalk"		
		45	120	Chalk				54	25			
							Total	**119**	**90**			
							MB	0	-25	DBSC MB	-55	-51
					Droughtiness grade (DR)			3a	3a		4	3b

CP82-84, 88-90, 102-115, 133-137, 145-149	T	0	25	mSL	10			39	39				
A		25	45	mSL	10			27	27				
		45	120	Rock				0	0				
							Total	**66**	**66**	DBSC			
							MB	-53	-49	MB	-30	-26	
					Droughtiness grade (DR)			4	3b		4	3b	
CP82-84, 88-90, 102-115, 133-137, 145-149	T	0	25	mSL	10			39	39				
B		25	45	mSL	10			27	27	Profile notes "stop for chalk"			
		45	120	Chalk				54	25				
							Total	**120**	**91**	DBSC			
							MB	1	-24	MB	-30	-26	
					Droughtiness grade (DR)			3a	3a		4	3b	
CP82-84, 88-90, 102-115, 133-137, 145-149	T	0	25	mSL	10			39	39				
C		25	45	mSL	10			27	27				
		45	77	mSL	40			23	24	Illogical assumptions			
		77	120	Rock				0	0				
							Total	**89**	**89**	DBSC			
							MB	-30	-26	MB	-30	-26	
					Droughtiness grade (DR)			3b	3a		4	3b	
CP82-84, 88-90, 102-115, 133-137, 145-149	T	0	25	mSL	10			39	39				
D		25	45	mSL	10			27	27				
		45	66	mSL	30			18	23	Illogical assumptions			
		66	120	mSL	96			5	0				
							Total	**89**	**89**	DBSC			
							MB	-30	-26	MB	-30	-26	
					Droughtiness grade (DR)			3b	3a		4	3b	
CP82-84, 88-90, 102-115, 133-137, 145-149	T	0	25	mSL	10			39	39				
D		25	45	mSL	10			27	27				
		45	66	mSL	30			18	23	Illogical assumptions			
		66	120	mS	90			5	1				
							Total	**89**	**89**	DBSC			
							MB	-30	-26	MB	-30	-26	
					Droughtiness grade (DR)			3b	3a		4	3b	
CP153	T	0	25	mZCL	15			41	41				
A		25	50	mZCL	15			37	37				
		50	60	mZCL		30		9	15				
		60	120	Rock				0	0				
							Total	**86**	**92**	DBSC			
							MB	-33	-23	MB	-12	-17	

					Droughtiness grade (DR)			3b	3a		3a	3a
CP153	T	0	25	mZCL	15			41	41			
B		25	50	mZCL	15			37	37			
		50	60	mZCL		30		9	15	Profile notes "stop for chalk"		
		60	120	Chalk				42	10			
							Total	**128**	**102**			
							MB	9	-13	DBSC MB	-12	-17
					Droughtiness grade (DR)			2	3a		3a	3a
CP153	T	0	25	mZCL	15			41	41			
C		25	50	mZCL	15			37	37			
		50	60	mZCL		30		9	15	Profile notes "stop for chalk"		
		60	70	mZCL		50		9	14	Could plausibly be Grade 2		
		70	120	Chalk				35	0			
							Total	**130**	**106**			
							MB	11	-9	DBSC MB	-12	-17
					Droughtiness grade (DR)			2	2		3a	3a
CP172/173, 186/187,189,200/201, 209,210, 212, 213,218,224	T	0	25	mZCL		15		44	44			
A		25	30	mZCL		15		8	8			
		30	45	mZCL		20		23	23			
		45	120	Rock				0	0			
							Total	**76**	**76**			
							MB	-43	-40	DBSC MB	-22	-18
					Droughtiness grade (DR)			3b	3b		3b	3a
CP172/173, 186/187,189,200/201, 209,210, 212, 213,218,224	T	0	25	mZCL		15		44	44			
B		25	30	mZCL		15		8	8			
		30	45	mZCL		20		23	23	Profile notes "stop for chalk"		
		45	120	Chalk				54	25			
							Total	**130**	**101**			
							MB	11	-15	DBSC MB	-22	-18
					Droughtiness grade (DR)			2	3a		3b	3a
CP172/173, 186/187,189,200/201, 209,210, 212, 213,218,224	T	0	25	mZCL		15		44	44			
C		25	30	mZCL		15		8	8			
		30	45	mZCL		20		23	23	Profile could easily/plausibly be Grade 2		
		45	60	mZCL		50		15	20			
		60	120	Chalk				42	10			
							Total	**133**	**106**			
							MB	14	-9	DBSC MB	-22	-18
					Droughtiness grade (DR)			2	2		3b	3a

Chippenham Park Additional Area

Stone types			Climate Data	
%	TAv	EAv	MDwheat	119
hard	1	0.5	MDpotato	115
chalk	10	7		

Site No.		Depth cm		Texture	stone% hard	stone% chalk	Struct-ure	APwheat mm	AP potato mm		DBSC Wheat	DBSC Potato
CPa18,21	T	0	30	mSL	10			46	46			
A		30	40	mSL	10			14	14			
		40	60	mSL		20		24	28			
		60	120	Rock				0	0			
							Total	**84**	**88**			
							MB	-35	-27	DBSC MB	-26	-22
					Droughtiness grade (DR)			3b	3a		3b	3a
CPa18,21	T	0	30	mSL	10			46	46			
B		30	40	mSL	10			14	14			
		40	60	mSL		20		24	28	Profile notes "stop for chalk"		
		60	120	Chalk				42	10			
							Total	**126**	**98**			
							MB	7	-17	DBSC MB	-26	-22
					Droughtiness grade (DR)			2	3a		3b	3a
CPa18,21	T	0	30	mSL	10			46	46			
C		30	40	mSL	10			14	14			
		40	60	mSL		20		24	28			
		60	85	mS	30			9	5	Illogical assumptions		
		85	120	Rock				0	0			
							Total	**93**	**93**			
							MB	-26	-22	DBSC MB	-26	-22
					Droughtiness grade (DR)			3b	3a		3b	3a
CPa31	T	0	25	mSL	30			31	31			
A		25	120	Rock				0	0			
							Total	**30**	**31**			
							MB	-89	-85	DBSC MB	-73	-69
					Droughtiness grade (DR)			4	4		4	4
CPa31	T	0	25	mSL	30			31	31			
B		25	39	mSL	30			15	15	Illogical assumption		
		39	120	Rock				0	0			
							Total	**46**	**46**			
							MB	-73	-69	DBSC MB	-73	-69
					Droughtiness grade (DR)			4	4		4	4
CPa52,56,57,62	T	0	30	mSL	3	2		49	49			

B		30	80	mSL		10		61	58			
		80	120	Rock				0	0			
							Total	**110**	**107**			
							MB	-9	-8	DBSC MB	-10	-16
					Droughtiness grade (DR)			3a	2		3a	3a
CPa52,56,57,62	T	0	30	mSL	3	2		49	49			
B		30	80	mSL		10		61	58	Profiles note "stop for chalk"		
		80	120	Chalk				28	0			
							Total	**138**	**107**			
							MB	19	-8	DBSC MB	-10	-16
					Droughtiness grade (DR)			2	2		3a	3a

Bay Farm

Stone types			Climate Data	
%	TAv	EAv	MDwheat	117
hard	1	0.5	MDpotato	113
chalk	10	7		

Site No.		Depth cm		Texture	stone% hard	stone% chalk	Struct-ure	APwheat mm	AP potato mm		DBSC Wheat	DBSC Potato
BF3,7	T	0	30	mSL	8			47	47			
A		30	40	mSL	8			14	14			
		40	60	LmS		15		15	18			
		60	120	Rock				0	0	DBSC MB	-28	-30
							Total	**76**	**79**	BF3	3b	3a/3b
							MB	-41	-34		-19	-23
					Droughtiness grade (DR)			3b	3b	BF7	3a	3a
BF3,7	T	0	30	mSL	8			47	47			
B		30	40	mSL	8			14	14	Profiles note "stop for chalk"		
		40	60	LmS		15		15	18			
		60	120	Chalk				42	10	DBSC MB	-28	-30
							Total	**118**	**89**	BF3	3b	3a/3b
							MB	1	-24		-19	-23
					Droughtiness grade (DR)			3a	3a	BF7	3a	3a
BF45-49,65-68, 81-85	T	0	25	LmS	5	5		31	31			
A		25	40	LmS	5	5		13	13			
		40	120	Rock				0	0			
							Total	**44**	**44**			
							MB	-73	-69	DBSC MB	-56	-52
					Droughtiness grade (DR)			4	4		4	4
BF45-48,65-68, 81-85	T	0	25	mSL	5	5		40	40			
B		25	40	mSL	5	5		21	21			
		40	120	Rock				0	0			
							Total	**61**	**61**			
							MB	-56	-52	DBSC MB	-56	-52
					Droughtiness grade (DR)			4	3b		4	4
BF45-48,65-68, 81-85	T	0	25	LmS	5	5		31	31			
C		25	40	LmS	5	5		13	13			
		40	80	LmS	42	5		17	17	Illogical assumption		
		80	120	Rock				0	0			

							Total	**61**	**61**			
							MB	-56	-52	DBSC MB	-56	-52
					Droughtiness grade (DR)			4	3b		4	4
BF45-48,65-68, 81-85	T	0	25	LmS	5	5		31	31			
D		25	40	LmS	5	5		13	13	Profile notes "stop for chalk"		
		40	120	Chalk				59	30			
							Total	**103**	**74**			
							MB	-14	-39	DBSC MB	-56	-52
					Droughtiness grade (DR)			3a	3b		4	4

Snailwell

Stone types			Climate Data	
%	TAv	EAv	MDwheat	120
hard	1	0.5	MDpotato	116
chalk	10	7		

hard

Site No.		Depth cm		Texture	stone% hard	stone % chalk	Struct-ure	APwheat mm	AP potato mm		DBSC Wheat	DBSC Potato
S47	T	0	30	mSL	10			46	46			
A		30	45	mSL	10			20	20	DBSC MB assumes less than no available water		
		45	80	mCL	10			34	36			
		80	120	Rock				0	0			
							Total	**101**	**103**	DBSC MB	-20	-25
							MB	-19	-13		3a/3b	3a
					Droughtiness grade (DR)			3a	3a			
S47	T	0	30	mSL	10			46	46			
B		30	45	mSL	10			20	20			
		45	80	mCL	10			34	36			
		80	120	mCL	20			32	0			
							Total	**133**	**103**	DBSC MB	-20	-25
							MB	13	-13		3a/3b	3a
					Droughtiness grade (DR)			2	3a			
S69	T	0	40	PS	0			156	156			
A		40	120	Rock				0	0			
							Total	**156**	**156**	DBSC MB	-60	-56
							MB	36	40		4	4
					Droughtiness grade (DR)			1	1			

Appendix 2: Agricultural Land Classification – Patrick Stephenson and Sam Franklin

Patrick Stephenson Ltd
Agricultural Consultants

AGRICULTURAL LAND CLASSIFICATION REPORT

Sunnica Energy Farm

Chippenham

Cambridgeshire

CB7 5PP

Proposed Development

October (Update) 2022

Prepared by: Patrick Stephenson BSc (Hons) Agriculture

Contents Page No.

1.0 Introduction

Patrick Stephenson Limited was approached to undertake a detailed Agricultural Land Classification Survey (ALC Survey) of the agricultural land quality at selected fields in and around Chippenham, Cambridgeshire. The envelope covers approximately 80 hectares and is located between the villages of Isleham, Chippenham, and Worlington.

1.1 Method

The method used to create this report was primary research in the form of a detailed-on site Agricultural Land Classification survey following the guidelines and criteria as stated in the documents listed below:

- "The Revised Guidelines and Criteria for Grading the Quality of Agricultural Land" DEFRA 1988
- "Specifications for Topsoil" British Standards Institute 2007.

Survey work was carried out in August 2021 across 80 ha of arable land, as outlined in the plans in Appendix 1. Soils were examined using a one metre handheld Dutch Auger at one hundred metre intervals. Additional borings were made to confirm soil boundaries and profiles. Secondary research was carried out via a desk top survey covering the whole area.

In September 2022 a further survey was undertaken on land previously sampled and further fields adjacent to the Sunnica proposed development. This survey involved the digging of soil pits laboratory analysis and photographs to support the findings. This work was carried by Mr P Stephenson and Mr S Franklin

1.2 Secondary Research

The desk top survey used the following sources:

- Published Agricultural Land Classification (ALC) Grades for the area
- The area viewed on Google Maps (Tele Atlas 2012)
- Natural England MAGIC web site (http://magic.defra.gov.uk/website/magic)
- The British Geological Survey Digital Mapping (70)
- Planning Policy Statement 7 (PPS7) *Sustainable Development in Rural Areas.*
- LA112 population and human health update January 2020
- The National Planning Policy Framework (NPPF July 2018)
- MAFF's *Guidelines for Agricultural Land Classification of England and Wales* (Revised 1988)
- Metropolitan Weather Office data
- Landis Soilscape
- Soil Survey of England and Wales Sheet 4

The research was conducted to establish what the land quality is like in the area and if the development of the proposed site would result in the loss of the 'best and most versatile' agricultural land.

1.3 Planning Policy

Planning policy regarding agricultural land in England has continually evolved. Most recently, from guidance contained in Planning Policy Guidance Note 7 (PPG7), The Implementation of National Planning Policy Guidance in relation to the Diversification of Farm Businesses March 2001 (*The Countryside Environmental Quality and Economic and Social Development*) to the Planning Policy Statement 7 (PPS7) *Sustainable Development in Rural Areas.*

Guidance contained in PPS7 was recently superseded by the National Planning Policy Framework (NPPF July 2018). Whilst reflecting much of the earlier advice the NPPF states that,

> *"Local planning authorities 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 a higher quality*".

The NPPF does specifically classify the 'best and most versatile' agricultural land. Further clarity is provided in MAFF's *Guidelines for Agricultural Land Classification of England and Wales* (Revised 1988) which refers to the 'best and most versatile' land as Grades 1 to 3a. Further modification to the assessment of land and its economic impact is outlined in LA112 Population and Human Health, update January 2020.

2.0 Location

Seven fields were selected for assessing, these were:-

T3 Surprise Hill TL 6772 8800 approx. 12.00 ha Off Elms Road

T1 Smiths Rectory Farm TL 6843 7197 9.5 ha Off Elm Road

T 25 Beck Road TL6673 8125 approx. 23 ha

Gargett TL 6870 4858 approx. 16 ha Near Badlingham Manor

Havica TL 6870 2040 approx. 14 ha Near Badlingham Manor

Isleham TL 6772 8800 approx. 10 ha off Station Road

County Council land at TL 6524 7294 off Station Road

Appendix 1 shows the land locations.

2.1 Site characteristics

The Soils of England and Wales (Sheet 4) shows the area to be dominated by three soil series Newport 4, Moulton and Swaffham Prior. The Cranfield University Land Information System describes them as follows:-

Newport 4

Deep well drained sandy soils covering 746 km² (0.5% of England and Wales). Growing Cereals, Sugar Beet, Carrots and Potatoes.

Moulton

Well drained coarse and fine loamy soils with similar shallow calcareous coarse loamy soils over chalk or chalk rubble in places. This series covers 149 km² (0.1% of England and Wales). In average years the soils are slightly droughty for cereals, oilseed rape and sugar beet, moderately droughty for potatoes and very droughty for grass.

Swaffham Prior

Well drained calcareous coarse and fine loamy soils over chalk rubble covering 693 km² (0.46% of England and Wales). The soils are very easy to cultivate and there are adequate days for spring and autumn cultivation. Yields from direct drilled autumn- and spring-sown crops are like those from conventional techniques. Arable crops including winter and spring cereals, sugar beet, potatoes, peas, and beans are grown

2.2 Climate and Relief

The Metropolitan Weather Office data for the Newmarket area shows an annual average annual rainfall of 580 mm, and the accumulated temperature from the period January to June as 1555 c˚.

The land is flat to gently sloping 0˚- 6˚ and the Ordinance Survey data shows the land to be between 5m and 19m meters above sea level.

3.0 Land Use

The surveyed area is currently parsnips, potato, and cereal stubbles.

4.0 Land Quality

The quality of land is assessed using the ALC Scheme, established by Defra, which provides a method for assessing the quality of farmland, so informed choices can be made about its future use within the planning system. It also helps underpin the principles of sustainable development.

4.1 Definitions and Grades

The ALC system classifies land into 1 through to 5 Grades, with Grade 3 further subdivided into Grade 3a and 3b, see Table 1. Consistent with national guidance, Grades 1, 2 and 3a represents the 'best and most versatile' land.

The 'best and most versatile' land is considered to be the 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 Grade 1 and 2 together form about 21% of all farmland in England; Sub-Grade 3a contains a similar amount.

The ALC system is used by Defra and others to give advice to local planning authorities, developers and the public if development is proposed on agricultural land or other 'Greenfield' sites that could grow crops. The General Development (Procedure) Order refers to the 'best and most versatile' land policy in requiring statutory consultations with Defra.

The ALC grading system is also used by commercial consultants to advise clients on land use and planning issues.

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.

Climate: temperature and rainfall; aspects, 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 also 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.

4.2 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
- the cost of obtaining the crop

The ALC gives a high Grade to land which allows more flexibility in the range of crops that can be grown (its 'versatility') and which require lower inputs. These higher Grades (1, 2,3a) also take into account the ability to produce consistently high yields of a narrower range of crops.

Table 1- Definitions of Land Classification Grades

Grade	Definition
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 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 – Good to Moderate Quality Agricultural Land	Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.
Sub-Grade 3a – Good Quality Agricultural Land	Land capable of consistently producing moderate to high yields from a narrow range of arable crops, especially cereals, or moderate yields from a wide range of crops including cereals, grass, oilseed rape,

	potatoes, sugar beet and the less demanding horticultural crops.
Sub-Grade 3b – Moderate Quality Agricultural Land	Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields from a wider range of crops or high yields of grass which can be grazed or harvested 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, the yields of which are variable. The Grade includes very droughty arable land.
Grade 5 – Very Poor Quality Agricultural Land	Land with very severe limitations, which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

Planning Policy Guidance note 7 Annex B paragraph B11 refers to irrigation and its impact on land quality. Land which has a proven supply of water and has irrigation systems operating with secure licenses will be categorised in line with their potential.

5.0 Published Survey Information

The Provisional ALC survey 1968-1972 carried out by MAFF showed the whole site to be Grade 2,3 and 4. It is acknowledged that this survey has limitations as boundaries and soil grades are determined by one sample every 80 ha and there is no sub-grade for Grade 3 lands. Detailed published land classification details show that there are grade 3a, 3b and 2 soils in the vicinity of the proposed development.

6.0 Survey Results

The field survey work was carried out in accordance with the method described in the "Revised Guidelines and Criteria for Grading the Quality of Agricultural Land" (DEFRA 1988).

The following soil grades were found within the survey area. Appendix 3 has a description of the sample point profiles. Table 2 shows a summary of the ALC grades found on the site as shown in Appendix 2.

Table 2 Summary of ALC Grades

Grade/Subgrade	Approximate Area Ha	Area %
2	8.0	10.0
3a	54.4	68.0
3b	15.9	19.9
4	1.7	2.1
Total	80.00	100

The detailed survey showed that most of the topsoil was sandy loam, loamy sand to silty sandy. Topsoil depth varied from 250 mm to 450 mm across the sites. All profiles had a degree of chalk and variable flint content. The main grade limiting factor was soil droughtiness and to a lesser extent soil depth.

Grade 2

This accounted for 10% of the area and was exclusively at the Isleham site. The topsoil was 400mm and had chalk throughout the profile and characterised as sandy loam over sandy silty loam. The main limitation for this grade was droughtiness.

Grade 3

3a Sub-grade

This accounted for 68% of the total and was the main grade across all sites. The soils were predominantly either sandy loam or loamy sand to a minimum depth of 250mm. Sub-soils varied from sandy silt loams, loamy sands to sands. The limiting factors for these soils are primarily droughtiness and to a lesser extent depth of the topsoil.

3b subgrade

This accounted for 19.9% of the area and was the second largest area. This was categorised by droughtiness and limitations to soil depth. The topsoil was commonly loamy sand with sand subsoils.

Grade 4

This area was adjacent to the River Kennet where flooding and wetness were the major characteristic.

7.0 Conclusion

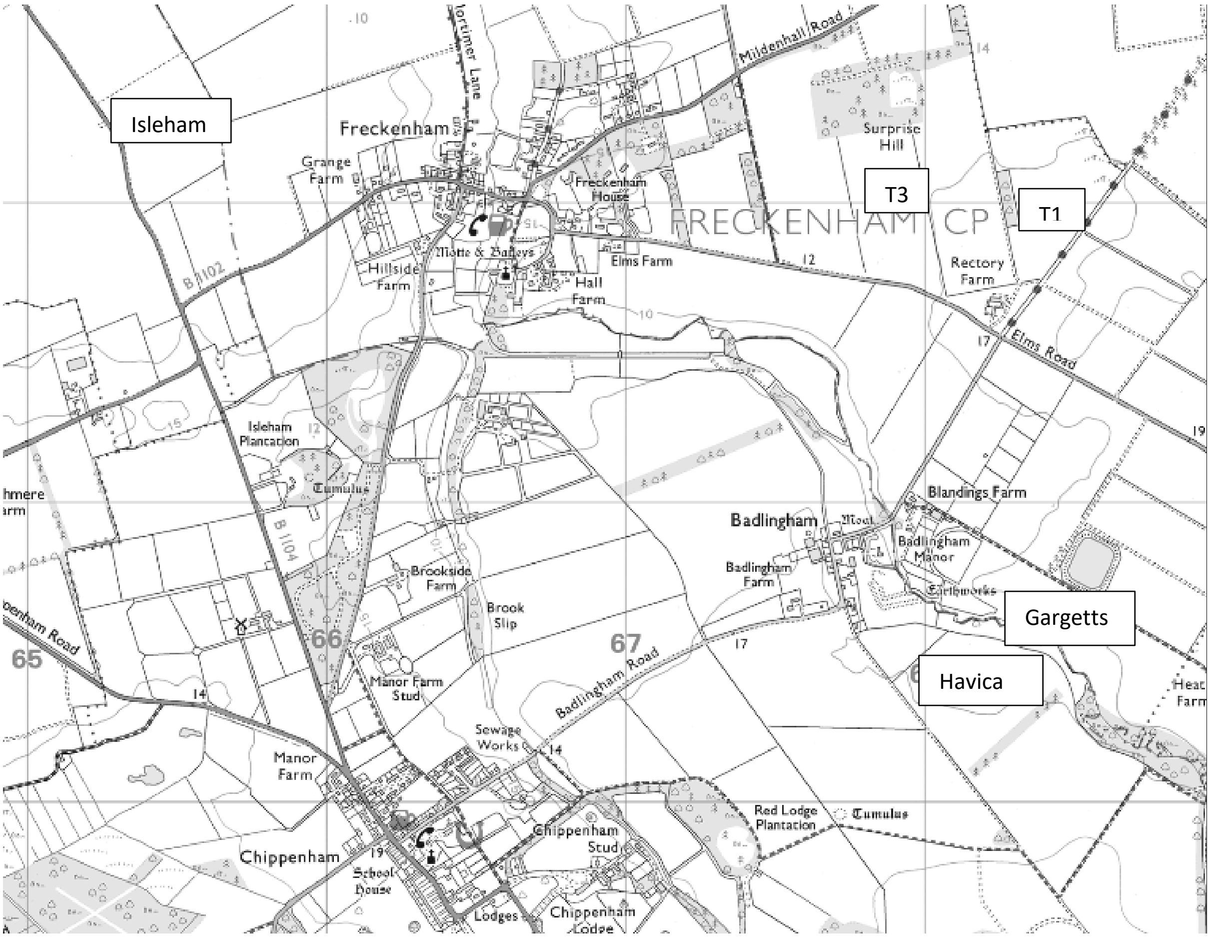
The original survey results were confirmed by the secondary survey carried out in September 2022. The area surveyed which was all adjacent to the Sunnica proposed developments shows that a significant amount of the land should be classed within grades 2 and 3a.

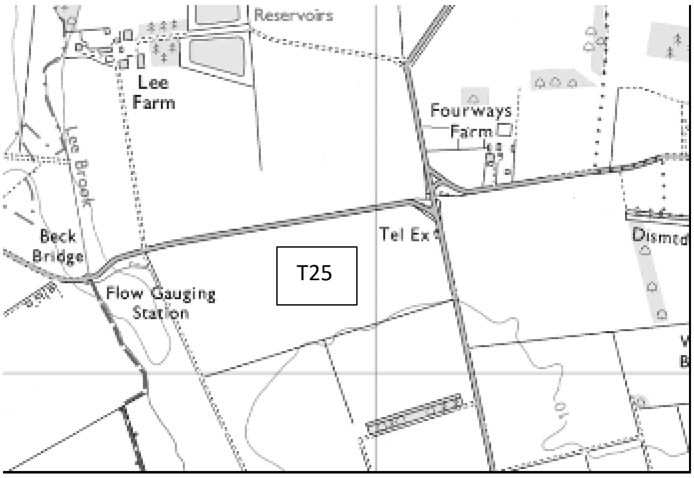
The assumption made in the Sunnica report that the soil grade is primarily due to the irrigation available can be challenged as much of the area would fit the criteria for 'best and most versatile' without irrigation.

The Sunnica Survey fails to conform to the guidelines for planning officers set out by the British Society of Soil Science Guidance Document 1 – **Assessing Agricultural Land Classification Surveys in England and Wales** which gives a check list of requirements for an adequate survey, and states that, if the answer to any of the checklist questions is 'FAIL', then there may be justification in seeking a professional assessment of the report's quality and reliability. It is very important reports are assessed thoroughly"

Natural England's position on the ALC is based around the Sunnica ALC report which this result contests.

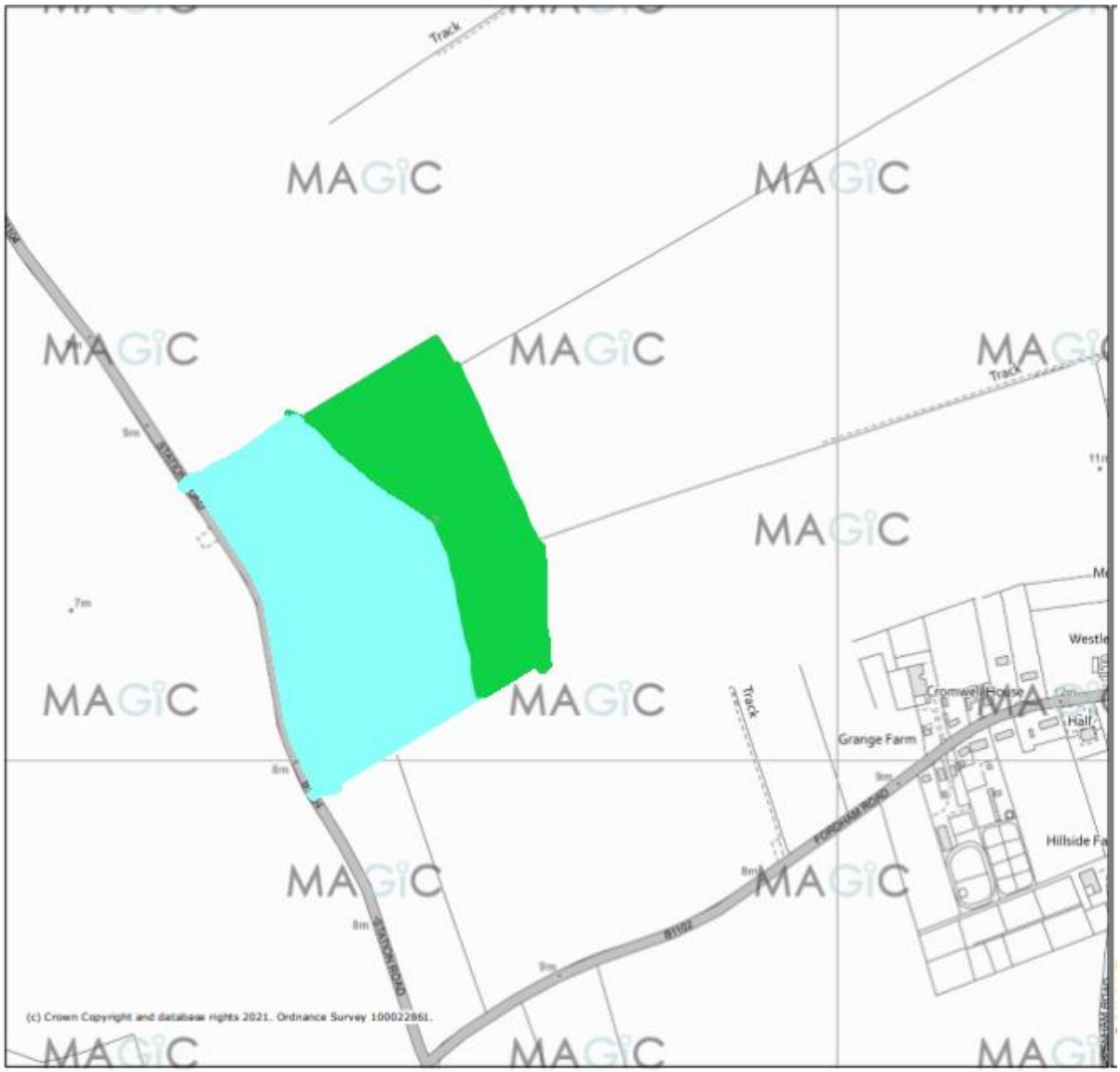
Appendix 1 – Location of Land


Isleham
Freckenham
T3
T1
FRECKENHAM CP
Mildenhall Road
Surprise Hill
Rectory Farm
Elms Road
Elms Farm
Hall Farm
Freckenham House
Grange Farm
Hillside Farm
Isleham Plantation
Tumulus
B 1102
B 1104
Blandings Farm
Badlingham
Badlingham Manor
Badlingham Farm
Earthworks
Gargetts
Havica
Brookside Farm
Brook Slip
Manor Farm Stud
Sewage Works
Badlingham Road
Manor Farm
Chippenham
School House
Chippenham Stud
Chippenham Lodge
Lodges
Red Lodge Plantation
65
66
67

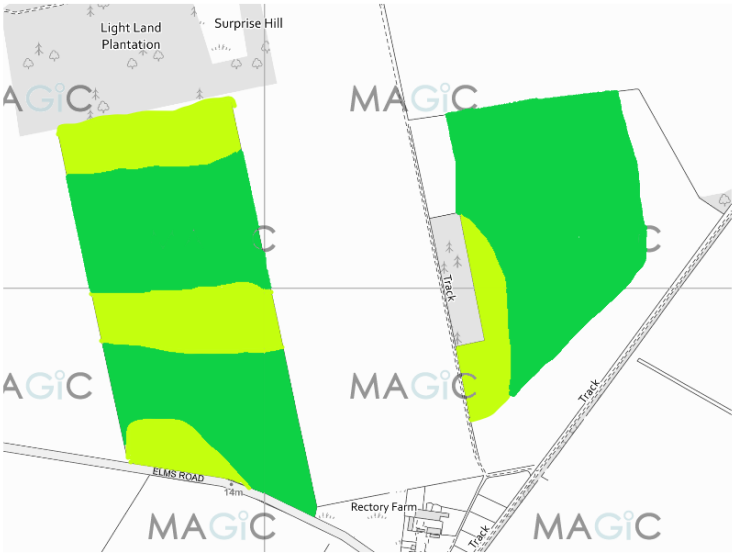

Reservoirs
Lee Farm
Lee Brook
Fourways Farm
Beck Bridge
Flow Gauging Station
T25
Tel Ex

Appendix 2 - Detailed ALC map

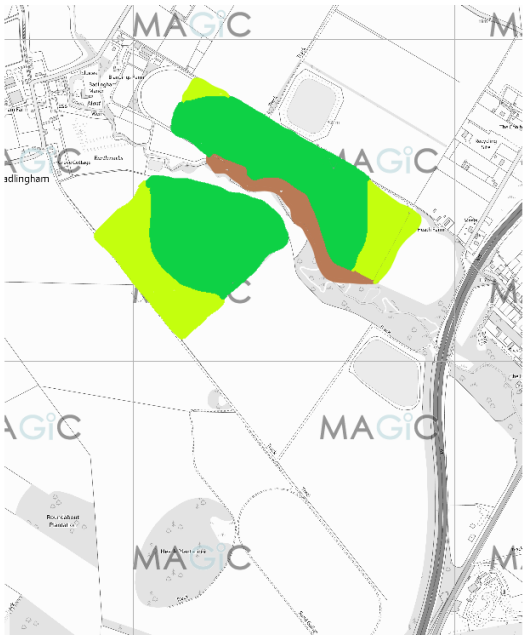
Isleham



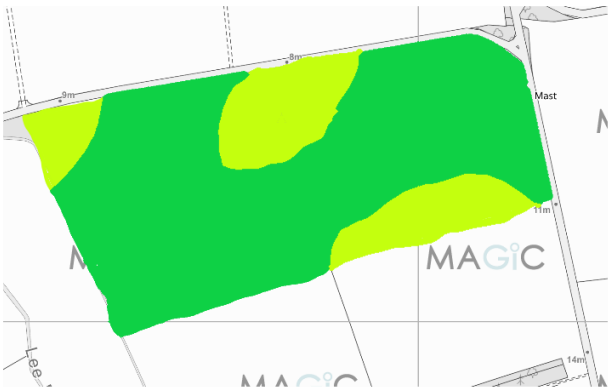
T3 T1



Gargett and Havica



T25



Key

Grade 2	
Grade 3a	
Grade 3b	
Grade 4	

Appendix 3- Sampling Point Descriptions
SOIL PROFILE SURVEY RESULTS

Soil Type Key:
O- ORGANIC
C- CLAY
S- SAND
L- LOAM
Z- SILT
P- PEAT

Hole	Grid ref	Texture	Depth mm	Stones	Wetness Class
	FIELD T3				
1 17m	N5219 078 E000 27 034	SL LS	0-30 30+	CHALK ODD FLINT	I
2	N5219 129 E000 27 809	SL LS	0-35 35+	CHALK	I
3	N5219 181 E000 27 787	SL S	0-30 30+	CHALK FLINT	I
4	N5219 239 E000 27 769	SL LS	0-25 25+	CHALK FLINT	I
5	N5219 295 E000 27 754	SL LS	0-25 25+	CHALK FLINT	I
6	N5219 345 E000 27 739	LS S	0-25 25+	CHALK FLINT	I
7	N5219 336 E000 27 661	LS S	0-25 25+	CHALK FLINT	I
8	N5219 289 E000 27 675	SL	0-30	CHALK FLINT	I

		LS	30+		
9	N5219 242 E000 27 687	SL LS	0-25 25+	CHALK FLINT	I
10	N5219 192 E000 27 703	SL S	0-35 35+	CHALK FLINT	I
11	N5219 144 E000 27 715	SL LS	0-25 25+	CHALK FLINT	I
12	N5219 099 E000 27 729	LS S	0-30 30+	CHALK FLINT	I
	FIELD T1				I
13	N5219 147 E000 28 135	SL S	0-40 40+	CHALK FLINT	I
14	N5219 192 E000 28 124	SL S	0-45 45+	CHALK FLINT	I
15	N5219 243 E000 28 111	SL S	0-30 30+	CHALK FLINT	I
16	N5219 298 E000 28 097	SL SL	0-35 35+	CHALK FLINT	I
17	N5219 348 E000 28 168	LS S	0-45 45+	LOW CHALK FLINT	
18	N5219 301 E000 28 180	LS S	0-45 45+	LOW CHALK FLINT	I
19	N5219 252 E000 28 194	LS S	0-45 45+	LOW CHALK FLINT	I

20	N5219 200 E000 28 211	LS S	0-45 45+	LOW CHALK FLINT	I
	FIELD T25				I
21 7m	N5219 899 E000 27 112	SILTY LOAM SILTY SANDY LOAM	0-25 25+	CHALK FLINT	I
22	N5219 891 E000 27 034	LS S	0-30 30+	CHALK FLINT	I
23	N5219 878 E000 26 954	LS S	0-25 25+	CHALK FLINT	I
24	N5219 865 E000 26 874	LS S	0-25 25+	CHALK FLINT	I
25	N5219 849 E000 26 784	SL S	0-30 30+	CHALK FLINT	I
26	N5219 838 E000 26 710	LS S	0-35 35+	CHALK FLINT	I
27	N5219 827 E000 26 622	SILTY L SL	0-25 25+	CHALK FLINT	I
28	N5219 859 E000 26 565	SL LS	0-30 30+	CHALK FLINT	I
29	N5219 917 E000 26 539	LS S	0-30 30+	CHALK FLINT	I
30	N5219 940 E000 26 605	LS S	0-35 35+	CHALK FLINT	I
31	N5219 895 E000 26 642	LS S	0-35 35+	CHALK FLINT	I

32	N5219 906 E000 26 729	LS S	0-35 35+	CHALK FLINT	I
33	N5219 951 E000 26 718	LS S	0-25 25+	CHALK FLINT	I
34	N5219 963 E000 26 791	LS S	0-30 30+	CHALK FLINT	I
35	N5219 925 E000 26 839	S COARSE S	0-30 30+	CHALK FLINT	I
36	N5219 927 E000 26 914	SILTY L S	0-25 25+	CHALK FLINT	I
37	N5219 977 E000 26 910	SILTY L S SILTY L	0-25 25+	CHALK FLINT	I
38	N5219 983 E000 26 994	SILTY L SL	0-30 30+	CHALK FLINT	I
39	N5219 939 E000 27 019	LS SILTY L	0-30 30+	CHALK FLINT	I
40	N5219 969 E000 27 072	SL S SILTY L	0-30 30+	CHALK FLINT	I
41	N5219 940 E000 27 104	SILTY L S SILTY L	0-25 25+	CHALK FLINT	I
	FIELD GARGETT				
42	N5218 588 E000 27 955	LS S	0-35 35+	CHALK	I
43	N5218 567 E000 28 015	SL S	0-35 35+	CHALK	I
44	N5218 542	SL	0-40	CHALK	I

	E000 28 077	S	40+	FLINT	
45	N5218 513 E000 28 151	SL S	0-45 45+	CHALK FLINT	I
46	N5218 491 E000 28 207	SL S	0-30 30+	CHALK FLINT	I
47	N5218 468 E000 28 270	SL S SILTY L	0-30 30+	CHALK	I
48	N5218 440 E000 28 339	SL S SILTY L	0-30 30+	CHALK	I
49	N5218 411 E000 28 418	LS S	0-25 25+	CHALK FLINT	I
50	N5218 371 E000 28 379	LS SILTY LOAM	0-25 25+	CHALK FLINT	I
51	N5218 400 E000 28 311	LS SILTY LOAM	0-25 25+	CHALK FLINT	I
52	N5218 422 E000 28 251	S SILTY L LS	0-30 30+	CHALK FLINT	I
53	N5218 447 E000 28 188	SILTY L SILT	0-30 30+	CHALK FLINT	I
54	N5218 471 E000 28 124	LS S	0-30 30+	CHALK FLINT	I

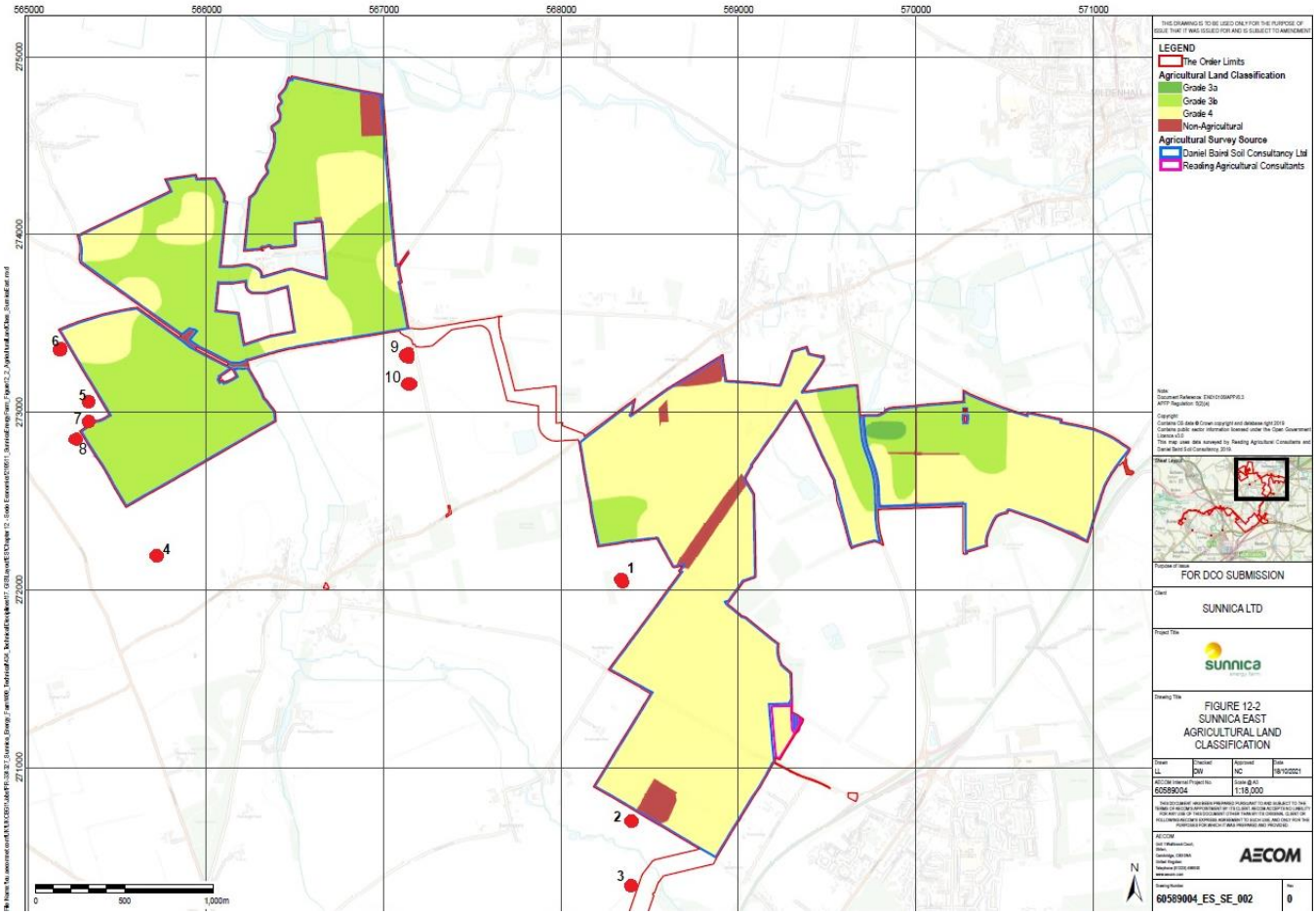
55	N5218 495 E000 28 063	S SILTY L L S	0-30 30+	CHALK FLINT	I
56	N5218 518 E000 28 004	SILTY L S SILTY L	0-30 30+	CHALK FLINT	I
57	N5218 542 E000 27 942	SILTY L S	0-30 30+	CHALK FLINT	I
	FIELD HAVACRE				
58	N5218 297 E000 27 787	SL S	0-25 25+	CHALK FLINT	I
59	N5218 343 E000 27 744	SL S	0-25 25+	CHALK FLINT	I
60	N5218 382 E000 27 796	LS S	0-25 25+	CHALK LOTS OF FLINT	I
61	N5218 403 E000 27 867	LS S	0-30 30+	CHALK FLINT	I
62	N5218 417 E000 27 944	SILTY L SL	0-30 30+	CHALK FLINT	I
63	N5218 409 E000 28 018	SILTY L LS	0-30 30+	CHALK FLINT	I
64	N5218 385 E000 28 095	SILTY L LS	0-30 30+	CHALK FLINT	I
65	N5218 341 E000 28 119	SILTY L S	0-30 30+	CHALK FLINT	I
66	N5218 311	LS	0-30	CHALK	I

	E000 28 063	S	30+	LESS FLINT	
67	N5218 330 E000 27 933	LS S	0-30 30+	LESS CHALK MORE FLINT	I
68	N5218 303 E000 27 930	LS S	0-30 30+	CHALK FLINT	I
69	N5218 260 E000 27 953	SL S	0-25 25+	CHALK FLINT	I
70	N5218 232 E000 27 892	SL S	0-25 25+	CHALK FLINT	I
71	N5218 268 E000 27 843	SL S	0-25 25+	CHALK FLINT	I
	FIELD ISLEHAM				
72	N5219 388 E000 25 477	SCL SILTY L	0-30 30+	CHALK	I
73	N5219 411 E000 25 550	SL S SILTY L	0-30 30+	CHALK	I
74	N5219 433 E000 25 617	SL SL to SAND	0-40 40+	CHALK	I
75	N5219 451 E000 25 685	SL SL to SAND	0-30 30+	CHALK	I
76	N5219 400 E000 25 711	SL SL to LS	0-30 30+	CHALK	I
77	N5219 354 E000 25 719	SL SL to LS	0-40 40+	CHALK	I
78	N5219 332 E000 25 655	SL SL to LS	0-40 40+	CHALK	I

79	N5219 365 E000 25 610	SL LS to SAND	0-40 40+	CHALK	I
80	N5219 300 E000 25 551	SL LS to CHALK	0-40 40+	CHALK	I
81	N5219 338 E000 25 508	SL LS to SAND to CHALK	0-40 40+	CHALK	I

Appendix 4

Soil Pit locations



Pit 1 Rectory

Pit 2 Gargetts


Pit 3 Havacre


It 4 Isleham Roy’s field

Pit 5 CCC land

Pit 6 CCC

Pit 8 T25

Pit 9 t25

Appendix 5

Soil Pit descriptions

Field	Location Northing/Easting	Topsoil	Subsoil 1	subsoil 2	Stones top	stones sub
Rectory Fm (1)	52197173/00028117	0-50 Sandy loam	50-65 sand		<5%	<10%
Gargetts	5218814/00028178	0-50 sandy loam/sandy clay loam	50-75 sandy loam,	chalk bedrock	<10% less than 2.5cm	<10% + flints >5cm
Havacre	5218342/00028141	0-30 Sandy clay loam,	30-45 silty loam	45-72 chalk	<10% odd flint> 5cm	<10% + flints >5cm
Isleham	5219469/00025691	0-35 sandy loam/sandy clay loam	35-50 sandy loam + chalk	50 + compacted chalk	<1%	<1%
CCC1	5218822/00025566	0-30 Sandy clay loam,	30- compacted chalk		<1%	<1%
CCC2	5220020/00025395	0-30 Sandy loam/sandy clay loam,	30-70 clay loam	70+ chalk	<1%	<1%
CCC3	5219774/00025491	0-30 Sandy loam/sandy clay loam,	30-45 sandy loam	45+ chalk	<1%	<1%
T25	5219880/00027105	0-30 Sandy loam	30-75 loose chalk		no stones	
T25	5219897/00027138	0-45 sandy loam/sandy clay loam	45-150 sandy loam	150 sand	no stones	

Apendix 6

Laboratory tests

Location	sand	silt	clay	soil type
Rectory	60.55	29.04	10.41	sandy loam
Roys	49.61	31.62	18.77	clay loam
Gargetts	58.25	27.09	14.66	sandy loam
Havacre	36.6	47.67	15.73	sandy silt loam
T25 2	44.88	35.92	19.2	clay loam
T25 1	46.49	38.59	14.92	sandy silt loam
County Council 1	37.1	42.1	20.8	clay loam
CC 2	39.76	41.03	19.21	clay loam
CC 3	44.4	37.18	18.42	clay loam
CC 4	38.75	38.01	23.24	clay loam

	pH	**P**	**K**	**Mg**	**Ca**	**S**	**Na**	**B**	**Cu**	**Fe**	**Mn**	**Mo**	**Zn**		**CEC**
GUIDE	**6.5**	**16-25 (index 2)**	**121-180 (index 2-)**	**51-100 (index 2)**	**1600**	**10**	**90**	**2.1**	**2.1**	**50**	**110**	**0.04**	**4.5**	**15**	15
			181-240												

			(index 2+)												
Rectory Top	7.7	48 (3)	89 (2+)	41 (1)	3751	1	22	0.83	3.3	384	108	0.02	3.8		19.5
Roysfield top	8.1	16 (1)	203 (2+)	56 (-2)	3112	5	34	2.49	5.3	98	239	0.04	3.5		13.6
Gargetts top	8.2	35 (3)	79 (1)	33 (1)	2100	5	10	0.98	3.6	42	38	0.04	4.5		8.8
havacre top	8.1	23 (2)	185 (2+)	58 (2)	2703	9	16	3.39	3.8	56	86	0.04	6.5		11.8
T25 2 top	8.1	53 (4)	173 (2-)	56 (2)	2457	6	12	1.54	4.4	164	72	0.04	6.4		10.7
T25 1 top	8.1	20 (2)	117 (1)	52 (1)	2272	11	8	1.63	3.6	62	76	0.06	4.6		9.7
county council 1	8.1	27 (3)	210 (2+)	36 (1)	2697	8	12	1.22	3.4	35	62	0.03	3.7		11.6
county council 2	8.2	20	339	46	2950	9	19	1.4	4	37	61	0.03	5.2		13.1
county council 3	8.1	35	181	49	3196	8	17	1.8	4.7	39	55	0.06	4.9		13.8
county	8.1	26	211	60	3238	8	17	2.07	4.9	52	70	0.03	4.3		14.1

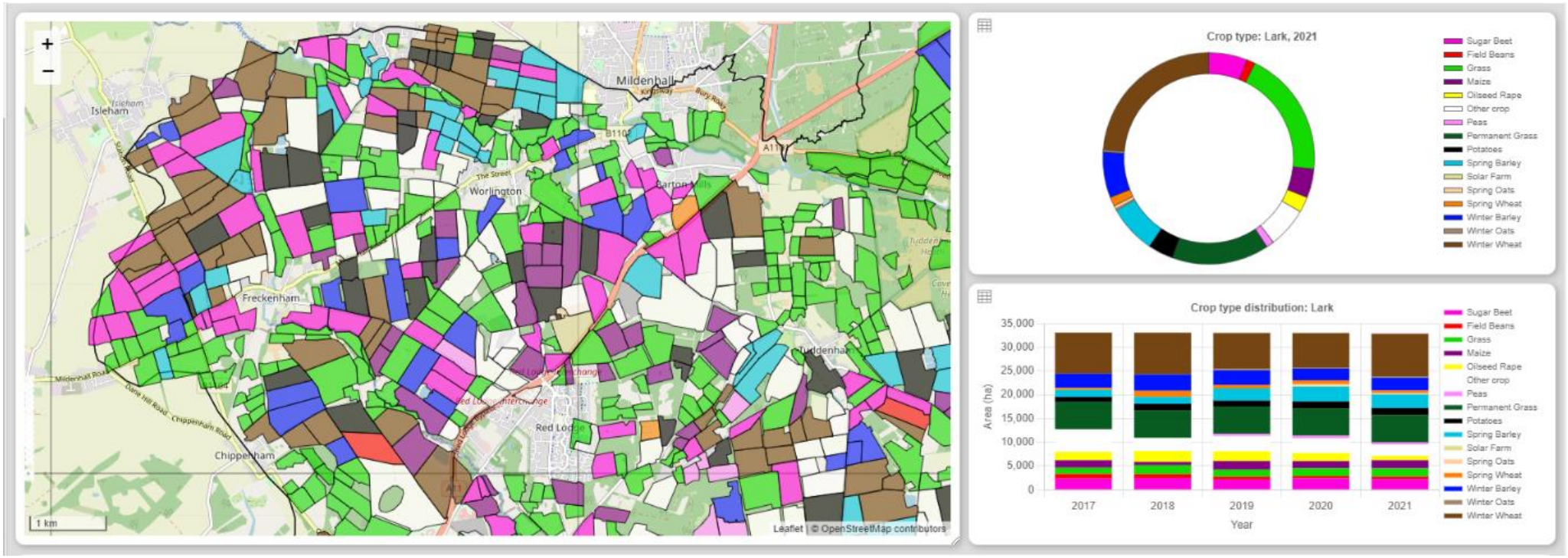
council 4 top <35cm															

Appendix 4
Aerial and Street View Images

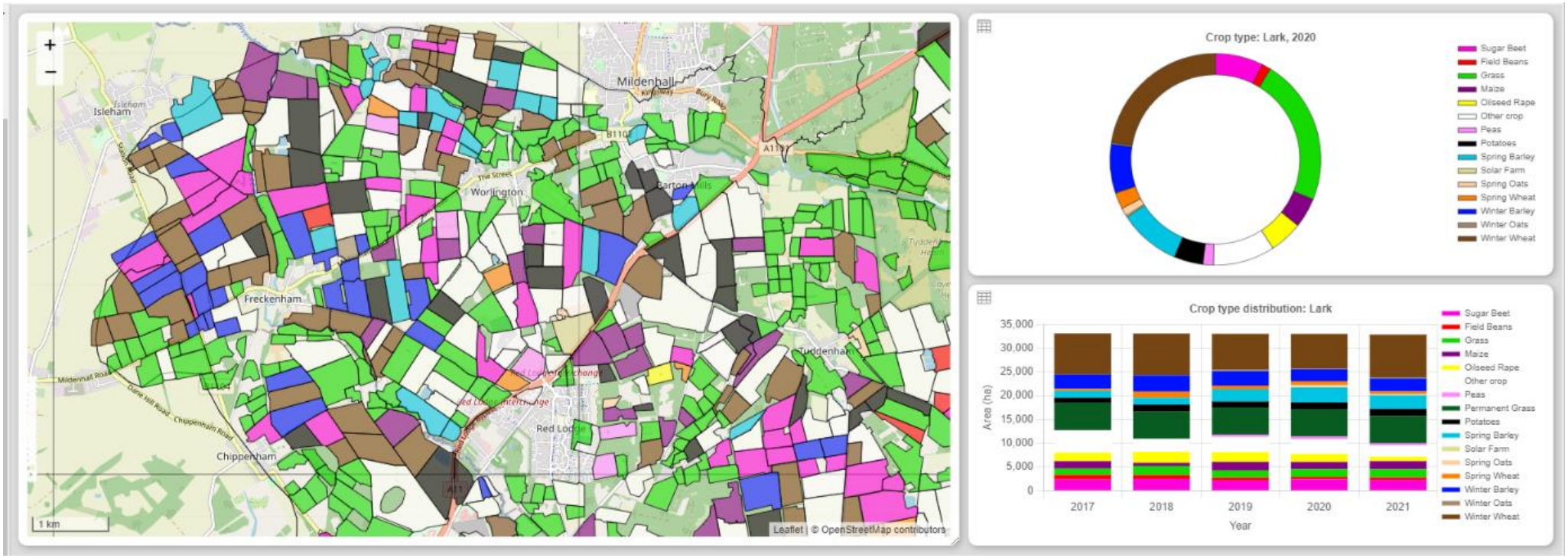
Google Earth Imagery showing variability in soils east of Isleham (April 2021 – approx.)

Google Street View showing land cropped with potatoes north of Beck Road, East of Isleham (June 2011)

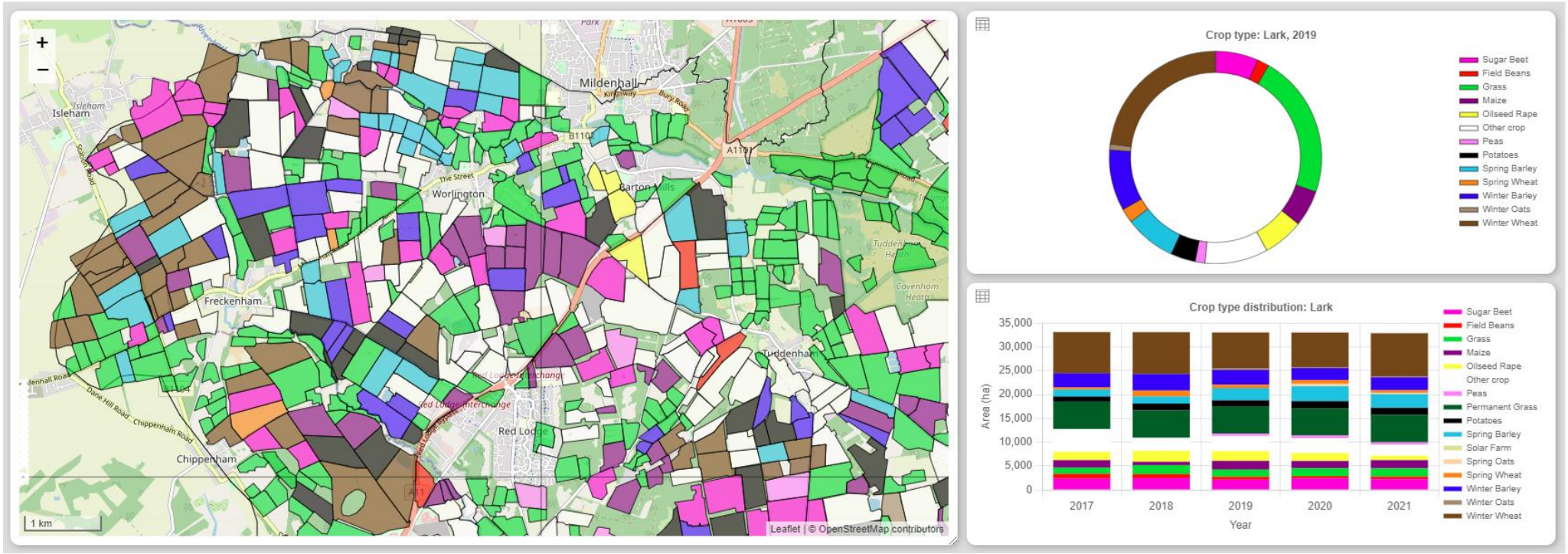
Appendix 5
Land Cover® Plus Images



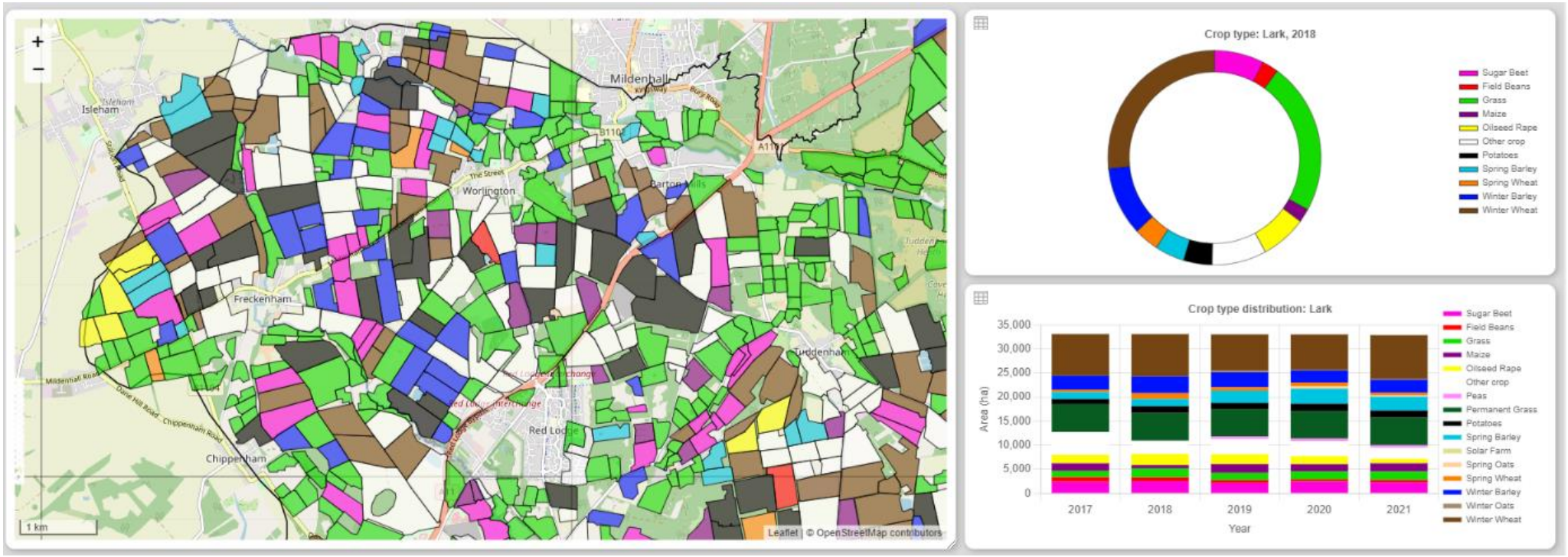
Crop map showing crop types and distribution in part of the Lark Catchment – 2021



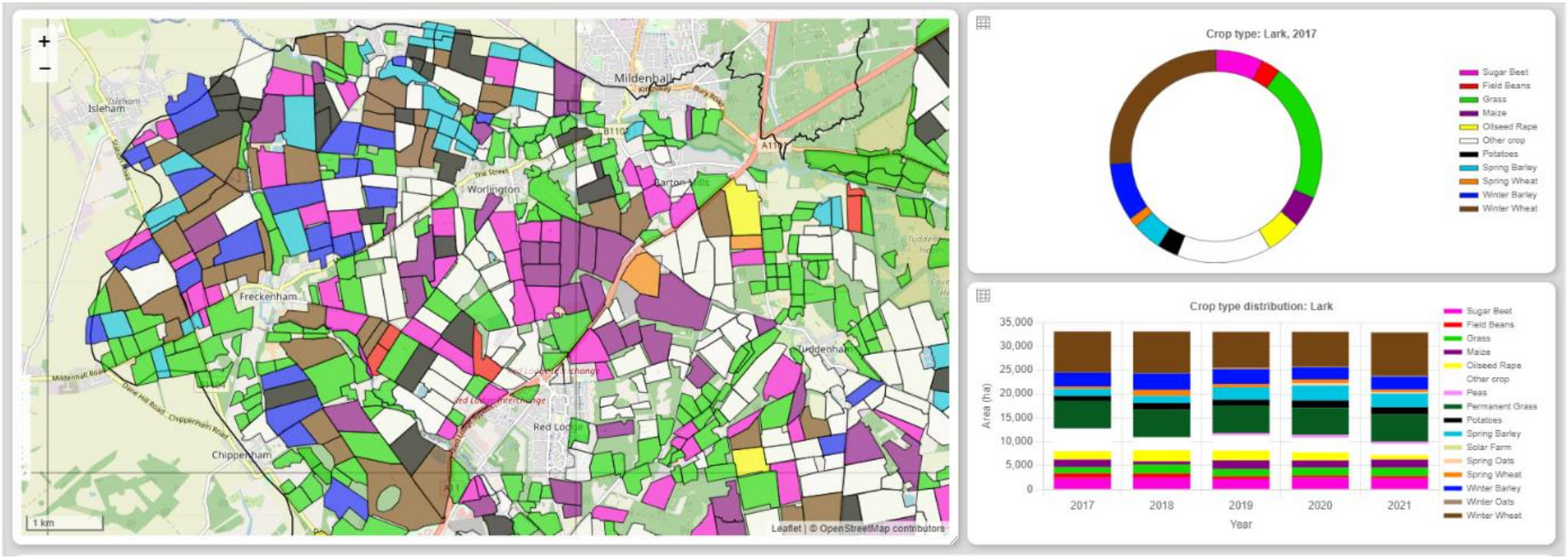
Crop map showing crop types and distribution in part of the Lark Catchment – 2020



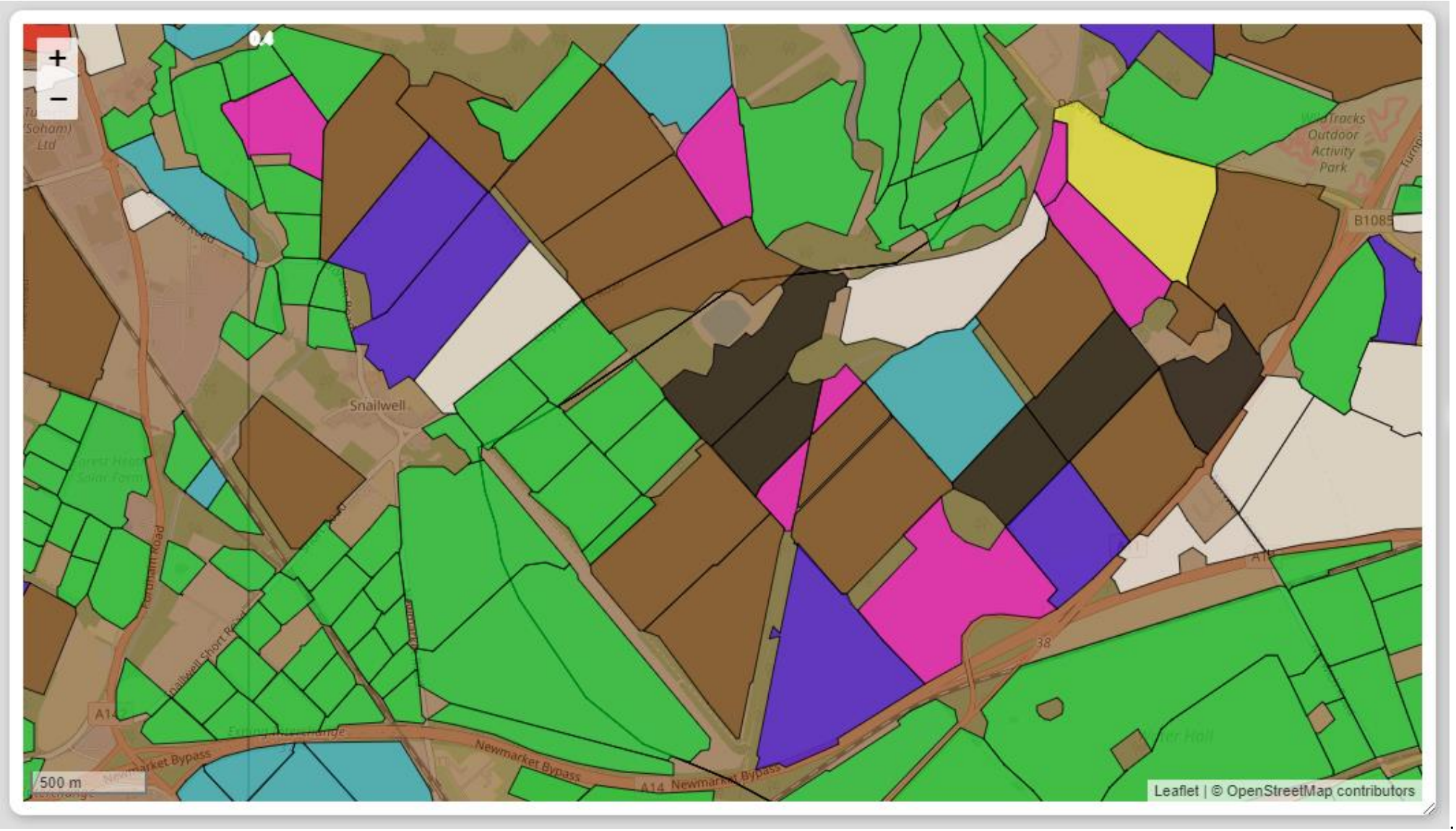
Crop map showing crop types and distribution in part of the Lark Catchment – 2019



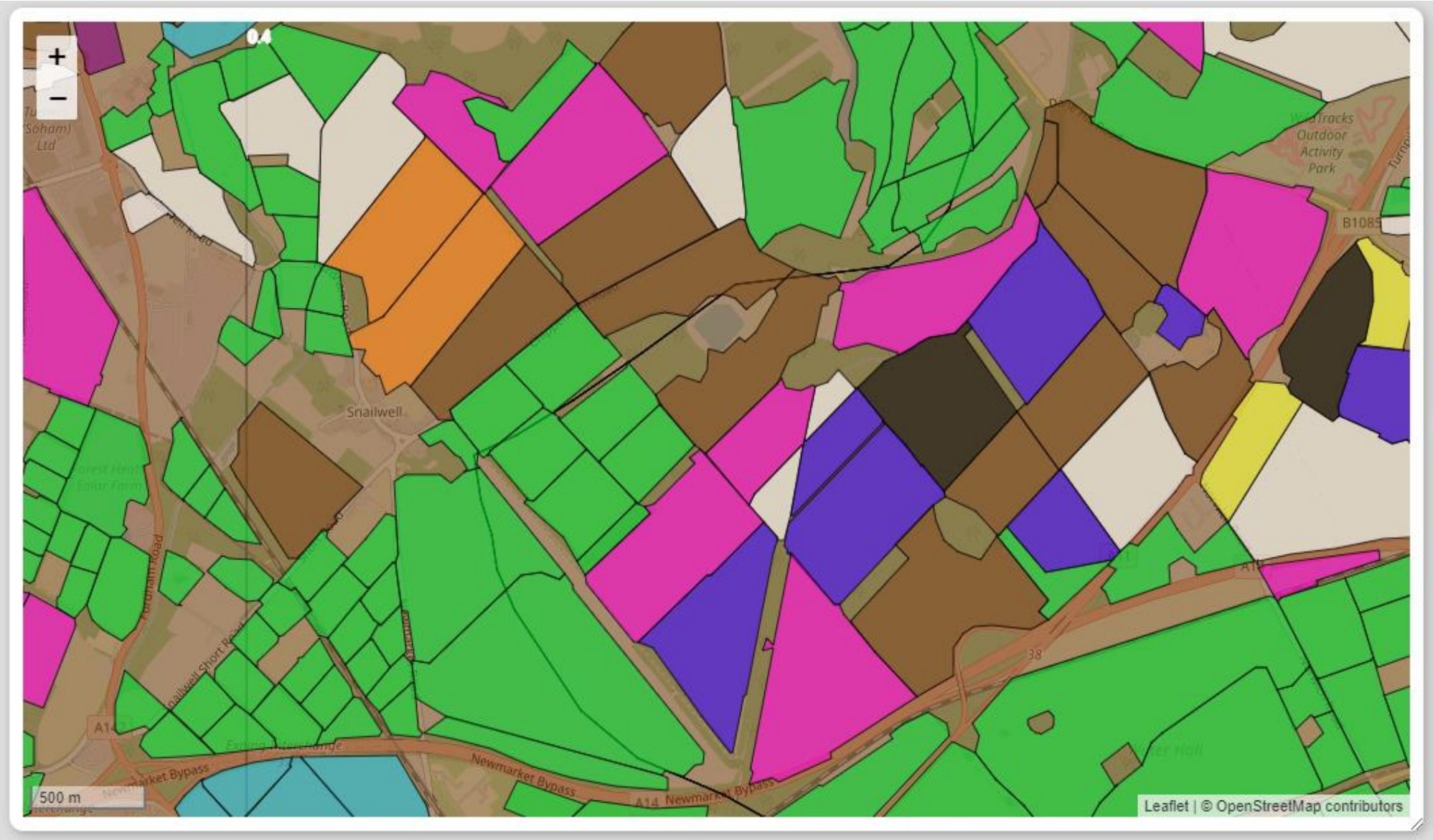
Crop map showing crop types and distribution in part of the Lark Catchment – 2018



Crop map showing crop types and distribution in part of the Lark Catchment – 2017

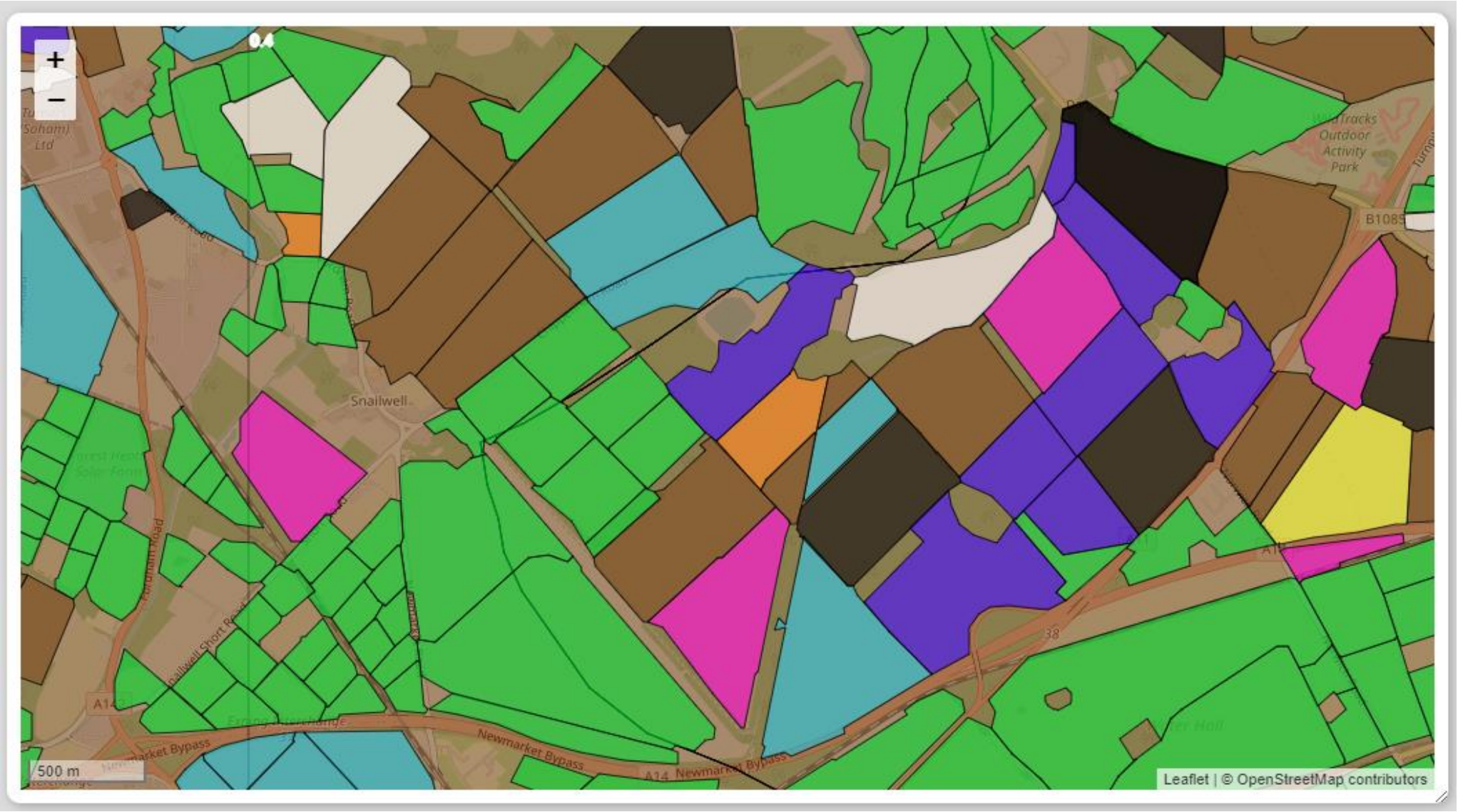


Crop map showing cropping south of Chippenham – 2017



Crop map showing cropping south of Chippenham – 2018

Crop map showing cropping south of Chippenham – 2019



Crop map showing cropping south of Chippenham – 2020

Crop map showing cropping south of Chippenham – 2021

Appendix 6
SNTS Data Collation

14th July 2022

I confirm that the Environment Agency, East Anglia Area, support the principle of constructing winter fill reservoirs to collect water during periods of high river flow/water level through the winter. The abstracted water can be stored in reservoirs and used to irrigate high value vegetable crops during the drier summer months.

The Environment Agency control when water is taken for the reservoirs by the issuing of abstraction licences. Winter fill licences only allow for the abstraction of water during periods of high river flow/water level when surface water has reached a certain point in rivers and drains to allow for abstraction while also keeping enough water in the rivers and drains to protect local habitat. This process helps the Environment Agency to manage water levels in periods of river flow/water level during the winter when abstraction is most sustainable and makes best use of it for producing high quality high value crops and can help protect against unwanted flooding.

Many Thanks,

[redacted]

Andrew Chapman

Senior Officer Water Resources (Ant, Broads & Marshes)
East Anglia Area
Environment Agency
[redacted]

sunnica
energy farm

SUNNICA ENERGY FARM

Preliminary Environmental Information Report

Appendix 9B: Groundwater Abstractions

Sunnica Ltd

AUGUST 2020

[redacted]

www.sunnica.co.uk

Quality information

Prepared by	Checked by	Verified by	Approved by
Various	Diane Harrower Senior Consultant	Owen Tucker Associate	Neil Titley Technical Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
1	September 2020	For issue	OT	Owen Tucker	Associate

Prepared for:

Sunnica Ltd.

Prepared by:

AECOM Infrastructure & Environment UK Limited
Unit 1 Wellbrook Court
Girton
Cambridge CB3 0NA
United Kingdom

[redacted]

9B Groundwater Abstractions

Table 9B-1: Environment Agency Licensed Abstractions within 500m

Licence No.	Name	NGR	Use	Annual Quantity (m^3)	Source of Water	Distance to scheme (m)
6/33/36/*S/0010	Fordham Abbey Farms	TL 6347 6904	Spray Irrigation - Direct	4546	Surface water	0
6/33/36/*S/0020	Chippenham Park Farm	TL 6344 6894	Spray Irrigation - Direct	31822	Surface water	0
6/33/36/*S/0020	Chippenham Park Farm	TL 6394 6877	Spray Irrigation - Direct	31822	Surface water	0
6/33/36/*S/0020	Chippenham Park Farm	TL 6389 6836	Spray Irrigation - Direct	31822	Surface water	0
6/33/36/*S/0264	Chippenham Park Farm	TL 63451 68938	Spray Irrigation - Storage	227272	Surface water	0
6/33/36/*S/0264	Chippenham Park Farm	TL 63451 68938	Spray Irrigation - Direct	50000	Surface water	0
6/33/37/*G/0426/R02	S J P Mortlock Ltd	TL 68839 72711	Spray Irrigation - Direct	36000	Groundwater	0
6/33/38/*G/0062/R02	Moulton Manor Farm	TL 68670 71180	Spray Irrigation - Direct	71000	Groundwater	0
6/33/38/*G/0062/R02	Moulton Manor Farm	TL 68670 71180	Spray Irrigation - Storage	45000	Groundwater	0
6/33/38/*S/0057	G A Thornalley & Sons	TL 66377 74492	Transfer Between Sources (Post Water Act 2003)	90900	Surface water	0
6/33/39/*S/0478/R01	T R & J R Waters	TL 66377 74492	Spray Irrigation - Direct	233491	Surface water	0
AN/033/0037/012/R02	Freckenham Estate	TL 67693 72809	Spray Irrigation - Direct	59100	Groundwater	0
AN/033/0037/012/R02	Freckenham Estate	TL 67693 72809	Spray Irrigation - Storage	59100	Groundwater	0

Licence No.	Name	NGR	Use	Annual Quantity (m^3)	Source of Water	Distance to scheme (m)
AN/033/0038/003/R01	Freckenham Estate	TL 66562 72489	Spray Irrigation - Storage	54545	Surface water	0.123807988
6/33/36/*S/0020	Chippenham Park Farm	TL 6380 6836	Spray Irrigation - Direct	31822	Surface water	3.294561307
6/33/36/*S/0020	Chippenham Park Farm	TL 6363 6901	Spray Irrigation - Direct	31822	Surface water	4.342334657
6/33/36/*S/0020	Chippenham Park Farm	TL 6354 6861	Spray Irrigation - Direct	31822	Surface water	6.70143534
6/33/36/*S/0020	Chippenham Park Farm	TL 6395 6818	Spray Irrigation - Direct	31822	Surface water	7.880821414
6/33/37/*G/0096	Upton Suffolk Farms	TL 697 730	Spray Irrigation - Direct	32959	Groundwater	12.39907979
6/33/37/*G/0096	Upton Suffolk Farms	TL 697 730	Spray Irrigation - Anti Frost	32959	Groundwater	12.39907979
6/33/36/*S/0020	Chippenham Park Farm	TL 6411 6815	Spray Irrigation - Direct	31822	Surface water	28.06063613
6/33/34/*S/0068	R Brown & Sons	TL 5818 6790	Spray Irrigation - Direct	4545	Surface water	36.37065827
6/33/28/*G/0049/R02	Environment Agency	TL 6731 6680	Transfer Between Sources (Post Water Act 2003)	640000	Groundwater	39.55557841
6/33/38/*S/0057	G A Thornalley & Sons	TL 66172 74000	Transfer Between Sources (Post Water Act 2003)	90900	Surface water	47.79760267
6/33/38/*S/0050/R01	Moulton Manor Farm (Holdings) Ltd	TL 68440 70537	Spray Irrigation - Storage	68000	Surface water	98.65701785
6/33/34/*S/0303/R01	G K Harrington & Sons	TL 58810 68390	Spray Irrigation - Direct	13600	Surface water	106.1160428
6/33/36/*S/0010	Fordham Abbey Farms	TL 6345 6927	Spray Irrigation - Direct	4546	Surface water	123.5510873

Licence No.	Name	NGR	Use	Annual Quantity (m^3)	Source of Water	Distance to scheme (m)
6/33/37/*G/0096	Upton Suffolk Farms	TL 694 726	Spray Irrigation - Direct	32959	Groundwater	127.9241758
6/33/37/*G/0096	Upton Suffolk Farms	TL 694 726	Spray Irrigation - Anti Frost	32959	Groundwater	127.9241758
6/33/38/*G/0071/R02	R F Tilbrook & Sons	TL 68877 68090	Spray Irrigation - Direct	80200	Groundwater	137.2731117
6/33/37/*G/0109	Miss C Norman	TL 6750 7437	Spray Irrigation - Direct	1018	Groundwater	150.6853685
6/33/34/*S/0280/R01	H J Hurrell	TL 5772 6715	Spray Irrigation - Direct	21100	Surface water	153.1416395
6/33/34/*S/0068	R Brown & Sons	TL 5876 6830	Spray Irrigation - Direct	4545	Surface water	154.6934983
6/33/37/*G/0096	Upton Suffolk Farms	TL 694 725	Spray Irrigation - Direct	32959	Groundwater	158.5326848
6/33/37/*G/0096	Upton Suffolk Farms	TL 694 725	Spray Irrigation - Anti Frost	32959	Groundwater	158.5326848
6/33/36/*S/0010	Fordham Abbey Farms	TL 6400 6921	Spray Irrigation - Direct	4546	Surface water	169.3679985
6/33/38/*G/0021	R F Turner & Son	TL 676 690	General Farming & Domestic	659	Groundwater	200.3157889
6/33/39/*S/0478/R01	T R & J R Waters	TL 66470 75102	Spray Irrigation - Direct	233491	Surface water	211.0703297
6/33/39/*S/0478/R01	T R & J R Waters	TL 66470 75102	Spray Irrigation - Direct	233491	Surface water	211.0703297
6/33/38/*S/0057	G A Thornalley & Sons	TL 66820 75040	Spray Irrigation - Direct	81819	Surface water	214.7851125
6/33/36/*S/0168	Fordham Abbey Farms	TL 631 693	General Farming & Domestic	2273	Surface water	220.3009294
6/33/37/*G/0109	Miss C Norman	TL 6754 7444	Spray Irrigation - Direct	1018	Groundwater	221.7793283

Licence No.	Name	NGR	Use	Annual Quantity (m^3)	Source of Water	Distance to scheme (m)
6/33/34/*S/0293/R01	Clarke Farms (Isleham) Limited	TL 66469 75113	Spray Irrigation - Direct	48830	Surface water	222.1076885
6/33/34/*S/0280/R01	H J Hurrell	TL 5781 6779	Spray Irrigation - Direct	21100	Surface water	249.5837604
6/33/37/*G/0109	Miss C Norman	TL 6758 7449	Spray Irrigation - Direct	1018	Groundwater	272.9175126
6/33/34/*S/0293/R01	Clarke Farms (Isleham) Limited	TL 60912 68787	Spray Irrigation - Direct	31790	Surface water	276.7046475
6/33/38/*S/0068	A G Wright & Son (Farms) Ltd	TL 6806 7064	Spray Irrigation - Storage	272760	Surface water	279.4602472
6/33/34/*S/0280/R01	H J Hurrell	TL 5744 6734	Spray Irrigation - Direct	21100	Surface water	286.8893986
6/33/37/*S/0423/R01	H Summers & Son	TL 67292 74711	Spray Irrigation - Direct	15900	Surface water	293.2977805
6/33/36/*S/0010	Fordham Abbey Farms	TL 6340 6947	Spray Irrigation - Direct	4546	Surface water	309.5058117
6/33/36/*S/0010	Fordham Abbey Farms	TL 6323 6950	Spray Irrigation - Direct	4546	Surface water	366.2215017
6/33/34/*G/0001	Exning Estate Co	TL 619 682	General Farming & Domestic	2945	Groundwater	366.7648131
6/33/37/*S/0378	Royal Worlington & Newmarket Golf Club	TL 702 735	Spray Irrigation - Storage	18181	Surface water	381.9648905
6/33/37/*G/0400/R02	Upton Suffolk Farms	TL 70260 71801	Spray Irrigation - Anti Frost	9320	Groundwater	391.4670067
6/33/37/*G/0400/R02	Upton Suffolk Farms	TL 70260 71801	Spray Irrigation - Direct	162835	Groundwater	391.4670067

Licence No.	Name	NGR	Use	Annual Quantity (m^3)	Source of Water	Distance to scheme (m)
6/33/37/*G/0400/R02	Upton Suffolk Farms	TL 70260 71801	General Farming & Domestic	49640	Groundwater	391.4670067
6/33/37/*G/0187	Upton Suffolk Farms	TL 703 718	Vegetable Washing	22730	Groundwater	393.1161117
6/33/37/*G/0101	Royal Worlington & Newmarket Golf Club	TL 699 735	Spray Irrigation - Direct	3636	Groundwater	412.5091193
6/33/37/*G/0101	Royal Worlington & Newmarket Golf Club	TL 699 735	Spray Irrigation - Storage	3636	Groundwater	412.5091193
6/33/39/*S/0478/R01	T R & J R Waters	TL 66793 75265	Spray Irrigation - Direct	233491	Surface water	429.8181732
6/33/37/*G/0400/R02	Upton Suffolk Farms	TL 69715 71747	Spray Irrigation - Direct	162835	Groundwater	467.6342221
6/33/37/*G/0400/R02	Upton Suffolk Farms	TL 69715 71747	Make-Up or Top Up Water	37125	Groundwater	467.6342221

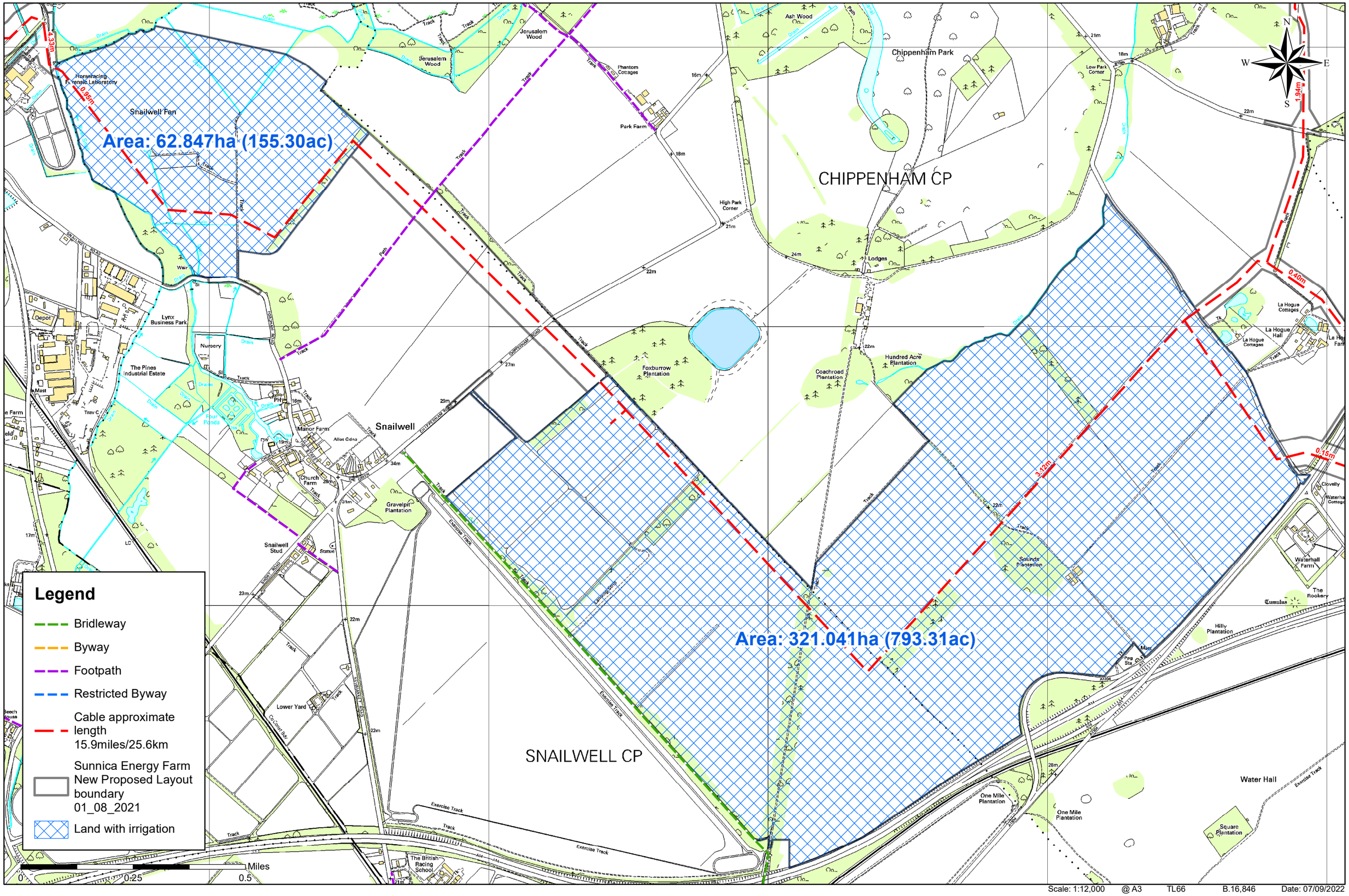
Source: Environment Agency

Table 9B-2: Local Authority Registered Abstractions within 500m

Licence No.	Name	Easting	Northing	Supply Type	Daily Quantity Cap (m^3)	Distance to scheme (m)
P/298/PWS/012	Lee Farm, Isleham Road IP28 8HR.	566218	273861	Single Domestic	0.8	27.33
P/298/PWS/008	Lindcoly Kennels, IP28 8EW.	568225	271667	Reg 10	0.6	102.21
P/298/PWS/047	Bh 3, The Bungalow, Freckenham Road, Suffolk.	567404	274236	Single Domestic	0.2	366.95
P/298/PWS/048	Bh 2, The Bungalow, Freckenham Road, Suffolk.	567404	274236	Single Domestic	0.4	366.95
P/298/PWS/046	Bh 1, The Bungalow, Freckenham Road, Suffolk.	567467	274231	Single Domestic	1	429.35
NA	Wild Tracks	568400	268700	Reg 9	10	92.73
NA	Snailwell House	564505	267337	Single Domestic	0	340.62
NA	Saki Brewery Fordham Abbey	562968	269468	Reg 9	10	387.09
NA	Badlingham Farm	567700	270800	Single Domestic	1	490.78

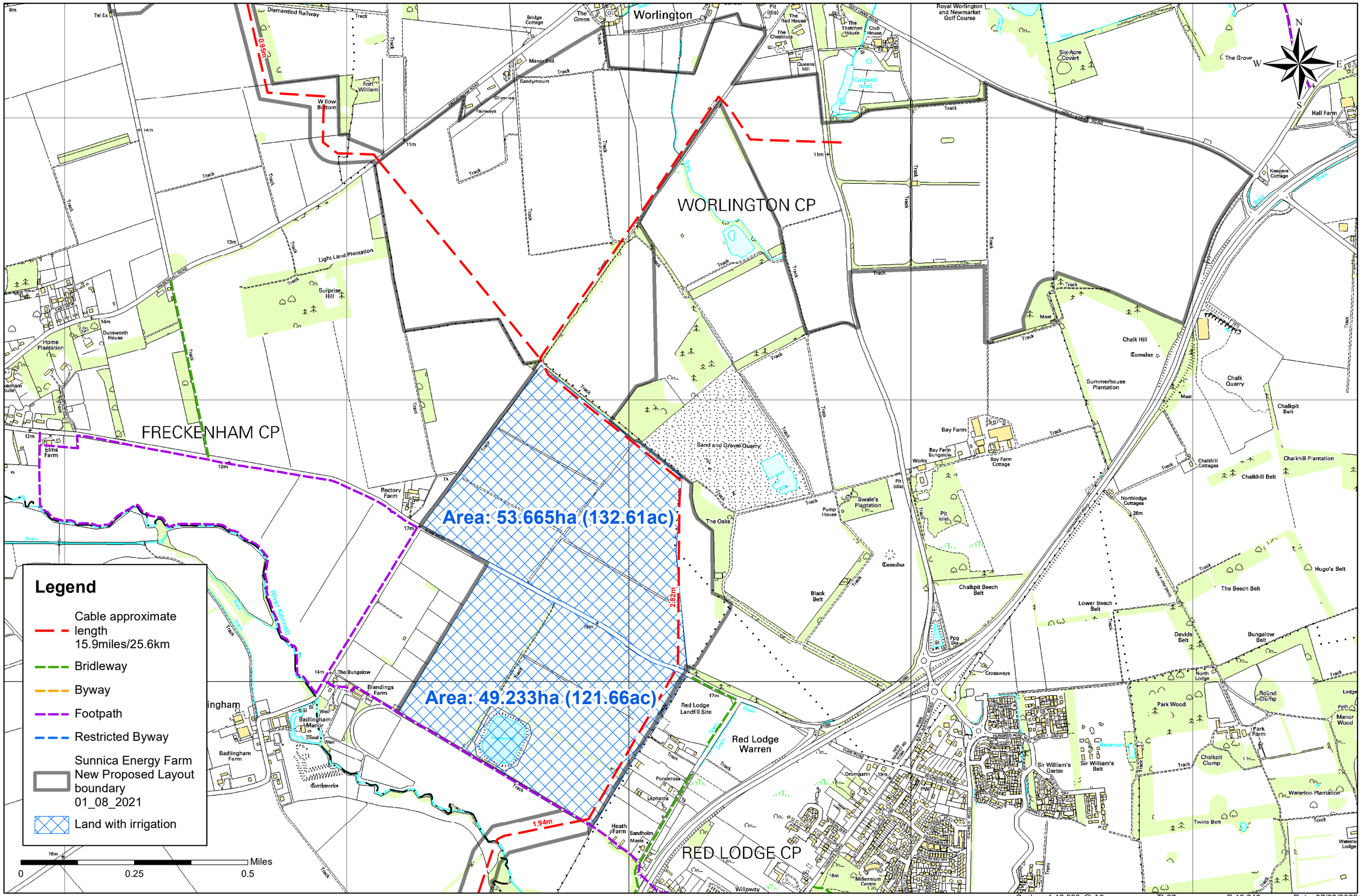
Source: West Suffolk Council and East Cambridgeshire Council

Sunnica Energy Farm Proposed Layout - Plan 1a (Field Views)



Scale: 1:12,000 @ A3 TL66 B.16,846 Date: 07/09/2022

Sunnica Energy Farm Proposed Layout - Plan 2 (Field Views)



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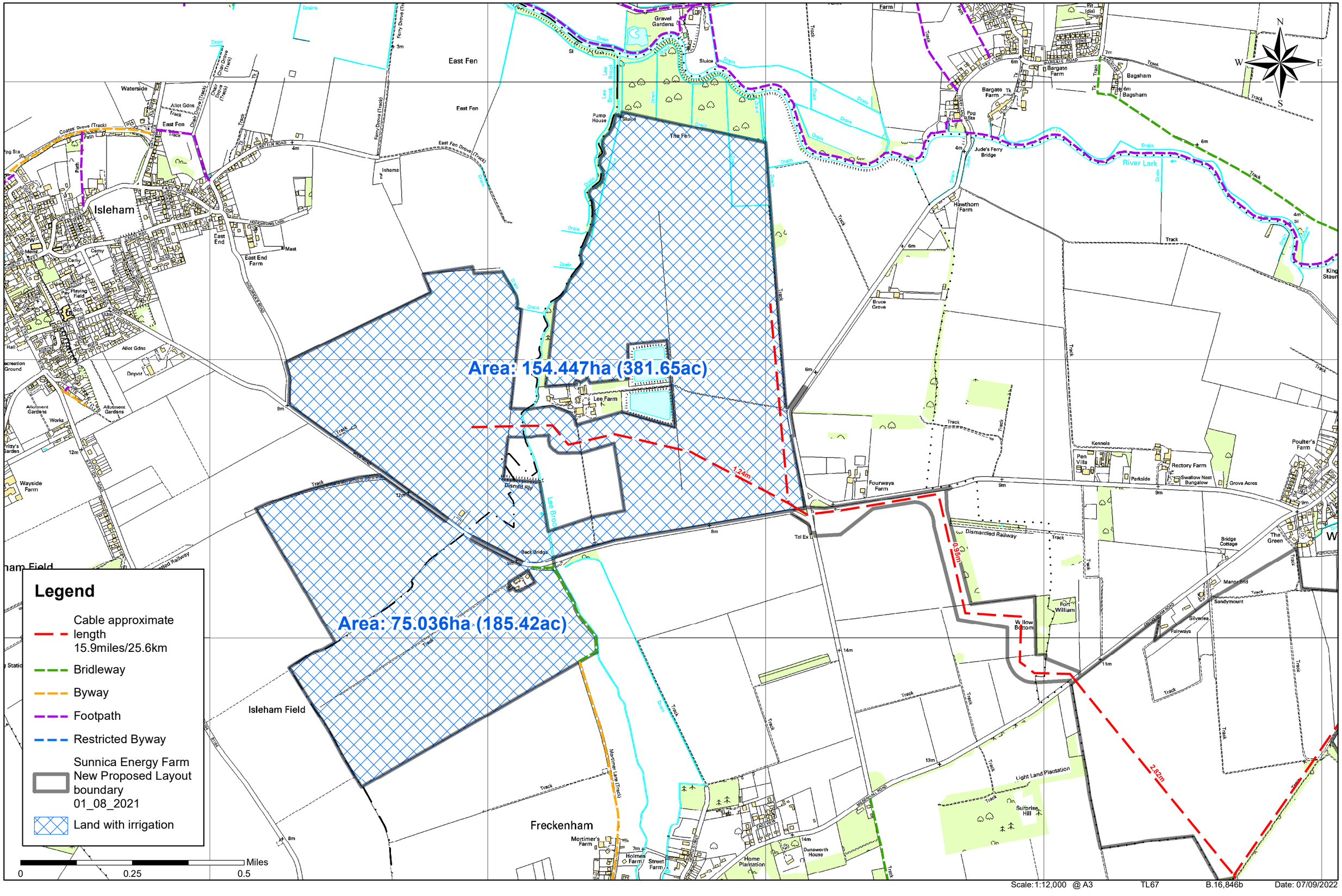
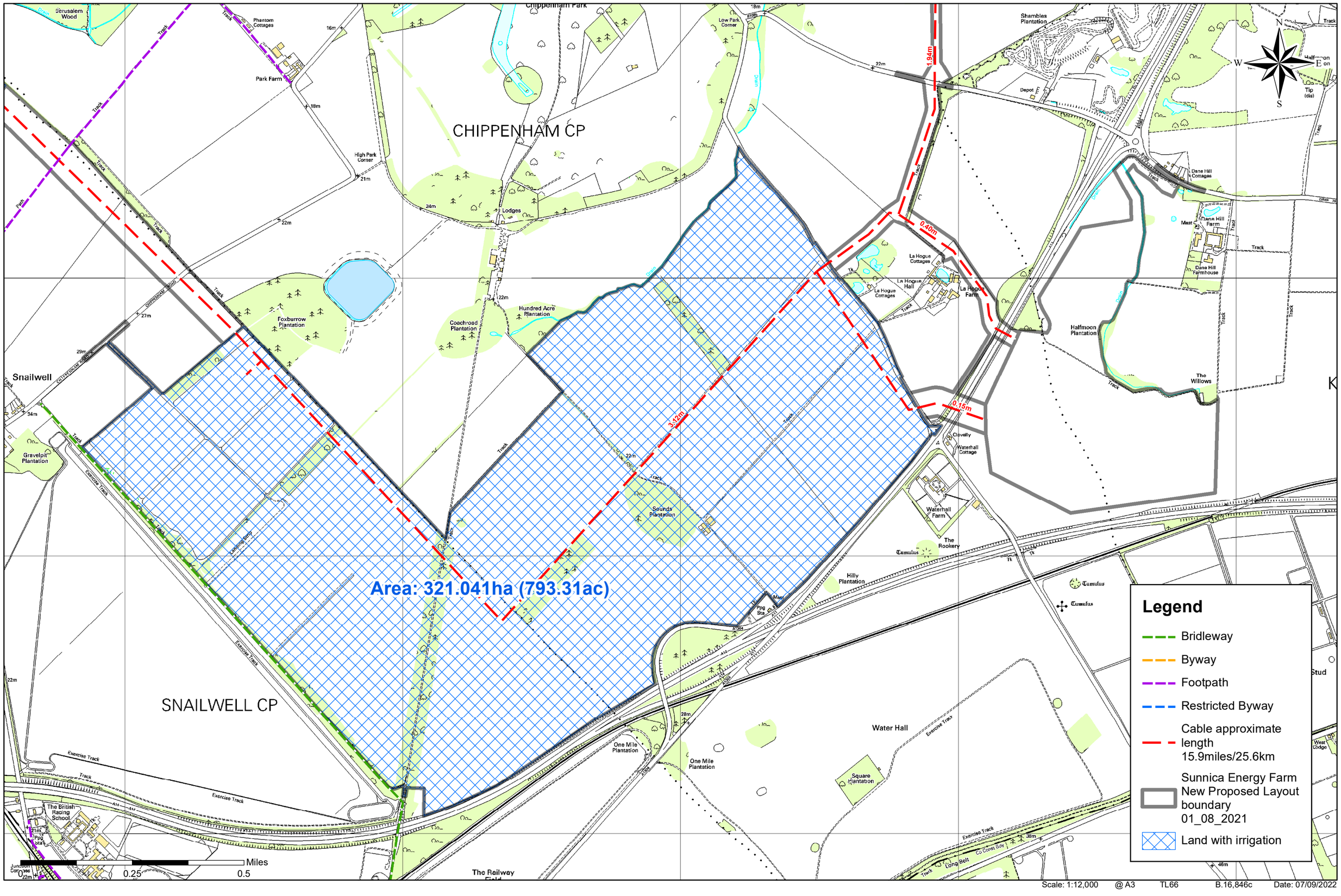
Sunnica Energy Farm Proposed Layout - Plan 3 (Field Views)



Sunnica Energy Farm Proposed Layout - Plan 1b (Field Views)



Scale: 1:12,000 @ A3 TL66 B.16,846c Date: 07/09/2022

Appendix 1A							
Sunnica - Landowner Irrigation Schedule	Total	For Irrigation	Winter storage				
Landowner	m3	Surface/Ground m3	Storage m3	total	m3/250 total		
Chippenham Park Farm	531,848	304,576	227,272	531,848	2,127		
Moulton Manor Farm	116,000	116,000		116,000	464		
Moulton Manor Farm (Holdings)Ltd	68,000		68,000	68,000	272		
R F Tilbrook & Sons	80,200	80,200		80,200	321		
S J P Mortlock Ltd	36,000	36,000		36,000	144		
T R & J R Waters	933,964	933,694		933,694	3,735		
Upton Suffolk Farms	642,239	642,239		642,239	2,569		
totals	2,408,251	2,112,709	295,272	2,407,981	9,632		
Total acre inches	9,632						
Total hectares of potates that cound be grown	487						
Total potatoes produce at 60t per ha	29,220						
Total value of potato crop at £250 per tonne	7,305,000						


La Hogue Farm
Shop & Café
A1(M)
Redlodge Bypass
Dane Hill Rd
Station Rd
A14
A14
A1(M)
A14
A1(M)
A1304
Lanwades Business
Lanwades Hall
& Events Venue
Well Btm
Google


B1102
Elms Rd
Elms Rd
Elms Rd
Elms Rd
River Kennett
Hanson Ready-mixed Concrete
Lindcolt Country Kennels & Cattery
Mick George Group - Worlington
The House of Muddy Paws
Bay Farm AO Plant
A11
Hamelin Brands
The Pines Primary School
B1085
Red Lodge Bypass
A11
KCO Pets
Sara's face painting and balloon modelling
SP Landscapes & Tree Contractors
Upton Suffolk Farms
Brookside Stud
Vehicle Dismantlers
St Christopher's VC Primary School
Red Lodge Sports Pavilion
Reynard Surgery
Red Lodge
Red Lodge Millennium Centre
Nisa Local
Yugen Flava Catering
Red Lodge Bypass
Google


Sootysad
TFA Partners
The Rising Sun
Appleyard Farm
Isleham Cemetery
The Ark Church Isleham
B1104
Ac building
Lee Brook
Jude's Ferry
River Lark
C & J Racehorse Transport
Suffolk Motor
Manor Farm Eggs
Freckenham Rd
B1102
Google

Application No:	CS 2592	Licence Serial No:	6/33/38/S/68

Please quote the serial number in all correspondence about this licence

ENVIRONMENT AGENCY

FULL LICENCE TO ABSTRACT WATER

The Environment Agency ("the Agency") grants this licence to:-

A. G. WRIGHT & SON (FARMS) LTD
HERMITAGE FARM
HADDENHAM
ELY
CAMBRIDGE
CB6 3PB ("the licence holder")

This licence authorises the licence holder to abstract water from the source of supply described in the Schedule of Conditions attached to this licence and subject to the provisions of that Schedule. The licence becomes effective on the relevant date shown below and shall remain in force until the date of expiry shown below.

[redacted]

Team Leader, Regulatory Water Resources

Environment Agency
Bromholme Lane
Brampton
Huntingdon
Cambs
PE28 4NE

Date of Issue... 09 AUG 2007

Date effective... 09 AUG 2007

Date of expiry... 31 March 2027

Date of original issue... 31 October 2006
(if this document is a reissue or revision of the licence originally granted for this abstraction)

The licence should be kept safe and its existence disclosed on any sale of the property to which it relates. Please read the 'important notes' on the cover of this licence.

Note: References to "the map" is to the map which is attached to this licence.
References to "the Agency" are to the Environment Agency or any successor body.

Licence Serial No.	6/33/38/S/68

SCHEDULE OF CONDITIONS

1. SOURCE OF SUPPLY

Inland water consisting of the River Kennett at Badlingham, Cambridgeshire

2. POINT OF ABSTRACTION

At National Grid Reference TL 6806 7064 marked "POINT OF ABSTRACTION" on the map

3. MEANS OF ABSTRACTION

(a) With regard to an abstraction rate of up to 72 cubic metres per hour, a pump of a maximum output not exceeding 20 litres per second

(b) With regard to an abstraction rate of up to 450 cubic metres per hour, pumps of a maximum output not exceeding 125 litres per second

4. PURPOSE OF ABSTRACTION

To fill the reservoir shown hatched blue on the map for subsequent spray irrigation

5. PERIOD OF ABSTRACTION

During the period 1 November to 31 March each year

6. MAXIMUM QUANTITY OF WATER TO BE ABSTRACTED DURING THE SPECIFIED PERIOD

450 cubic metres per hour 10,800 cubic metres per day 272,760 cubic metres per year

7. MEANS OF MEASUREMENT OF WATER ABSTRACTED

The licence holder shall use meters to measure the quantities of water abstracted. The licence holder shall provide and install the meters before any abstraction takes place. The licence holder shall maintain the meters in a condition so as to measure quantities of water abstracted accurately and efficiently, shall calibrate them regularly, in accordance with the recommendations of the manufacturer or at any time when required by the Agency, and shall replace them as necessary. The licence holder shall retain evidence of current certification for inspection by the Agency

The Agency may have regard to its *Abstraction Metering Good Practice Manual* (or equivalent guidance) in directing where the meters should be located or how they should be installed, in determining whether the meters measure accurately and efficiently and are properly maintained and in judging whether it is necessary to require repair or replacement of the meters

8. RECORDS

The licence holder shall take and record such readings of the meters specified in Condition 8 as may be necessary to show the quantity of water abstracted each day or as otherwise approved in writing by the Agency

A copy of the record or summary data from it shall be sent to the Agency within 14 days of 31 March in each year or within 14 days of being so directed in writing by the Agency

Each record shall be kept and made available during all reasonable hours for inspection by the Agency for a period of not less than 7 years

9. FURTHER PROVISIONS

(a) i) NO WATER SHALL BE TAKEN when the flow in the River Kennett as measured at Beck Bridge Gauging Station (National Grid Reference TL 662 733) is EQUAL TO or LESS THAN 140 litres per second which equates to a level of 10.07 metres on the Upstream Crest Gaugeboard

ii) Water may be abstracted at a rate of 72 cubic metres per hour, 1,728 cubic metres per day when the flow as measured at Beck Bridge Gauging Station (National Grid Reference TL 662 733) is greater than 140 litres per second, which equates to a level of 10.07 metres on the Upstream Crest Gaugeboard

iii) Water may be abstracted at a rate of 450 cubic metres per hour, 10,800 cubic metres per day when the flow as measured at Beck Bridge Gauging Station (National Grid Reference TL 662 733) is greater than 220 litres per second, which equates to a level of 10.09 metres on the Upstream Crest Gaugeboard

(b) No water shall be taken when the Licence Holder is notified by the Agency that the Combined Flow is EQUAL TO or LESS THAN:-

From the 1st day March to the 31st day of March

113,652 cubic metres per day (Equivalent to 1.3 cubic metres per second and 25 million gallons per day)

From the 1st day of November to the last day of February

318,226 cubic metres per day (Equivalent to 3.68 cubic metres per second and 70 million gallons per day)

Or such other Combined Flow being not greater than the above figures as shall be notified to the Licence Holder by the Agency

In this Provision "the Combined Flow" shall mean the flows of water in the Ely Ouse River and the Cut-Off Channel as measured by the Agency at the Denver Sluices when added together

(c) Minimum Value Condition

The minimum value, as referred to in section 46(2A) Water Resources Act 1991, is 272,760 cubic metres per year and the authorised abstraction quantity in this licence can be reduced to that value.

REASONS FOR CONDITIONS

Provisions 9(a) and 9(b) have been included to enable the Agency to order cessation of abstraction from the watercourses of the South Level system to protect the environment and to safeguard protected rights

Provision 9(c) has been included to protect the environment for the duration of the licence

Appendix 7
Evolution of the ALC grading protocols

Agricultural Land Classification – Irrigation

The Issue

Whether or not the availability of irrigation is a factor in the assessment of agricultural land quality. It has been asserted by National England in an e-mail to Mr Baird that irrigation was removed as an assessment consideration in 1997.

The source document for the methodology applicable to the assessment of agricultural land quality is *'Agricultural Land Classification of England and Wales – Revised guidelines and criteria for grading the quality of agricultural land'* (Ministry of Agriculture, Fisheries and Food. 1988) (MAFF). At Section 3.4 the relevance of irrigation to the grading of agricultural land quality is stated.

It is not considered that any confirmed revision of the 1988 Guidelines has been issued or any official statement qualifying the consideration of irrigation, or any other assessment criterion has been published.

Insofar as some practitioners no longer follow the 1988 guidelines in respect of the consideration of irrigation, this appears the originate from a draft revision of the 1988 Guidelines of 1996 which appears not to have progressed to a confirmed and published version.

Relevant documents

1. 1966 MAFF. Agricultural Land Service. Technical Report No 11. Agricultural Land Classification

The first progress report on the establishment of the Agricultural Land Classification (ALC) system.

The system pre-supposed the presence of satisfactory land management associated with climatically suited crops. The explanatory notes included a section headed **'Rainfall and irrigation need'**

It was recognised that in large parts of lowland England many crops could only reach their maximum potential with the aid of irrigation. The irrigation need varied and a Figure was provided to give a guide to the amount of irrigation needed to satisfy the climatic moisture requirement of several crops.

It was stated that *"Where water is available for irrigation an area may need to be up-graded; the extent of up-grading will depend on soil and crop factors as well as water availability"*

2. 1976 MAFF. Agricultural Development and Advisory Service. Technical report 11/1. Agricultural Land Classification of England and Wales – The definition and identification of Sub-grades within Grade 3.

This was a development of the ALC system described in Technical Report 11. It re-iterated the assumption of satisfactory management but made no specific reference to irrigation.

3. 1988 MAFF. **Agricultural Land Classification of England and Wales -Revised guidelines and criteria for grading the quality of agricultural land.**

This was a further refinement of the Technical Report 11 methodology with particular reference to the assessment of climatic limitations and climate-soil interactions.

The Introduction identifies a number of assumptions to be considered in ensuring a consistent approach when classifying land. Consideration (2) refers to land drainage and irrigation. On the latter, it is stated that *"Where an adequate supply of irrigation water is available this may be taken into account when grading the land (see Section 3.4, page 21)."*

Section 3.4 deals with **'Interactive Limitations'** namely physical limitations resulting from interactions between climate, site and soil these being soil wetness, droughtiness and erosion. In the discussion of '**Droughtiness'** is a sub-section headed **'Irrigation'**. Here it is stated that *"Irrigation can significantly enhance the potential of agricultural land, especially in drier areas, and should therefore be taken into account in ALC grading where it is current and recent practice".* It is indicated that the irrigation factor *"will usually upgrade land by no more than one grade or subgrade".*

4. 1996 MAFF. News Release 1 August 1996. Agricultural Land Classification

This News release announced, amongst other matters, MAFF's intention to propose changes to the ALC Guidelines:

"The current technical guidance for identifying ALC grades was published in 1988 and is well-established, providing a sound and accepted basis for assessing the agricultural quality of land. In 1988 it was acknowledged that further revisions might be necessary to make use of new information or technical innovations. Following a review, it was concluded that there are no reasons to make any fundamental changes to the current methodology, however a number of enhancements are proposed. These principally concern treatment of irrigation, soil wetness assessment and the grading of land where the natural soil profile has been disturbed. MAFF and WOAD are consulting interested parties on the proposed changes."

Currently unable to confirm what the changes consulted upon comprised, but a document titled:
Ministry of Agriculture, Fisheries and Food Welsh Office Agriculture Department
Agricultural Land Classification of England and Wales
Guidelines and criteria for grading the quality of agricultural land
Second Revision
Draft – May 1996

Is available. All the references to irrigation appearing in the 1988 Guidelines are removed from this draft document, which it is presumed was consulted upon or was similar to it. No published outcome of the consultation exercise has been identified.

5. 1997 Department of the Environment. Planning Policy Guidance (PPG7) – The Countryside – Environmental Quality and Economic and Social Development.

This PPG replaced earlier planning guidance, including PPG7 (1988), which included references to safeguarding agricultural land from development, but which did not refer to the ALC methodology.

Paragraph 2.16 re-introduces the policy of safeguarding agricultural land in planning decisions having regard to land quality and cross refers to *"Annex B explains the grading of land according to its quality and gives detailed advice on development affecting it".*

Annex B Development Involving Agricultural Land

Paragraph B1 introduces the ALC system and the assessment considerations. It states that:

"The system was devised and introduced in the 1960s. Revised technical guidelines and criteria for grading using this system will be published in 1997, under the title *Agricultural Land Classification of England and Wales*. These guidelines update the system without changing the original concepts."

At paragraph B7 it is indicated that, while agricultural land quality is normally the most important factor in considering the impact of development on agriculture, other factors may be material. Irrigation is identified as one such factor at paragraph B11 - *"Where irrigation is practiced and water supplies are adequate and reliable, the productive capacity of agricultural land and its importance relative to non-irrigated land of the same grade will often be significantly increased."* This comment is consistent with Section 3.4 of the 1988 Guidelines, but its appearance as another factor rather than within the ALC description may be significant. It would, however, seem a little inconsistent if changes were being made somewhat obscurely on the basis of a review and consultation exercise which appears to have reached no formal conclusion.

A second part of Annex B dealt with the Procedural Arrangements for Consultation with MAFF and covered the various circumstances in which MAFF was involved with planning decisions, particularly in relation the land quality issues.

The PPG was updated in 2001. While the general paragraphs incorporating the policy on protecting agricultural land particularly that of best and most versatile quality were re-drafted, there was no reference to the revised Guidelines of 1997 forecast in PPG7 (1997). Annex B was removed but the Department of the Environment, Transport and Regions indicated that the procedural arrangements described in it would continue, pending the repeal of certain of the statutory rights of MAFF to intervene in planning decisions.

Subsequent revisions of national planning policy guidance (Planning Policy Statements and the National Planning Policy Framework) have merely re-iterated the basic approach of seeking to safeguard best and most versatile agricultural land from unnecessary

development with no further reference to the assessment approach to the quality of agricultural land.

6. 2009 First Edition/2012 Second Edition. Natural England. Technical Information Note TIN 049. Agricultural Land Classification: protecting the best and most versatile agricultural land

TIN 049 is the primary source of an introduction to the ALC and of which there have been two editions. The second edition of 2012 is current.

Both editions contain a summary of the development of the ALC system:

"Since 1976 (when the Technical Report 11/1 subdivision of Grade 3 took place), selected areas have been surveyed in greater detail and to revised guidelines and criteria. Information based on detailed ALC field surveys in accordance with current guidelines is the most definitive source. Revisions to the ALC guidelines and criteria have been limited and kept to the original principles, but some assessments made prior to the revision may need to be checked against current criteria. The guidelines introduced in 1988 with improved criteria for climatic limitations and climate-soil interactions adopted only two Subgrades for Grade 3."

There follows a cross reference to "Further information" which states that details of the system of grading are to be found in the 1988 Guidelines.

TIN 049 makes no reference to any revisions of the Guidelines post 1997, neither does it offer any technical qualifications to the 1988 Guidelines. The latter must, therefore, be interpreted in the context of the quote above as being regarded by Natural England as the current definitive source of guidelines.

7. 2021 Natural England. Guide to assessing development proposals on agricultural land

This guide refers to the policy framework relating to the considerations to which developers and local planning authorities should have regard in the circumstances of development proposals affecting agricultural land and soils. It sets on the nature and use of ALC in informing development decisions. Where there is insufficient published ALC data the guide indicates that new land surveys should be undertaken. It is indicated that these should be carried out by experienced soil specialists who are:

- *"Members of the British Society of Soil Science, the British Institute of Agricultural Consultants or similar professional body*
- *Knowledgeable about the ALC 1988 guidelines*
- [redacted]*)*
- *Experienced in soil description and ALC assessments"*

The link to the 1988 guidelines is to the original document inclusive of the references to irrigation.

8. **2021 Welsh Government. Agricultural land Classification – Frequently Asked Questions**

   Welsh Government's advisory document on ALC contains the following:

   "I am a consultant/soil scientist undertaking a detailed ALC site survey and the land benefits from irrigation. Should I be taking this into account in my grading assessment.

   No. The advice that irrigation should be removed from the ALC assessment was expressed in a consultation on the ALC system in 1996."

   This entry appears to confirm that any removal of irrigation as an assessment criterion from the 1988 Guidelines was based on a review/consultation exercise which was never formally concluded.

Conclusions

1. The 1988 Guidelines continue to be promoted by the statutory authorities in England and Wales as the currently application approach to assessing agricultural land quality, without any clearly expressed qualification regarding any changes which may have arisen from an uncompleted review and consultation exercise in 1996. All current advice on the use of the ALC methodology is therefore deficient in respect of irrigation, and potentially other considerations.

2. Reliance is placed on the reference to irrigation in Annex B to PPG7 (1997) as evidence of a change to the 1988 Guidelines. This was a reference which did not outlive the removal of Annex B in the next iteration of the planning guidance in 2001 and would not, therefore, be available to readers of Natural England's current guidance documents of 2012 and 2021.

3. Only in Wales is there reference in a current guidance document to the removal of irrigation as a consideration, and this appears to be a precautionary approach related to the 1996 consultation exercise.

Howard Elliott

20.07.22

Developer's Correspondence with Natural England (p66 of Soils and Agricultural Baseline Report)

Despite published evidence suggesting that the 1988 guidelines still apply, DBSC sought clarification of Natural England, stating that in the case of land in the proposed development area surveyed by ADAS on behalf of Defra:

"*The ALC grading appears to have been given a one grade lowering of drought limitation thanks to the availability of irrigation. Obviously a lot has changed in the ¼ century regarding the farmers security of supply of water to abstract, and the direction of travel does not seem likely to improve"*

and asking:

"*Do NE have a policy on the current robustness of such soil droughtiness limitations or is it considered on a case by case basis*".

Natural England's response was that irrigation had been removed from the ALC guidelines in 1997, reflecting the 1997 version of PPG7, where it was stated that the importance of irrigated land, relative to non-irrigated of the same grade will often be significantly increased because of its enhanced productive capacity.

In summary, Natural England stated that it would be acceptable to change the grade by reducing in from 3a to 3b or 2 to 3a if it were to be reviewed without irrigation. This had the effect of reducing the percentage of BMV land in the 189ha surveyed by ADAS by 53%, to 70ha of Grade 3a, Grade 2 land taking irrigation into account.

This response is specific to regrading land that had been surveyed in 1992 before consultation on the revision of guidelines relating to irrigation, in line with the post-1997 methodology applied by DBSC in the main soil baseline survey. Natural England in its response fails to emphasise that the importance of irrigated land should still be taken into account in any planning assessment where the grading of land for ALC does not take irrigation into account.

Thus, the aim of the baseline work carried out by DBSC appears to be focussed on the identification of non-BMV land in the proposed development area.

This is consistent with a soil survey of undertaken by DBSC of land being promoted for development as a Motorway Service Area, near Ripon, North Yorkshire (Annex 1 to this Appendix), where the conclusions of its survey, for Savills, that the ALC of the site was restricted to Grade 3b on grounds of droughtiness, albeit a small area was identified as Grade 3a on drought. This was in direct conflict with a survey carried out in 2010 by RPS Ltd for the same development, which found that the site comprised a mixture of Grade 2 and 3a, BMV land.

The Inspector at the Planning Inquiry dealing with this matter found that the 2010 survey was consistent with the predominant soil association in the area and that the grading of land had not been carried out "…*in a transparent manner, consistent with the MAFF Agricultural Land Classification guidelines on crop-adjusted available water capacity to take into account the presence of stones, rock or a very poorly structured horizon.*"

This is consistent with the findings of RAC's desktop analysis of the soils of part of the proposed development area (Appendix 3 to the main report) and of the soil survey carried out on behalf of SNTS.

In this case, DBSC has not verified the findings of the RAC (3.3ha) or ADAS (51.4ha) surveys of agricultural land against its own methodology, or used laboratory analysis to aid the transparency of

the grading process which has led to the conclusion that only 8.8ha (~1%) of the land it surveyed was BMV, in contrast with 28.5ha (~55%) identified by ADAS on a much smaller area of broadly comparable soils.

Annex 1

Ripon MSA Appeal

The Planning Inspectorate

Appeal Decisions

Inquiry Opened on 16 February 2021

Site visits made on 22 March 2021

by David M H Rose BA(Hons) MRTPI

an Inspector appointed by the Secretary of State

Decision date: 13th April 2021

APPEAL A: (The proposed Vale of York Motorway Service Area (MSA))
Appeal Ref: APP/E2734/W/20/3245778
Land Comprising OS Field 3300 Marton Le Moor YO51 9DP

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant outline planning permission.
- The appeal is made by Applegreen Plc against the decision of Harrogate Borough Council.
- The application reference 18/00123/EIAMAJ, dated 10 January 2018, was refused by notice dated 22 November 2019.
- The development proposed is: 'Outline application for proposed Motorway Service Area to the West side of the A1(M) with vehicular over bridge to and from southbound carriageway and partial diversion of the A168, including associated infrastructure and staff access from B6265'.

APPEAL B: (The proposed Ripon Motorway Service Area (MSA))
Appeal Ref: APP/E2734/W/20/3261729
Land Comprising Field At 435074 475842 Hutton Conyers North Yorkshire

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant outline planning permission (access and layout not reserved).
- The appeal is made by Moto Hospitality Limited against the decision of Harrogate Borough Council.
- The application reference 18/02713/EIAMAJ, dated 5 July 2018, was refused by notice dated 9 October 2020.
- The development proposed is: 'Construction of new Motorway Service Area ("MSA") to comprise: Amenity Building, Lodge, Drive Thru Coffee Unit, associated car, coach, motorcycle, caravan, HGV and abnormal load parking and a Fuel Filling Station with retail shop, together with alterations to the adjacent roundabout at Junction 50 of the A1(M) to form an access point and works to the local highway network. Provision of landscaping, signage, infrastructure and ancillary works'.

Decision (Appeal A)

1. The appeal is allowed and planning permission is granted for an 'Outline application for proposed Motorway Service Area to the West side of the A1(M) with vehicular over bridge to and from southbound carriageway and partial diversion of the A168, including associated infrastructure and staff access from B6265' at Land Comprising OS Field 3300 Marton Le Moor YO51 9DP in accordance with the terms of the application, reference 18/00123/EIAMAJ, dated 10 January 2018 subject to the conditions (1 – 42) set out in Annex A to this decision.

Decision (Appeal B)

2. The appeal is dismissed.

Preliminary matters (General)

The Inquiry

3. The Inquiry sat for 14 days on 16 – 19 February; 22 - 26 February; 2 - 5 March; and 11 March 2021. A number of local residents spoke during the Inquiry, mainly during an evening session on the first day of the Inquiry.

4. I carried out unaccompanied site visits, following agreed itineraries to specific and representative viewpoints, including night-time views, on 22 March 2021.

5. Formal evidence was presented on landscape and visual impacts; agricultural land quality; and planning policy and the planning balance. A 'round-table' discussion was held on the need or otherwise for an additional Motorway Service Area (MSA); and on draft planning conditions and obligations. All other matters took the form of written statements.

Context

6. In 2012 the Secretary of State issued decisions (the 2012 appeal decisions) on proposals for four competing MSAs, and a Truck Stop Service Area (referred to as Coneygarth Truck Stop, Leeming Bar), which took a wide range of factors into account in determining the most suitable site for an additional MSA along the A1/A1(M).

7. Three of the decisions are of particular relevance to the current appeals. First, the Secretary of State found that the twin-sided on-line MSA at Kirby Hill[1] (corresponding generally with the location of the current Applegreen Vale of York MSA proposal) had the following disadvantages:

> *'…… the fact that it is only just above 12 miles north of the fully operational Wetherby MSA weighs against it, as do the material considerations that it would have the greatest visual, environmental and heritage impacts as well as the greatest take of BMV[2] land. Furthermore, the need to resolve the drainage issue means the likelihood of some delay in commencing work'*.

8. Second, a site at Baldersby Gate[3] (corresponding generally with the location of the current Moto Ripon MSA proposal), located on the western quadrant of the A1(M) and A61 near the midpoint between, what were, existing services at Wetherby to the south and Barton to the north. The Secretary of State attached significant weight to this central location but noted that the proposal would be constructed in open country on a green field site, taking best and most versatile agricultural land and causing some visual impact, and it would not be in accordance with the development plan. He disagreed with the principal Inspector's[4] recommendation to allow this proposal in light of a preference for a third site which is summarised below.

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1 Submitted in December 2008 ('the 2008 application')
2 Best and Most Versatile
3 Submitted in June 2010 ('the 2010 application')
4 The original Inquiry was re-opened by a second Inspector and two reports were submitted to the Secretary of State (the principal Inspector and the second Inspector)

9. Third, the principal Inspector's report identified the proposal at the then existing Motel Leeming Services to be disadvantaged by its off-centre, and relatively remote location from the motorway (having been by-passed by the upgrade of the A1 to motorway standard), and that it would fall short of meeting the identified need for an additional MSA. However, the Secretary of State found advantage in the lack of encroachment into the countryside, no loss of agricultural land and deliverability which, overall, amounted to sustainable development and compliance with the development plan.

10. The Secretary of State therefore granted outline planning permission for a MSA at Motel Leeming Services and refused the other three MSA proposals.

11. The Leeming Bar permission, following the approval of reserved matters, has been implemented by nominal works. However, Leeming Bar remains as a signed Motorway Rest Area (MRA) with limited, poor quality, facilities.

12. For the avoidance of doubt, both the current Vale of York MSA proposal, in particular, and the Ripon MSA project are materially different to those that preceded them, notably in terms of illustrative layout and design. Also, the decisions of the Secretary of State, having regard to the Inspectors' reports, have to be read as a whole.

The Development Plan: The Harrogate District Local Plan (Adopted 2020)

13. The All Party Statement of Common Ground identifies some 20 policies that are relevant to the consideration of the proposals. The policies most relevant to the main issues are Policy NE4: Landscape Character and Policy NE8: Protection of Agricultural Land.

14. Reference was also made to Policy EC3: New Employment Development in the Countryside and Policy GS3: Development Limits. Other policies applicable to the main issues considered by written representations are noted subsequently where they are germane to those issues.

15. The applicability or otherwise of Policies EC3 and GS3 to MSA proposals was in dispute.

16. Policy EC3 indicates that new employment development will be permitted in the open countryside where a number of criteria are met including, in short, the re-use or adaptation of an existing building or small-scale new building which is well related to a rural settlement.

17. Although the interpretation of this policy was somewhat wide-ranging, in my view, on its face, the policy is aimed at modest projects for rural diversification. Although both of the appeal proposals would provide considerable new employment in the countryside, the primary function of a MSA is to support the welfare and safety of motorists and employment generation is an incidental consequence. In my view, EC3 is not a relevant policy.

18. Policy GS3, in general, identifies where new development will be accepted and indicates that *'Outside development limits proposals for new development will only be supported where expressly permitted by other policies of this plan or a neighbourhood plan or national planning policy'*.

19. In my view, Policy GS3 is very much aligned to the provision of new homes and jobs whilst protecting the character and appearance of the countryside. It would be difficult to conceive of a situation where a MSA could be accommodated within the limits of any settlement in the district given that the A1(M) cuts through open countryside.

20. To the extent that the phrase '*Outside development limits ……'* might be engaged, it is evident that neither the development plan, a neighbourhood plan (where there is none), or national planning policy expressly permit either of the proposed MSAs. In these circumstances, absent specific endorsement, the proposals are to be considered on merit having regard to all material considerations and the fundamental objective, for example, of safeguarding the character and appearance of the countryside.

Preliminary matters (Appeal A)

Reasons for refusal and the Council's Statement of Case

21. The Council refused planning permission citing 6 reasons:-

    1) *'The site is not allocated for a Motorway Service Area in either the 2001 Harrogate District Local Plan or the emerging Harrogate District Local Plan.*

    2) *The proposal would result in a second Motorway Service Area in the District contrary to Saved Local Plan Policy T7.*

    3) *The proposal represents an unsustainable development that would result in a significant encroachment into open countryside resulting in harm to the landscape and irreversible damage to agricultural land of the best and most versatile in conflict with Saved Policies C2 and T7 of the 2001 Harrogate District Local Plan, Policy SG4 of the Harrogate District Core Strategy Development Plan Document and Policies NE4 and NE8 of the emerging Harrogate District Local Plan.*

    4) *The proposed Motorway Service Area would cause economic harm to the town of Boroughbridge through the resultant loss of trade in conflict with Policy JB1 of the Harrogate District Core Strategy Development Plan Document and Policy GS5 of the emerging Harrogate District Local Plan.*

    5) *The development has a potential risk of environmental damage arising due to drainage and surface water issues contrary to Policy EQ1 of the Harrogate District Core Strategy Development Plan Document and Policy CC1 of the emerging Harrogate District Local Plan.*

    6) *The harm resulting from the proposed development would outweigh the benefits of the proposed Motorway Service Area contrary to paragraph 11 of the National Planning Policy Framework.'*

22. The Council, in its Statement of Case, confirmed that reasons 1, 2, 4 and 5 would not form part of its case as the 2001 Local Plan had been replaced; there was no evidence of adverse effects on the town of Boroughbridge; and statutory authorities had not raised objections in relation to drainage or surface water issues. In addition, references to Saved Policies in reason for refusal 3 were similarly superseded.

23. In short, the Council approached the appeal on the principal basis that the harm to the landscape, and the loss of best and most versatile agricultural land, would *'significantly and demonstrably outweigh the benefits particularly so when taking into account the existing service area at Wetherby at only 12 miles away from the site'*.

24. Nonetheless, Kirby Hill Residents Against Motorway Services (RAMS), a Rule 6(6) Party, representing the views of the local community and those of seven local councils, aligned itself with all of the reasons for refusal and presented evidence and written statements as applicable.

The appeal proposal

25. The Vale of York MSA, between Junctions 48 and 49 (J48 and J49) of the A1(M) is a proposed on-line service area with facilities and vehicle parking located on the western side of the A1(M). It is intended to serve both directions of travel on the motorway by means of a new junction with slip roads and an overbridge. The slip roads and junction arrangement serving traffic would necessitate a realignment of the existing A168 in an easterly direction.

26. The application was made in outline with approval sought for means of access. However, this matter was reinstated during the consideration of the application and the appeal is to be considered with all matters reserved for later approval. The area of the site was also reduced from 19.84 hectares (ha) to 19.1ha prior to determination of the application.

27. The application was supported by an illustrative masterplan and parameters plan, with the latter being consistent with the masterplan and defining the scope of the development for which planning permission was sought. The illustrative masterplan depicts the proposed development at the upper end of the range based on an illustrative design, with the proposed buildings and parking areas set below existing ground levels and new mounds planted with hedgerows. The use of 'green roofs' is also proposed for the new buildings.

28. The application was accompanied by an Environmental Statement[5]. I have had regard to the environmental information in considering the appeal.

Planning Obligation

29. A Unilateral Undertaking, under section 106 of the Town and Country Planning Act 1990, confirms payment of a Travel Plan monitoring fee in the sum of £2,500. The Undertaking is supported by a statement of compliance. I am satisfied that the deed meets the relevant statutory and policy tests.

Preliminary matters (Appeal B)

Reason for refusal and the Council's Statement of Case

30. Planning permission was refused for the following reason: *'The proposal is outside development limits and represents an unsustainable development that would result in a significant encroachment into open countryside causing harm to the landscape in conflict with Policies EC3 (A & C), GS3 and NE4 of the Harrogate District Local Plan.'*

31. The Council approached the appeal on the principal basis that the proposal would have a significant adverse effect on the character and appearance of the area and on views from the A61. As such, the resultant harm would outweigh any benefits from the proposed MSA, having particular regard to the distance between facilities serving the motorway at Wetherby and Leeming Bar.

[5] Including Addendum and 2nd Addendum

The appeal proposal

32. The proposed Ripon MSA lies on a site immediately to the west of J50 of the A1(M). It would be served from the existing roundabout junction of the northbound motorway slip roads with the A61 and the A6055.

33. The application was made in outline with access and layout to be determined as part of the application. However, at a late stage in the Inquiry, Moto requested that layout should be reinstated as a reserved matter, albeit by reference to the same drawings and supporting information presented with the application and which formed the basis of the Environmental Impact Assessment.

34. Neither the Council, nor any other party, opposed the amendment sought. I am satisfied that the development would not be so changed that it would deprive those who should have been consulted of the opportunity of such consultation and no third party would be prejudiced. Moreover, I conclude that there would be no impact on the environmental information underpinning the proposed development.

35. The Design and Access Statement explains that the larger amenity and lodge buildings are purposefully located close to the eastern boundary of the site where ground levels are generally below the adjacent highways and roundabout junction infrastructure. The related linear tree belt would be strengthened and other screening would be achieved by low mounds and tree and shrub planting.

36. The application was supported by an illustrative masterplan and parameter plans collated on a parameter site plan. It is said that the parameter plans, and particularly the heights noted, encompass the widest and the highest parts of each of the buildings with a small additional tolerance to account for some degree of flexibility.

37. The application was accompanied by an Environmental Statement and I have had regard to the environmental information in my consideration of the appeal.

Planning Obligations

38. Although Moto sought to enter into a Planning Obligation with Harrogate Borough Council and North Yorkshire County Council, with regard to a Travel Plan and its related monitoring fee, this was precluded by a potential legal impediment. However, the provision of a Travel Plan is provided for in one of the draft planning conditions and payment of the monitoring fee has been made. The County Council has confirmed that the funds would only be used for the purpose sought; and would be refundable should the appeal be dismissed.

39. Planning obligations, in the form of a Unilateral Undertaking, are made in favour of Harrogate Borough Council (in which the appeal site is located) and Hambleton District Council (in which the Leeming Bar MRA lies). The respective obligations seek to ensure that if the Ripon MSA appeal is allowed, the permission would not be implemented in the event that the approved scheme at Leeming Bar is continued to be constructed; and, if permission is granted and implemented, no reliance would be placed on the Leeming Bar permission.

40. However, Hambleton District Council has stated: *'…… Hambleton do not propose to be party to this agreement on the basis that we have concerns about its enforceability in the future. We also opine that supporting this agreement might prejudice development in Hambleton and therefore cannot agree to it.'*

41. In view of this position, whilst it is acknowledged that the Undertaking is necessary and otherwise lawful, and Harrogate Borough Council would be able to enforce the obligation made in its favour, the prospect of two MSAs within such a short distance, although highly unlikely, could not be discounted. The Unilateral Undertaking is therefore of limited materiality.

Main Issues

42. The main issues are:

a) whether or not there is a need for an additional MSA between Wetherby MSA and Durham MSA, having particular regard to other facilities along this stretch of the A1(M);

b) the effect of each of the proposals on the character and appearance of the area including landscape and visual effects;

c) the nature and acceptability of the loss of agricultural land at both sites;

d) the effects of the Vale of York proposal on highway safety; drainage, flood risk and climate change; the local economy; and designated heritage assets;

e) the relative merits of each of the proposals; and

f) the overall planning balance.

43. By way of explanation, it was common ground that there are only two possible outcomes of the Inquiry in that either both appeals are dismissed or one of them is allowed.

44. In this regard, if it is concluded that there is no need for an additional MSA, both appeals should be dismissed. Alternatively, if a need is shown to exist, and having decided the better of the two proposals, whether that need outweighs any conflict with the development plan and any other harm arising from the consideration of the other main issues.

Reasons

The First Main Issue: Need (Appeals A and B)

45. The National Planning Policy Framework (the Framework) states at paragraph 104 e) that planning policies should *'provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy'*.

46. A related footnote (fn42) indicates that *'policies for large scale facilities should, where necessary, be developed through collaboration between strategic policy-making authorities and other relevant bodies. Examples of such facilities include …… roadside services'*.

47. The recently adopted Harrogate District Local Plan does not contain any policies or references specific to MSA provision, notwithstanding representations made by Applegreen during the evolution of the plan.

48. The Council, in responding to Applegreen's representations stated:

'Detailed guidance on roadside facilities for road users on motorways is set out in DfT[6] Circular 02/2013. This includes matters relating to spacing and impact of roadside facilities on the strategic road network. This also sets out that new and existing roadside facilities are subject to the provisions of relevant planning legislation and regulation. Proposals for new MSAs will therefore need to take account of national guidance and policies in the relevant development plan.

Taking account of the existing policies in the Local Plan and national guidance, it is not considered necessary to include a policy in the Local Plan as any proposal received will be considered on its merits and subject to other provisions of the Plan such as impact on landscape character and the natural environment, designated and non-designated heritage assets and amenity'.

49. In short, any 'speculative' MSA proposal is to be considered on merit, having regard to other policies in the plan; the Framework; and Circular 02/2013 (the Circular), each read as a whole and in combination; and other material considerations. As Kirby Hill RAMS pointed out, both the Framework and the Circular have the objective of achieving sustainable development.

50. Turning to the Circular, this sets out policy on, amongst other things, the provision of roadside facilities on the strategic road network. It is recognised that MSAs and other roadside facilities perform an important road safety function by providing opportunities for drivers to stop and take a break in the course of their journey. Government advice is that motorists, not subject to a regime of statutory breaks, should stop for at least 15 minutes every two hours.

51. Based on the premise that opportunities to stop are provided at intervals of approximately half an hour, paragraph B6 of the Circular indicates that the recommended maximum distance between MSAs should therefore be no more than 28 miles, but it can be shorter. It is clear to me that the approximate 'time-based' criterion influences the maximum 'distance' criterion. However, neither is prescriptive or precise other than in the terms set out and the most definitive statement is *'no more than 28 miles'*.

52. In this regard, even though it is said that the A1(M) in the vicinity of the appeal sites is not susceptible to congestion and delays, the potential for unimpeded journeys does not undermine the maximum distance criterion which has particular applicability to vehicles governed by a statutory speed limit of 56mph (28 miles per half an hour).

53. All parties agreed that the measurement of the gap in MSA provision should commence from Wetherby MSA, to the south, at J46. The first operational MSA, to the north, is at Durham (J61), a distance of 60.8 miles.

54. Leeming Bar MRA at J51, and off the A6055, lies 28.8 miles to the north of Wetherby MSA as measured centre of car park to centre of car park following the methodology employed in the 2012 appeal decisions. Whilst Kirby Hill RAMS disputed this approach and hence the distance, nothing turns on the matter given that the Circular regards 28 miles to be a maximum distance between MSAs.

[6] Department for Transport

55. Moreover, Leeming Bar is not at present a MSA. The full implementation of its extant planning permission, irrespective of Hambleton District Council's ambivalence about enforcing the Unilateral Undertaking, seems a most unlikely prospect given its detachment and distance from the motorway; the obvious need for very substantial investment; and the unchallenged submission that it is not a viable location for a MSA.

56. In terms of other facilities, Coneygarth Truckstop, off J51 and served by the A684, is 28.6 miles from Wetherby MSA; and Scotch Corner MRA (J53) is at a distance of 38.8 miles. There is also a Truckstop at Barton Park (J56)[7], served from the A6055, some 40 miles north of Wetherby MSA. It has a historic permission for a MSA which has been lawfully implemented but not built out. Kirby Hill RAMS also pointed to the presence of Morrisons, for example, on the approach to Boroughbridge. There is also an undetermined planning proposal for a MSA at Catterick (J52) some 37.5 miles from Wetherby MSA.

57. In my opinion, none of the legacy facilities, relied on by the Council and Kirby Hill RAMS, which once served the needs of the A1 before it was up-graded to motorway standard, nor services of a local nature, can be considered to provide a MSA function within the terms of the Circular.

58. Overall, I consider that there is a need for a MSA to support the safety and welfare of road users to serve the A1(M) between Wetherby MSA and Durham MSA, and that either proposal would fulfil that need. It is common ground that only one of the two candidate sites could succeed whilst acknowledging that both could fail. If permission is to be granted, case law[8] establishes that the decision maker must consider which of the alternatives would cause the least planning harm.

59. In summary, the very recently adopted development plan concedes the consideration of any proposal for a MSA in the district to other policies in the plan and to national guidance. Policies EC3 and GS3 are not directly aligned at such proposals; the Framework is supportive of the provision of roadside facilities; and Circular 02/2013 regards 28 miles to be a maximum distance between MSAs. In my opinion need is firmly demonstrated.

The Second Main Issue: Landscape and Visual Effects

Appeal A: The Vale of York MSA proposal (Applegreen Plc)

The 2012 Decision and the current scheme

60. With regard to the proposal for a twin-sided on-line MSA, the subject of the 2012 decision, the principal Inspector's summary conclusions were[9]:

> '*The site is not covered by any formal landscape quality designation, but it has been assessed in the district's landscape character appraisal. It is a uniform large-scale agricultural landscape that would not easily mitigate the harmful effects of the large scale MSA. The development would be seen from closer viewpoints, mostly in the context of introduced large scale woodland planting and a 450m long mound up to 9m high that would mostly surround the development. Both would be alien features in the countryside here that would significantly harm the character of the surrounding open landscape …….*

[7] J56 is the next junction beyond J53 – there is no J54 or J55
[8] *Secretary of State for the Environment v Edwards (P.G.) (1995) 69 P. & C.R. 607*
[9] IR 14.3.79 – 14.3.81

The views of the MSA from the A1(M) would be of lesser importance, but there would be clear views from the LRN [local road network] and Ripon Road roundabout which lie on a tourist route. I consider that the visual effect of the MSA on the tourist route would be moderate to slight adverse. The MSA and mound would cause slight visual harm to views from a number of residential properties in Church Lane and moderate to slight visual harm to residents near Skelton Windmill particularly in the early years and in winter. There would also be a slight detrimental visual effect from nightglow.

I conclude that the proposal would have a significant detrimental effect on the character and appearance of the surrounding landscape.'

61. In terms of the current scheme, there is little or nothing of direct comparison in that it consists of a single-sided facility on the western side of the northbound carriageway. Access for southbound vehicles would be achieved by new slip roads to and from an elevated 'dumbbell' roundabout junction and bridge crossing the motorway. The A168 would be realigned further east to accommodate the new junction. The scheme relies on substantial ground excavation and remodelling to integrate the service area into its new land-form aided by green roof construction and landscaping to maintain open views across the site.

Valued Landscape

62. Local Plan Policy NE4 identifies nine 'Special Landscape Areas' that are valued locally for their high quality landscape and their importance to the settings of Harrogate, Knaresborough and Ripon. Neither the appeal site, nor its surroundings, fall within the terms of the policy. In addition, Applegreen and the Council agree that the area of the appeal site is not to be regarded as a 'valued landscape' within the meaning of paragraph 170 a) of the Framework.

63. However, Kirby Hill RAMS contended that the local landscape is a valued landscape using the methodology and criteria set out in the Guidelines for Landscape and Visual Impact Assessment (Third Edition) (GLVIA3). The document points out that *'landscapes or their component parts may be valued at the community, local, national or international levels …… the fact that an area of landscape is not designated …… does not mean that it does not have value'*.

64. Box 5.1 of GLVIA3 identifies a number of factors which are generally agreed to influence value. Kirby Hill RAMS highlighted the presence of Skelton Windmill; a historic coach road; expansive views of the Vale of York, Hambleton Hills and the White Horse of Sutton Bank; the Grade I Listed All Saints' Church in Kirby Hill; historic associations by the presence of the Roman Road known as Dere Street which borders the east of the site; and at least one of the two sacred Neolithic 'pathways to purity' linking the Devil's Arrows with the Thornborough Henge complex running close to, or through, the site itself[10].

65. All of the above are capable of influencing value. However, the windmill has lost some integrity with the removal of its cap and sails; the historic coach road is of narrow interest; and the expansive views are not restricted to the immediate locality. The village Church is of importance in its own right, but its overall influence in the landscape is limited. The historical significance is

[10] With particular reference to KH1.1 and the Statements by Dr Rose Ferraby, Archaeologist and Chris Thirkell

by association rather than through physical manifestation. Taken together, in the context of a typical lowland farming landscape, and the visual and audible presence of the A1(M) motorway in particular, I consider that these locally cherished attributes do not take the landscape out of the ordinary and elevate it to a valued landscape for the purposes of the Framework.

Parameters and Visualisations

66. Although the Vale of York proposal was submitted in outline, the principles of its design, as illustrated in the Parameters Plan and the Design and Access Statement, could be secured by planning conditions. The illustrative masterplan depicts the proposed scheme at the upper end of the development parameters, albeit based on modelled design principles aimed at integrating the buildings and related facilities into the landscape.

67. The Council's approach of assessing the proposal to the full extent of the parameters effectively ignores the overall design concept and footprint parameters and exaggerates the reasonably likely worst case effects. Moreover, the Council's wireframe overlays were superimposed on an amalgam of photographic images with resultant distortion and inaccuracy. Overall, I find Applegreen's visual material to be the preferred basis to assist my assessment.

Landscape character

68. Policy NE4 contains five guiding criteria to protect, enhance, or restore the landscape character of the district. In particular, criterion B requires, in short, development proposals to be informed by, and to be sympathetic to, the distinctive landscape character areas as identified in the Harrogate District Landscape Character Assessment.

69. The appeal site is located in Landscape Character Area 81 (LCA81) 'Dishforth and surrounding farmland'. The Guidelines for the area aim to maintain the extensive views across and beyond the area; to integrate existing development; and to reinforce the diverse landscape pattern of the field systems.

70. The principles within the Guidelines recognise the difficulty of accommodating large scale development without further detriment to landscape character; confirm the inappropriateness of extensive large scale tree planting required to screen any new development; and seek to avoid highlighting the A1(M) and A168 corridors as linear planting does not respect the pattern of the landscape.

71. An adjacent Landscape Character Area (LCA74) 'Skelton on Ure rolling farmland' lies generally to the west of, and some 220m at its closest point from, the Applegreen appeal site. The character area is noted as being attractive and pleasant, with particular reference to Newby Hall and Skelton Windmill. The character area is extremely important to the setting of Newby Hall and its associated Registered Historic Park and Garden and tourism is stated to be a major source of income for the Hall.

My appraisal

72. There are two distinct, yet inextricably linked, elements to the Applegreen proposal, namely the MSA facilities to the west of the A1(M) and the new highway infrastructure to the east of the motorway.

73. Taking each in turn, the site to the west of the motorway falls, in very general terms, from a north-westerly to south-eastly direction. The southern boundary, forming part of the rising embankment to the existing B6265 overbridge, is a well vegetated and strong delineating feature.

74. The western boundary is marked by an almost continuous substantial hedgerow with two mature oak trees. The hedgerow more-or-less coincides with the horizon when viewed from the motorway, other than at its southern end where there is a limited rise in landform to the crest on which the windmill sits.

75. The eastern boundary coincides with the margins of the motorway and its limited screening of the appeal site. The tapering northern edge is the most exposed, albeit an intermediate hedge within the site and the nature of the landform contain views to some degree.

76. It is common ground that the proposal would be large scale development and that it would cause some landscape harm and some visual harm arising from effects on openness and on views. That said, the crux of the issue is to what extent and degree would that manifest itself.

77. The illustrative plans demonstrate that lowering ground levels, as shown generally, would ensure that the proposed buildings and ancillary areas would be capable of assimilation into the resultant landform.

78. In particular, the combined amenity building and fuel filling station would be sited close to and parallel with the southern boundary with the highest part of the building illustrated as coinciding more-or-less with the carriageway level of the B6265. Established roadside planting would provide further screening, and the curvilinear green living roof would reinforce integration. The smaller and lower HGV re-fuelling facility and the drive-through coffee shop, also illustrated with curved green roofs, would be sited more centrally within the site but, again, generally contained by the existing and proposed engineered and natural landscape framework.

79. In terms of the representative viewpoints, and the additional locations to which I was directed, the aspect from the existing B6265 overbridge towards the site is heavily influenced by the presence of the motorway. Although the proposal would undoubtedly extend the impact of the motorway at this point, the development itself would not have any broader effect on the character and appearance of the landscape, having particular regard to the intended landform, internal landscaping, building composition and the backcloth of the reinforced western boundary.

80. The B6265 is an important tourist route and a proportion of motorists may, as a result, have an enhanced sensitivity. However, in my opinion, the proposed MSA, to the limited extent that it would be apparent, would be perceived as a related and complementary adjunct to the motorway in both form and function. Whilst the rear staff access would provide a fleeting, oblique and downward view into the site, I am satisfied that appropriately designed internal landscaping would be capable of minimising any adverse effects and shielding views into the HGV parking area.

81. Further to the west, the aspect from the direction of the junction with High Moor Road is influenced by the overbridge, with its lighting columns and signs, and traffic on the motorway comes increasingly, and fully, into view on the approach to the site.

82. The illustrative details demonstrate the feasibility and effect of recontouring of the western boundary, to form a rising berm topped by a new hedgerow, and the manner in which it would substantially curtail views into and across the site. The green-roofed buildings, particularly the means by which that of the amenity building would sweep up from ground level, would also be a significant factor in rendering the development to be relatively unobtrusive.

83. Although it was conceded that the upper parts of some high-sided vehicles would not be fully obscured from view (Year 1 and 5), and the fascia supporting the green roof of the HGV refuelling facility would also be visible (Year 1), these elements would, in my opinion, appear less intrusive than current views of the traffic along the motorway. I also believe that the lighting columns, atop the new junction to serve the proposed MSA, would not be unduly striking, having regard to those that already exist at the B6265 roundabout.

84. Moving to Moor Lane (south), and the public footpath at Cottage Farm, the view northwards towards the appeal site, where it exists, is curtailed by the boundary screening of the B6265. In the presence of the existing overbridge and related traffic, and the influence of the motorway, I am satisfied that the proposal would have no perceptible additional adverse effect.

85. Turning to the 'Coach Path' and Moor Lane, to the north of the B6265 and linking with Cocklakes Lane/Chapel Lane, neither was assessed in Applegreen's Landscape and Visual Impact Assessment as they were not identified as Public Rights of Way. However, both are the subject of a recent Application for a Definitive Map Modification Order. Kirby Hill RAMS held that the omission overlooks 'receptors' with a high degree of sensitivity.

86. Having that in mind, the Coach Path affords extensive sideways views over and beyond the appeal site to the North York Moors. The middle ground contains the motorway corridor. Walking northwards, the B6265 overbridge is visible as is the motorway carriageway and attendant vehicles. Whilst landform offers some subsequent screening, the gantry signs and overbridge linking Highfields Lane and Moor Lane come into view, and vehicles reappear, thus accentuating and extending the influence of the motorway.

87. From Moor Lane there are direct views towards the motorway and the Marton-le-Moor overbridge and, from the bridge itself, there are long views over and along the motorway. From Cocklakes Lane/Chapel Lane, Moor Lane, and the bridge, and also from Highfields Lane to the east, the most visible elements of the project would be the proposed southbound slip roads, the new dumbbell roundabout, and the bridge over the motorway. Lighting columns and traffic movements would be an added factor.

88. However, notwithstanding the claim that the scheme would result in the highest concentration of road bridges in LCA81, I consider that the addition of what would be an 'infill' bridge, between two existing closely-spaced bridges[11], could not be said to be uncharacteristic or visually incongruous in this setting. The associated earthworks to the west of the motorway, subject to gentle gradient and rounded profile, would reflect the characteristic undulating topography, and appropriate new tree planting would assist assimilation. Importantly, where views would remain across the site, the backdrop of the western and southern boundaries would ensure that the development was visually contained within a robust landscaped setting.

[11] The proposed overbridge is shown to have a deck level some 0.5m higher than that of the B6265 bridge

89. Finally, on the western side of the site, the nearby seven-storey landmark Skelton Windmill has an extensive panoramic outlook. The illustrative scheme takes account of the view-lines from the windmill and, in my opinion, demonstrates through a combination of topography, landscaping, building locations and built form that the overall effects on visual amenity could be substantially mitigated.

90. Turning now to the proposed new highways infrastructure, the proposal would involve the repositioning of the A168 further east of its current route[12]. The existing alignment benefits, in substantial part, from linear tree belts and hedgerows although the lead up to the B6265 roundabout is relatively open to view. The construction of the proposed southbound off slip road would include the removal of established vegetation and replacement planting on its outer edge which would take some years to screen the slip road as it rises to the new junction.

91. The junction infrastructure would be the most notable element, again with the loss of established vegetation to accommodate the works. Although some replacement planting would be feasible, the eastern-most dumbbell roundabout would be located atop a steeply graded embankment rising from the A168.

92. Looking first at impacts on road users, the A168 is already strongly influenced by its proximity to, and intermittent views of, the adjacent motorway. It passes under the Marton-le-Moor overbridge and rises up to the B6265 junction, albeit engineered topography is generally subtle in form.

93. Although the proposed eastern elevated roundabout, and circulating traffic, would stand some 6.7 metres above the A168, more measured grading would be possible, particularly to the north. Given the fleeting image on a route with fast moving traffic, and scope for planting adjacent to the lower carriageway level, I consider that the visual impact would not be of any material consequence. As to the abnormal load bays, these would have less elevation and greater separation and the effects arising from parked vehicles would be negligible.

94. Moving on to the wider locality, from the vicinity of Dishforth Airfield there are limited views of the motorway corridor; Marton-le-Moor overbridge is partially visible; and the lighting columns on the B6265 roundabout are also apparent. The introduction of the proposed new highways infrastructure and related traffic, although initially pronounced, would be capable of some amelioration over time and, in any event, the outcome would not be unduly uncharacteristic or intrusive in an already notable highways corridor.

95. Further to the south, rising topography removes the influence of the motorway. Views of the proposal would largely be limited to the lighting columns around the new dumbbell roundabout and its approaches. The existing lighting columns around the B6265 roundabout would also be visible a short distance to the south. The overall impact would be very minor.

[12] The realigned A168 at its most easterly point would extend 129m from the edge of the motorway compared to its current position of 75m (the eastern most point of the proposed bund associated with the 2012 decision was shown to be 253m east of the motorway)

96. From the direction of Kirby Hill, including the public footpaths to the north of the village[13], Millings Lane, the Churchyard, the public footpath from Church View and residential properties, the principal effects would be associated with the new roads infrastructure. In this regard, the existing view is across open fields, dividing hedgerows and the well-vegetated motorway/A168 corridor. The lighting columns in the vicinity of the B6265 roundabout can also be seen as elements breaking the skyline.

97. The realigned A168 would have a more open easterly aspect than the existing route and vehicles would be visible over a longer stretch than at present. However, vegetation in the foreground of both the motorway and the new slip roads would provide a dense backdrop to the repositioned road. In addition, new hedgerow planting, in the narrow strip on the eastern edge of the relocated A168, would offer some further mitigation in due course.

98. The proposed new embankments, the dumbbell roundabout and the new overbridge would be the most noticeable elements. There would also be the added effects of the lighting columns and the movement of vehicles. In combination with the realigned A168, the road corridors, and in particular that of the motorway, would become significantly wider and more apparent.

99. However, the new embankments could be, for the most-part, planted to assist assimilation. It was also said that the steepest gradient below the eastern roundabout could be grassed to maintain visual continuity. Nonetheless, even with the indicative landscaping, the lighting columns would remain as conspicuous vertical elements as would high-sided vehicles.

100. Taking account of the totality of the view, with the built-up area of the village visible in combination with other built elements within the wider landscape, I consider that the resultant adverse effects of the new highway works would not amount to a compelling degree of harm.

101. In addition, the associated new tree planting to the east of the motorway, acknowledged to be *'large scale tree planting'*, whilst predominantly linear in form, would imitate that which already exists. Moreover, the extent to which it might accentuate the motorway and the A168 corridors would be very limited as the routes are already an established influence on landscape character. In my opinion, the replacement and reinforcement planting would not result in a notable change to landscape character.

102. Considering next, in general terms, the likely night-time effects, there would inevitably be some surrounding locations from where the lighting of the main MSA would be evident. From the immediate west, along the B6265, individual light sources would be apparent, with some columns visible above screening features, resulting in a new source of artificial lighting and change to the night sky.

103. However, this would be in the context of the lighting columns in the vicinity of the B6265 roundabout and those of moving vehicles. At a greater distance from the site, for example from the north-west along Chapel Lane and to the south along Moor Lane, individual light sources would be less apparent but, in combination, would emphasise the already locally lit corridor.

[13] Representative viewpoints 6 and 7 in particular

104. Inevitably, the most likely effects would arise from the lighting columns in the vicinity of the new dumbbell roundabout and from taller columns within the site. Downward illumination would highlight circulating vehicles on the elevated junction and add to lights from traffic entering and leaving the proposed MSA. The effects would be most evident from an easterly direction, notably from Kirby Hill, appearing as a second cluster of lighting along the skyline.

105. From my site visit I was able to observe that the night sky is not inherently dark, in that there are sporadic light sources in the wider area with those at the B6265/A168 junction the most apparent. Whilst the proposed development would locally intensify the effects of artificial lighting, the generally dark landscape would remain as the predominant characteristic.

106. Moreover, the outline scheme of lighting shows that it would be possible to limit the level of sky-glow in accordance with the Institute of Lighting Professionals (ILP) (2011) Guidance Notes for the Reduction of Obtrusive Light. Precise details could be secured by a suitably worded planning condition.

107. Drawing together my findings, by returning to the Guidelines for LCA81, I consider that the illustrative details indicate that the proposed development would generally maintain the extensive views which characterise the area and that an appropriate scheme of landscaping would help to integrate the MSA with the landscape.

108. It cannot be denied that the proposal would change the character of the local landscape by the extent and nature of the development as agricultural land would give way to engineered land-form, buildings, related infrastructure, vehicles, intense activity, new planting and lighting. However, as demonstrated by the illustrative details, these effects would be relatively confined and very much related to the existing A1(M) and A168 corridors. Although the proposals would result in a localised widening, the parallel roads are already a notable element as they dissect the character area.

109. The Guidelines indicate that large scale development cannot be easily accommodated without further detriment to landscape character. It was agreed that this imposed a 'high bar'. However, I believe that, based on Applegreen's clear understanding of the landscape, it has been demonstrated beyond doubt that a MSA could be developed in a sensitive manner.

110. With reference to the aim to avoid highlighting the A1(M) and A168 corridors, the proposed works on each side of the motorway would demonstrably widen the presence of roads related infrastructure. However, given the established characteristics of this part of the highway network, and the manner in which the proposed development could be contained within the landscape through ground modelling and planting consistent with that which exists, the added effects would not be unduly significant.

111. Moreover, with reference to the aim in the Guidelines *'to reinforce the diverse pattern of field systems'* the overall balance of the scheme would provide an opportunity to improve hedgerow quality and extent. In addition, the underlying principle of the landscape proposals to the west of the motorway is to soften rather than screen adverse effects.

112. In terms of LCA74, it was agreed that there was a strong relationship between this character area and the appeal site due to rising landform. Although elements of the proposal would be visible, generally in combination with, or in the context of, the motorway, I am content that the development would not have any adverse effect on the approach to Newby Hall or on its character and setting. As such there would be no conflict with the published Guidelines for this character area.

113. Returning to the Local Plan, the proposed development would, in my opinion, protect the landscape character of the district in that the illustrative details demonstrate that the proposal has been informed by, and is sympathetic to, the distinctive relevant landscape character area. As such, it would accord with Local Plan Policy NE4, with particular reference to criteria B, C and E.

Appeal B: The Ripon MSA proposal (Moto Hospitality Ltd)

The 2012 Decision and the current scheme

114. The principal Inspector's summary conclusions included[14]:

> *'…… The landscape mitigation would retain and enhance planting around the site and introduce some native species woodland, avoiding large scale woodland blocks that would be inappropriate to the area's characteristics and would impact upon views. However, the site would appear as a landscaped box that contained development …… From most long views only the tops of the buildings may be visible. I conclude that the proposal would cause moderate harm to the landscape character, which would soften over the years to moderate to slight ……*
>
> *…… there would be clear views of the MSA from the A61, which is a tourist route. The visual impact would be no more than slight because of the context of a considerable area of highway infrastructure and paraphernalia in the immediate vicinity as well as large volumes of motorway traffic ……'*.

115. Unlike the previous proposal, with its buildings in the central and western parts of the site and extensive perimeter landscaping, the current scheme shows the main amenity building and lodge to be sited close to the eastern boundary of the site, below the adjacent roadside embankment, and with more modest screening in light of the Inspector's criticism of the *'landscaped box'*.

Parameters and Visualisations

116. In common with the Vale of York proposal, the Council assessed the proposed Ripon scheme on the basis of the maximum parameters without reference to other controlling factors. Similarly, Moto's illustrative scheme is well-developed in the sense that the indicative design of the proposed buildings is based on the company's latest (under construction) MSA at Rugby.

117. I therefore consider that the Council's approach ignores the overall design concept and footprint parameters and exaggerates the reasonably likely worst case effects. Overall, I find Moto's visual material to be the preferred basis to assist my assessment.

[14] IR 14.5.58 – 14.5.59

Landscape character

118. In my consideration of the Applegreen proposal I have made reference to Local Plan Policy NE4 and, in particular, criterion B and the applicable Landscape Character Area. The proposed Ripon MSA site is also located in LCA81 and the aims and principles of the Guidelines apply in the same way. There are no other relevant Landscape Character Areas.

My appraisal

119. The Moto site comprises part of a large block of arable land on the western side of the A61 and its dumbbell roundabout junction with the motorway and the A6055. The entire eastern boundary is defined by roads infrastructure with the site laying, to varying degrees, below a roadside embankment.

120. The southern and western boundaries are physically indeterminate whilst the northern boundary is delineated by a poorly maintained drystone wall containing a single mature tree. Arable farmland extends beyond the site in gently undulating form, interrupted by the Melmerby Industrial Estate in the middle ground, with the long ridge of the Nidderdale Area of Outstanding Natural Beauty and Yorkshire Dales National Park, generally, forming a more distant backdrop to the west.

121. From the evidence presented, and as a result of my site visit to agreed viewpoints and defined routes, the principal difference between Moto and the Council, in tandem with Applegreen, is the effect of the proposal on the character of the landscape and its visual impact from the immediate locality of the site itself.

122. My analysis from the wider locality confirmed that the area consists of a predominantly open, gently undulating landscape with extensive views to the east and west; complementary hedgerows with both intermittent and linear tree cover providing successive 'layers' to the landscape; and some blocks of woodland.

123. As a consequence, I am satisfied that occasional long views towards elements of the proposed development, from the north, south and west, with the principal buildings set against the boundary embankment, and supplementary foreground terrain modelling and landscaping, would not be of any real materiality. From the east, beyond the motorway, the highway corridor and topography would effectively conceal the proposed MSA.

124. Again, it was not disputed that the proposal would be *'large scale development'* and that, in particular, regard has to be had to openness and views; and to avoid large scale tree planting or large blocks of woodland screening. It was also accepted there would be some perception of impact on openness from some directions and that it would impact on some views by "closing off parts of the view".

125. The Moto site already benefits from a degree of planting arising from the landscaping works associated with the up-grading of the A1 to motorway, albeit the nature of the planting scheme and the developing effect on curtailing views to the west came under criticism. The vegetation is at its deepest, tallest, and densest in the vicinity of the roundabout and it progressively ebbs in effect as it runs alongside the A61.

126. Starting from the overbridge, irrespective of the immediate highway paraphernalia and mid-foreground planting, the landscape to the west of the motorway is perceived as a sweeping arc of open countryside, seemingly with little built-development, with rising distant hills and an elongated horizon under a large sky. The undeveloped nature of the appeal site is a foreground component of that vista.

127. From the western-most roundabout, the vegetation on the embankment rising up to the roundabout, is well-established and, even in early spring, provides heavy filtering of forward views to the north-west. The limiting effect would be the more apparent in summer months and with further growth over time. However, the openness of the site and the attributes of the wider landscape are more apparent immediately to the south of the roundabout where the planting is less intensive and significantly lower.

128. Progressing along the A61, although the landscaping buffer gains some greater presence over a short distance, it subsequently subsides to around one metre in height above road level before it disappears altogether. At the same time, the embankment that supports the roundabout runs out more-or-less to road and site level where roadside planting is least prevalent or of no real effect.

129. In my view, the overall extent, intensity and significance of the existing roadside planting, as the foundation for the proposed scheme, has been overstated by Moto. In this regard, even with increased height and some diminution of gaps with its anticipated growth over time, the relative openness of the appeal site would endure as an inherent component of the expansive landscape, and long views, albeit more restricted, would remain.

130. Moving on to look at the impact of the proposed development, it was claimed that the formation of the access from the roundabout into the MSA, and the removal of vegetation, would re-establish the once open vista. However, the true essence of the view would not be restored in a meaningful manner as the foreground characteristic landscape would give way to the proposed road infrastructure and the fuel filling station within the proposed MSA.

131. In terms of the amenity building and the lodge, the illustrative visualisation (Year 1), from the immediate south of the site, indicates that, even with new foreground modelling and planting, a significant part of the proposed amenity building would be visible. The upper part of the building, and its varying roof profiles, followed by the higher elevation of the lodge, would also be apparent from the road to and from the roundabout.

132. In my opinion, as the motorway is relatively well-shielded from the site, aided by its contemporary landscaping, the proposed MSA would lack any natural physical or perceptual affinity with it. To my mind, it would represent a very sizeable incursion into the rural landscape and seriously undermine its inherent characteristics.

133. In terms of longer term mitigation, the illustrative scheme relies on perimeter raised mounding, other than where the existing embankment contains the site; new hedgerow planting to the southern and western boundaries; loose-knit tree planting; dense tree planting in the south-eastern corner of the site; and reinforcement of the existing planting along the eastern boundary. With regard to the latter, the Design and Access Statement affirms:

'The eastern boundary development strategy is therefore a key factor in controlling visual impact in the site's wider visual setting ……. The visual screening effect of the eastern boundary is further enhanced by the inclusion of a strengthened linear tree belt, some 10m - 15m wide, between the eastern boundary line and the rear of the amenity building, service yard and lodge. This is extended at the southeastern corner of the site for approximately 70m along the southern boundary to assist in screening the service yard when approaching junction 50 along the A61 from the southwest'.

134. Although Moto has sought to resolve the previous Inspector's criticism of the *'landscaped box'*, by more subtle boundary treatment, the eastern and south-eastern boundaries would nonetheless take the form of a substantial band of planting with the sole purpose of screening the proposed development.

135. I recognise that the landscape in the vicinity of the site is enriched by the presence of hedgerow trees, avenues and woodland blocks. However, in the main, these appear to owe more to the evolution of the countryside landscape rather than being a necessary consequence of seeking to hide new built development.

136. The LCA81 Guidelines indicate that '*small woodland blocks associated with appropriately scaled development may help to integrate development with the landscape'*. However, I consider that the proposed MSA, in terms of the combined building footprints and the areas to be devoted to circulation and parking, within such a predominantly open rural setting, and its disconnection from the motorway, would be at odds with the overall context and setting of the site and the wider landscape.

137. In my view, it could not be said that the form and nature of the proposed landscaping to shield the development from the A61 would amount to a small woodland block. Rather, its overall configuration, with the proposed mounding, would fail to integrate the development with the landscape. Moreover, the intended continuous band of planting would, in itself, fail to take account of the aim within the Guidelines of maintaining the extensive views across and beyond the area.

138. I acknowledge that outlook across the site, effectively restricted to southbound motorists[15], is of short duration and in a sideways (westerly) rather than forward direction. Nonetheless, even on a glimpsed basis, and whilst such views are not unique to this length of the A61, the openness and qualities of the landscape are inescapable. Although elements of the motorway, and traffic on it, can be seen to the east beyond the gated 'lay-by' and adjoining field, it is the open views, rather than the motorway or the junction accoutrements, that are the dominant characteristic.

139. Moto's Landscape and Visual Impact Assessment confirms:

'The construction of an MSA on an open arable field will have a Major–Moderate Negative impact on the character of the field but the effect on the character of the wider landscape will be Minor Negative and this correlates with the Secretary of States [sic] *conclusions[16] when considering the previous application*.

[15] Noted as a tourist route where a proportion of motorists may have an enhanced sensitivity

[16] '*the proposal would cause moderate harm to the landscape character, which would soften over the years to moderate to slight ……. The visual impact would be no more than slight because of the context of a considerable area of highway infrastructure and paraphernalia in the immediate vicinity as well as large volumes of motorway traffic ……'*

Once the external mounding has been constructed there will be no significant negative effects on the visual amenity of residents, walkers or travellers'.

140. It will be apparent from my assessment, based on the evidence that I heard and from my site inspection, that the proposed development would impact on identified valued characteristics of openness, and it would not reflect the aim within the LCA81 Guidelines of maintaining the extensive views across and beyond the area.

141. Similarly, the proposed extensive tree planting to enlarge and reinforce earlier landscaping (which was generally agreed to be atypical), in order to screen the proposed MSA, would be a further contradiction of the Guidelines.

142. Moreover, it is evident that a development of the scale proposed, that would protrude uncharacteristically into an agricultural landscape that continues almost uninterrupted by development to a distant horizon, would have a very damaging effect on the character and appearance of the local landscape, the wider landscape and the Landscape Character Area as a whole.

143. Finally, whilst the proximity of the motorway corridor and the works associated with J50 are relevant factors, I consider that the Moto appeal site has very little direct affinity with those, in that it is truly embedded within the wider countryside landscape. The proposed development would, in my opinion, not only highlight the motorway corridor but also widen it in a disparate and illogical manner.

144. In terms of operational lighting effects, the existing motorway junction, and the roundabouts to the east of the site, are lit by lighting columns. The lighting of the proposed MSA would appear as a new source of artificial lighting within an otherwise dark location beyond these lights. However, the indicative lighting scheme shows that it would be possible to meet the standards set out in the Institute of Lighting Professionals (ILP) (2011) Guidance Notes for the Reduction of Obtrusive Light. In particular, light spill over the site boundaries and upward sky-glow could be minimised by careful design. Precise details could be secured by a planning condition.

145. However, this does not change my overall analysis and my firm conclusion that the proposal would neither protect nor enhance the landscape character of the district, and it would be in conflict with Local Plan Policy NE4 with particular reference to criteria B, C and E.

The Third Main Issue: Loss of Agricultural Land (Appeals A and B)

146. The Statement of Common Ground between Applegreen and Moto, on Agricultural Land Matters, confirms that the proposed Vale of York MSA site, contains some 14.35ha of best and most versatile agricultural land with a mix of Grades 2 and 3a.

147. The principal dispute on the classification of the Ripon site rests between Applegreen and Moto. In this regard, Applegreen claims that the Ripon site, some 13.34ha, is also best and most versatile agricultural land, in a mix of Grades 2 and 3a, whereas survey work to inform the Moto proposal (the 2020 Savills' Report) states that it is Grade 3b and therefore not of such quality.

148. There are four elements to Applegreen's challenge namely: survey work undertaken by, or on behalf of, the Ministry of Agriculture Fisheries and Food (MAFF) in the mid-1990s in connection with up-grades to the A1; a survey (the 2010 RPS Report) underpinning the previous planning application the subject of the 2012 decision; the quality of the 2020 Savills' Report; and a survey, carried out on behalf of Applegreen, on nearby land.

149. On the first, it is known that the entire length of the A1 through Harrogate Borough was surveyed and classified by MAFF prior to the route being up-graded to motorway status. The published A1(M) Agricultural Land Classification Map, for the sections from Wetherby to a point between J50 and Leeming Bar, covered a linear band of land with some 86% classified as best and most versatile agricultural land, predominantly Grade 2. That part of the appeal site within the mapped area was shown as Grade 2.

150. Notwithstanding the dispute on the provenance of the mapping, and whether or not parts were derived from desk-based assessment, the Environmental Statement for the A1 Dishforth to Barton Improvement confirms that *'detailed land classification surveys were undertaken by Defra (formerly MAFF) in 1993/94'*. Whilst this shows the eastern and south-eastern parts of the appeal site as Grade 2, consistent with other best and most versatile agricultural land in the locality, it is inconclusive in the categorisation of the appeal site as a whole.

151. Turning to the 2010 RPS Report, it was stated that a detailed site survey had been undertaken comprising 20 auger borings (1.0m auger) complemented by the digging of three soil pits. The site was found to consist of a mixture of Grade 2 and 3a quality land with the former (6.3ha) running north-west to south-east, through the central lower lying part of the site, with the latter (7.0ha) on the west and north-eastern areas.

152. It was recorded that '*the Grade 2 land is characterised by medium sandy loam topsoils overlying similar subsoils to depths of 45 – 60cm overlying sandier loamy medium sand lower subsoils to depth. The profiles contain limited amounts of total stone (<5%). These profiles are limited to Grade 2 by a slight susceptibility to droughtiness'*.

153. The Grade 3a land was found to comprise three different soil profile types. First, in short, medium sandy loam topsoils with 2 - 5% total stone located on the higher parts of the site, particularly to the north-east, and susceptibility to droughtiness. Second, similar sandy profiles on the western part of the site with notably higher percentages of stone, including large stones (>6cm diameter), and a main limitation due to susceptibility to drought and a similar stoniness limitation. Third, medium sandy clay loam soils overlying heavy clay loam upper subsoil and mottled and slowly permeable clay subsoil.

154. With one exception, the texture of the topsoil derived from the auger samples was described as medium sandy loam. Stone presence was generally low with only 3 points recording in excess of 5% (5 - 10%) stone content in the topsoil. The majority of the sample points were able to record profiles at or approaching the full depth of the auger with only two recording impenetrability beyond 60cm.

155. The three soil pits also revealed a top layer of medium sandy loam with two of the points recording less than 5% stone and the third recording 10% stone. This was broadly consistent with the nearest auger profiles. The results were further verified by two Particle Size Distribution samples which were taken for laboratory analysis.

156. The Savills' 2020 survey to inform the current proposal, the third of Applegreen's points of contention, was undertaken without knowledge or reference to the 2010 RPS Report. Moto's expert witness conceded that this was a robust piece of work, albeit he disagreed with the conclusions, and that the quality of agricultural land will generally prevail for decades.

157. Nonetheless, the survey carried out on behalf of Moto produced very different results. Although only 16 sample auger locations were chosen, the sample density was consistent with Natural England's Technical Information Note (TIN49) with one boring per hectare to a depth of 1.2m.

158. The summary outcome graded the entire site as Grade 3b land with a limitation of soil droughtiness. The sample point data identified five locations as *'Grade 3b on Drought'*; two locations of *'Grade 3b on Drought, close to 3a'*; four points of *'3a on Drought'*; and five assessments of *'Grade 4 on Drought'*.

159. Stone was found to be considerably more prevalent, varying between 8% and 20% in the top layer. In addition, at 9 locations penetration of the auger to its full depth was precluded by stone with two locations showing constraint at a depth of 35cm. The report made passing mention that the survey included trial pits but without corresponding record. Moto's witness at the Inquiry reported that the survey included a single inspection pit, close to an auger boring recording Grade 3a, albeit without reporting on the outcome.

160. Looking further at these findings, Moto's position was that the dominant limitation on agricultural land quality and versatility is soil droughtiness and that the presence of large stones was sufficient to impose a parallel limitation to Grade 3b. The two have different effects, in that the former is likely to inhibit yield and the latter restricts how the land is managed. Variability of soils and site conditions across a field can become a significant 'pattern' limitation resulting in classification to the lower or lowest of two or more grades.

161. In terms of droughtiness, the 2010 RPS Report found the site to consist of a predominance of medium sandy loam topsoils with inclination to droughtiness limiting classification to Grade 2 or Grade 3a at worst. By contrast, the 2020 Savills' Report described the predominant topsoil characteristic as loamy medium sand and the inability of the soil profile to hold water.

162. The difference in the recording of soil types is significant in that loamy sands contain a higher proportion of sand particles than sandy loams, and are thus unable to retain as much water in the soil profile to support crop growth.

163. Whilst Savills' 2020 assessment has to be taken at face value, the 2010 classification was supported by laboratory analysis whereas the more recent field survey was not validated in this way. Moreover, the assessment made in 2010 was consistent with the predominant soil type, in very general terms across the region, namely the Escrick 2 association.

164. By comparison, the finding of a concentration of loamy sand topsoils, whilst made by a competent soil consultancy, sits uneasily in my opinion with the earlier classification. Although I recognise that local disparity could influence site specific classification, Moto's evidence and assessment of droughtiness, whilst robustly defended, does nonetheless cast serious doubt on its primary conclusion that droughtiness imposes a restriction to Grade 3b.

165. It was said in evidence, that where the auger encountered resistance before reaching a depth of 0.5m, further attempts were made in the immediate locality to obtain a deeper core. Where this failed, an additional allowance of soil material was given for the drought calculation as crop roots were likely to penetrate to a greater depth than the auger. Without the allowance, a Grade 5 drought limitation would have been recorded at some of the sample locations.

166. However, it was not clear to me how, and to what extent, any adjustment had been derived or made. In particular, there was nothing to suggest that an allowance had been applied, in a transparent manner, consistent with the MAFF Agricultural Land Classification guidelines on crop-adjusted available water capacity to take into account the presence of stones, rock or a very poorly structured horizon.

167. In terms of stoniness, the guidelines indicate that: *'The degree of limitation imposed by stones depends on their quantity, size, shape and hardness. Stoniness can vary markedly over short distances and is time-consuming to measure'*. In this regard, the task is not one of simply recording total percentage stone content, as is reported in the majority of the 2020 sample points, as it is stones which are retained on a 6cm sieve that are likely to have a more negative effect than smaller stones.

168. For example, a 25% presence of stones in the topsoil, (15% between 2cm and 6cm and 10% larger than 6cm) would qualify as Grade 3a land on stone content. Similarly, a total of 15% stone (10% and 5% respectively) would be classed as Grade 2.

169. However, only three of the sixteen sample points record stone content in excess of 15%; and a lone auger point shows a total stone content of 30% (20% and 10% rendering that point Grade 3b). Whilst the two supplementary photographs[17] *'Prominent and common areas with significant large stone content found on the site'* seek to illustrate stoniness, these appear inconsistent, in my view, with the majority of the sixteen sample points. In addition, having walked around the periphery of the site, and along several tracks between bands of immature crops, I saw nothing of equivalence to support the proposition of prominent surface stoniness across the site.

170. Moreover, most of the results make no distinction on the relative percentages in the overall total (e.g. *'10% hard stone'* and *'15% hard stone and gravel'*). Put simply, the tabulated data is superficial, inconsistent in presentation and it does not follow the MAFF guidelines. In my opinion, despite one isolated record of above average stone, the survey provides no confident basis to conclude that the stone content of the topsoil limits the land to Grade 3b.

[17] Savills' letter dated 28 May 2020 to HBC Appendix 4

171. Reflecting on the 2020 Savills' Report in the round, I consider the two factors leading to its overall conclusion cannot be treated with any degree of confidence. Moreover, whilst it was said that the occurrences of Grade 3a land within the site did not form contiguous areas of a single quality to be mapped as such, this appears to be a consequence of the reservations that I have described leading to a singular perfunctory Grade 3b presumption.

172. I acknowledge that some differences are to be expected between field surveyors in applying professional judgement to survey points each with unique characteristics. Whilst Applegreen made much of Moto's approach, which I have discussed above, Moto's expert witness had little in the way of disagreement with the methodology of the 2010 RPS Survey.

173. However, in highlighting issues of fine judgement over subtle distinctions in soil texture, the 2010 RPS field work has the advantage of laboratory endorsement. Moreover, the allegation that the 2010 survey failed to adequately recognise the alleged *'significant presence of large topsoil stones'* appears to be highly improbable.

174. Turning briefly, to Applegreen's fourth strand, relating to its own recent survey of adjacent land to the east of the A61. The summary findings endorse the presence of sandy loams, supported by laboratory determination, rather than the droughtier loamy sands; consistency with the mapped soil type and earlier surveys; and reach an overall conclusion of Grade 2 in the northern part of the land and Grade 3a to the south. Whilst supportive of the wider characteristics of the locality, it does not have any real bearing on the evaluation of the appeal site.

175. In the final analysis, although the 2010 RPS Report was not 'tested' at the Inquiry, in the sense of having a witness available for cross-examination, its conclusions were not seriously challenged. Further, its provenance was in the nature of an assessment in connection with the promotion of the 2010 application for a proposed MSA on the site. Both the principal Inspector and the Secretary of State found the loss of best and most versatile agricultural land to be a consideration to be weighed in the balance. In my opinion, the conclusions of the 2010 Agricultural Land Classification are a significant factor.

176. On the other hand, the Savills' 2020 Report has a number of shortcomings. None of these, or its variance from the 2010 RPS Report, were resolved persuasively in the evidence presented to the Inquiry by Moto. As such, I find Moto's case to be largely unconvincing.

177. Accordingly, on a compelling balance of probability, the evidence points to the proposed Ripon MSA site being best and most versatile agricultural land.

178. Turning now to the Harrogate District Local Plan, Policy NE8 confirms, in short, that the best and most versatile agricultural land will be protected from development unless there is an overriding need; and if best and most versatile land needs to be developed, and there is a choice between sites in different grades, land of the lowest grade available must be used except where other sustainability considerations outweigh land quality issues.

179. It follows that the agricultural land resource of both the Applegreen and Moto sites is to be protected unless there is an overriding need for either proposal. The former, consists of some 14.35ha of best and most versatile agricultural land which, in the mix of Grade 2 and 3a, is predominantly Grade 2. The latter has an area of approximately 13.34 ha of which approximately half should be considered to be Grade 2 and the remainder Grade 3a.

The Fourth Main Issue: Highway Safety; Drainage, Flood Risk and Climate Change; the Local Economy; and Designated Heritage Assets (Appeal A)

Highway safety

180. Kirby Hill RAMS had two principal concerns. The first related to the use of the 'rear access' on to the B6265 which would be used during the construction phase and thereafter by staff and some service vehicles. The B6265 is a main tourist route from the A1(M) to Newby Hall, Ripon and its Racecourse and Fountains Abbey. The second concerned the realignment of the A168.

181. As the proposed MSA has been designed to be an on-line facility, with principal access from the A1(M), the proposed rear access on to the B6265 would allow local employees to access the site by car, cycle or on foot and for local deliveries to avoid a lengthy journey on the motorway.

182. Although Kirby Hill RAMS claimed that vehicles passing the proposed rear access are able to travel at 60mph, a speed survey conducted on behalf of Applegreen, at a location agreed with the Highway Authority, shows an 85th percentile speed of 42mph in a westbound direction and 47.6mph eastbound.

183. Whilst criticism was made of the positioning of the data point, the desirable minimum stopping sight distance of 215 metres, for a design speed of 60mph, can be achieved to the west in the direction of nearside on-coming traffic. The splay of 160 metres to the east would be consistent with the speed survey based on a design speed of 50mph.

184. Even if reliance were to be placed on the later survey by the County Council, to the west of the proposed access where vehicles are in free flow, and the 85th percentile speed of up to 58.9mph eastbound, the Highway Authority continues to endorse the proposed access and visibility splay arrangements.

185. This leads me to consider whether there are factors which would undermine this judgement and have an unacceptable impact on highway safety.

186. Kirby Hill RAMS pointed to published accident data in the vicinity of the proposed rear access, and more recent local knowledge, and claimed that this stretch of road is an 'accident blackspot'. Yorkshire Police has also confirmed that the B6265 is a 'Killed or Seriously Injured' (KSI) Route.

187. Nonetheless, from the evidence available, there is nothing to suggest any cluster of accidents in terms of either location or cause. Indeed, it is to be noted, from 'Crashmap', that the only recorded incident (slight), a significant distance to the east of the proposed rear access, was in the vicinity of the B6265 overbridge and roundabout. Similarly, the three documented serious incidents, to the west, were logged beyond High Moor Road.

188. Kirby Hill RAMS also expressed concern about how Applegreen would address three recommendations of the Stage One Road Safety Audit which I note was undertaken by, amongst others, representatives of the Highway Authority and North Yorkshire Police.

189. Firstly, the hidden dip in the road to the west of the proposed rear access has clear safety implications for vehicles leaving the site. Given that the details of the proposed access is a reserved matter, there is nothing to suggest that the recommendation of amending levels within the access and/or on the B6265 to achieve adequate visibility in the vertical plane could not be fulfilled. This would be subject to detailed design, a Stage 2 Safety Audit, and the approval of the local planning authority.

190. Secondly, the impeding effect of vegetation to the east of the proposed rear access would be readily resolvable by limited cutting back (without any material effect on its screening qualities) and subsequent maintenance free from obstruction secured by condition. This would be in addition to the repositioning of the highway advance direction signs to the east.

191. It was further suggested that pedestrians and cyclists using the proposed new shared facility running from the edge of Kirby Hill, and the relocation of the crash barrier, would obstruct visibility in the same direction. However, it has been confirmed that scope exists within land controlled by the Highway Authority to ensure that this matter would be resolved at reserved matters stage.

192. Thirdly, it is intended that the use of the proposed rear access would be on a restricted basis and controlled by security measures. This could be made clear by the provision of signs to inform passing motorists, in accordance with an overall scheme, to be agreed, to control the operation of the access.

193. Although Kirby Hill RAMS highlighted the regular incidence of fog across the Vale of York, thereby affecting motorists' visibility, one would expect drivers to adapt to the prevailing conditions and adjust their manner of driving accordingly. In my opinion, localised fog as described would not provide a good reason to preclude the provision of the proposed rear access, having particular regard to the advantage in local connectivity.

194. The B6265 inevitably experiences high traffic flows associated with local attractions and events. Whilst this is likely to be more relevant to the construction stage of the proposed development, the use of the proposed rear access by heavy goods vehicles could be managed through the approval of a Construction Management Plan, secured by condition.

195. It is acknowledged that employees walking or cycling from the direction of Kirby Hill would have to negotiate a busy roundabout junction, compounded from time to time by traffic diverted from the motorway. Whilst such a journey would have to be made with caution and awareness, the southerly limb of the A168 has a central refuge and, with reasonable care, there is nothing to suggest that the route would be inherently unsafe. Moreover, the design of the crossing points would be subject to approval at which stage additional measures to highlight pedestrian and cycle activity, if deemed to be necessary, could be secured.

196. It is also suggested that the location of the proposed rear access, at the furthest point from Kirby Hill, and the nature of the route, would make journeys on foot unlikely, contrary to the aims of sustainable development. However, given the type of development and its location, and the measures proposed in combination with a Travel Plan, I consider that appropriate opportunities to promote sustainable transport modes have been demonstrated. As such, there would be no conflict with Local Plan Policy TI1: Sustainable Transport.

197. Moving on to the concerns relating to the realignment of the A168, Applegreen's Highways and Highway Safety Supplementary Written Statement demonstrates that right turn protection to the area of the attenuation pond could be provided in accordance with the relevant standard[18], should it be so required, at detailed design stage.

198. In terms of the elevation of the proposed eastern dumbbell roundabout, relative to the A168 carriageway below, I note that the respective highway authorities raise no objections. It is apparent that safety could be secured by appropriately designed measures which would be subject to future approval and a Stage 2 Road Safety Audit. Similarly, relative to the roundabouts, arrangements for overrun areas to accommodate abnormal load movements have been endorsed by Highways England and I see no reason to disagree.

199. Overall, I am content that the highway matters raised by Kirby Hill RAMS are capable of mitigation. On that basis, I conclude that there would be no unacceptable impacts on highway safety.

Drainage and flood risk

200. In terms of drainage and flood risk, Kirby Hill RAMS raised three principal points. These were: local drainage infrastructure; the risk of flooding; and effects on groundwater.

201. In terms of foul drainage, a number of local issues, including infrastructure capacity and related pollution, have been documented. However, the drainage authority has confirmed, despite reservations in 2017, that the sewerage network and treatment works can, or will be able to, accommodate the proposed foul discharge from the site. Specifically, the on-site drainage is to consist of separate foul and surface water systems; and the foul drainage to be pumped from the site would be subject to a maximum flow rate. These elements could be secured by planning conditions.

202. Kirby Hill RAMS also pointed to a foul drainage issue at a MSA site operated by Applegreen. However, it has no direct bearing on the considerations before me and, in any event, documentary evidence shows it to have been resolved.

203. Turning to potential flood risk, the overall strategy is to drain surface water to the ground based on a Sustainable Drainage System (SuDS). Site investigation shows that the proposed SuDS could be designed to accord with the Council's 'Supporting Drainage Chart' and the relevant guidance in CIRIA[19] SuDS Manual C753. Where the site currently experiences periodic standing water, surface water would be collected and pumped up through the site to discharge to one of the proposed higher infiltration basins.

[18] Design Manual for Roads and Bridges Standards for Highways CD 123 – Geometric design of at-grade priority and signal controlled junctions

[19] Construction Industry Research and Information Association

204. Looking next at groundwater, the disposal of surface water would be managed using a series of water treatment processes including fuel interceptors, bypass separators and permeable paving. In addition, drainage during the construction phase would be managed and monitored through a Construction Management Plan.

205. Local Plan Policy CC1: Flood Risk and Sustainable Drainage explains, amongst other things, that development proposals will not be permitted where they would have an adverse effect on watercourses or increase the risk of flooding elsewhere. It indicates that priority should be given to incorporating SuDS to manage surface water drainage. The proposal would not be in conflict with this policy.

Climate Change

206. The principal point raised by Kirby Hill RAMS relates to greenhouse gas emissions caused by road transport. In this regard, it is noted that vehicles, slowing, idling, and accelerating discharge higher emissions than a vehicle travelling at speed. In addition, extra mileage is incurred by leaving and re-entering the motorway. Consequently, it is claimed that MSAs work directly against the Government's net zero emissions target; and its legally binding commitments under the Paris Agreement and the Climate Change Act 2008. Further, national policy in Circular 02/2013 takes no account of this material consideration or the more recent policy reductions in the UK's annual carbon emissions by 2030.

207. The matter of relative emissions is generally common ground. However, I consider the comparison to be somewhat artificial insofar as a break in journey would have been likely to occur, in any event, at an alternative facility. The approval of an additional MSA along a route would therefore have the tendency to redistribute emissions between locations rather than to result in a material increase and resultant harm. Overall, I find nothing inconsistent with commitments to reduce greenhouse gas emissions.

The Local Economy of Boroughbridge

208. Boroughbridge is said to be an attractive and vibrant place to live, work, visit and shop. There is no doubt that it is an appealing and popular tourist destination. Kirby Hill RAMS maintained that Applegreen has seriously underestimated the effects of displacement on existing local businesses and the resultant economic harm.

209. However, the travel to work area for the site is more extensive than Boroughbridge itself; and Applegreen's Travel Plan provides for an employee bus service, including potential pick-ups and drop-offs in Ripon and Harrogate. Moreover, Applegreen's economic assessment demonstrates potential available sources of labour. Part-time opportunities and shift patterns are also likely to be attractive to those seeking top-up jobs and/or flexible working.

210. As to the potential loss of trade to the 'Local Services' in Boroughbridge (signed at J48), it is conjecture that the proposal would take trade away from the town. In this regard, MSAs have a specific purpose of meeting the needs of motorists, generally engaged in long distance travel with a tendency to seek directly accessible facilities. Whilst some motorists may prefer to meander from their journey, in order to explore a more distinctive alternative, there is nothing to suggest that a nearby MSA would change that behaviour to a material degree or cause harm to the economy of the town.

211. I recognise that the type of jobs associated with a MSA would not reflect the Council's focus for economic growth, and the key sectors identified in Local Plan Policy GS5: Supporting the District's Economy. In addition, the Framework encourages planning policies to set a clear economic vision and strategy to positively encourage sustainable economic growth.

212. However, in my opinion, neither local nor national policy, in setting priorities, intends an exclusive economic focus at the expense of other employment opportunities. On the basis that MSAs are a consequence of need, related to the safety and welfare of motorists, it follows that the type and nature of the resultant employment is a corollary of that need. Whilst the jobs generated by the proposed development would not be in accordance with the local employment strategy expressed through Policy GS5, the 'one-off' inward investment is a factor to be considered in the overall planning balance.

Designated Heritage Assets

213. It is common ground between the Council and Applegreen that 'Heritage' is not at issue. Local Plan Policy HP2: Heritage Assets indicates that proposals for development that would affect heritage assets will be determined in accordance with national planning policy; and applicants should ensure that proposals affecting a heritage asset, or its setting, protect or enhance those features which contribute to its special architectural or historic interest.

214. The Framework indicates that in determining applications, an assessment should be made of the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset).

215. The Church of All Saints', Kirby Hill is Listed Grade 1. Its significance and the contribution of setting to significance is set out in the Environmental Statement. Principal facets include its location on the eastern edge of the village within an enclosed and partially screened churchyard. The appeal site lies to the north-west in the middle distance beyond undulating agricultural fields. The most notable element to be added to this setting would be the new highways infrastructure and moving traffic. However, having regard to the existing A1(M)/A168 corridors, I concur with Applegreen's assessment that the project would not materially affect the ability to understand, appreciate and experience the church and its value.

216. Skelton Windmill, to the west of the site, is Listed Grade II. Its significance and the contribution of setting to significance are also set out in the Environmental Statement. The windmill is situated on the summit of a low rise that provides commanding rural views. The main area of the proposed MSA would lie below eye-line from the upper parts of the building, although lighting columns and some elements of the green roofs are predicted to be visible. The new junction would be a further obvious element. Nonetheless, I agree that the immediate agricultural setting would remain legible, as would the building's commanding position, distinctive character, and wide-ranging views.

217. In both cases, I consider that the respective changes to the landscape would have a very minor adverse effect on the contribution of setting to the significance of these designated heritage assets. This would amount to less than substantial harm to be weighed against the public benefits of the scheme.

Other Considerations (Appeal A and Appeal B)

218. Both applications, and related appeals, generated a number of representations from people living in nearby local communities which raised a range of themes. I have considered many of those in connection with the main issues above. Some others relate to technical matters that I have assessed in light of responses from specialist consultees. There are also points which would be the subject of further assessment when reserved matters are submitted and/or subject to detailed planning conditions. A few concerns, although understandable, are not strictly material to the determination of these appeals.

The Fifth Main Issue: Relative Merits of the Appeal Sites

Landscape

219. I have found that the Applegreen proposal would, when considered against the relevant Landscape Character Area Guidelines, cause limited harm to the area's defining characteristics both in terms of landscape character and visual amenity. In my opinion, it has been demonstrated that the proposed illustrative scheme has been informed by, and would be sympathetic to, the Landscape Character Area in which it lies, and also to the adjacent Landscape Character Area, so far as material. It can therefore be said that the proposed development, in the manner as generally indicated, would protect the landscape character of the district. It would therefore accord with Local Plan Policy NE4.

220. By contrast, I consider that the Moto proposal, in its illustrative scheme, does not reflect the Landscape Character Guidelines, with particular reference to maintaining extensive views across and beyond the area, as a result of the proposed built form and associated screen landscaping. It follows that the proposal would not protect the landscape character of the district and the project would be in conflict with Local Plan Policy NE4.

Agricultural land

221. Both proposals would result in the loss of best and most versatile agricultural land. Local Plan Policy NE8 seeks to protect such land from development except where it can be demonstrated to be necessary. If there is a choice between sites in different grades, land of the lowest grade available must be used except where other sustainability considerations outweigh land quality issues.

222. The proposed Moto site would use marginally less best and most versatile agricultural land than its counterpart which would give it borderline advantage. If the policy is to be read as drawing a distinction between grades, rather than differentiating between best and most versatile agricultural land and land that is not best and most versatile, the proposed Ripon site could also have a marginal preference. That said, given that both sites are a combination of Grade 2 and 3a, it would be difficult to logically draw distinction.

On-line or at junction

223. Annex B of Circular 02/2013 indicates:

> *'On-line (between junctions) service areas are considered to be more accessible to road users and as a result are more attractive and conducive to encouraging drivers to stop and take a break. They also avoid the creation of any increase in traffic demand at existing junctions.*

Therefore, in circumstances where competing sites are under consideration, on the assumption that all other factors are equal, the Highways Agency has a preference for new facilities at on-line locations'.

224. The Applegreen proposal would be an on-line site in the sense that it would be located between existing junctions and it would have its own access from the motorway. The Moto proposal would be a junction MSA.

225. However, the approach/exit distances into and out of each of the facilities would be much the same. The Applegreen scheme, as a single-sided facility, would also require southbound vehicles to enter and leave the site indirectly by means of a grade-separated junction. In addition, in the case of Moto, J50 of the motorway with the A61/B6055 is not an unduly busy one and the increased traffic demand would not be significant. Junction MSAs have also become increasingly common.

226. On the face of it, there would be little material difference between the two projects. However, with exclusive access from the motorway, irrespective of the subsequent configuration and incidence of circulating roundabouts, the Vale of York MSA is likely to have a very slight advantage, particularly for northbound traffic, in encouraging motorists to take a break.

Where better to meet need

227. The Circular does not prescribe any minimum spacing between MSAs. However, logic would point to spacing at, or close to, the maximum of 28 miles in that most proposed MSAs are likely to encounter a range of planning constraints.

228. The proximity of the Applegreen proposal to the Wetherby MSA, at little more than 13 miles, places it at a minor disadvantage to the Moto proposal, which would be some 4.5 miles further to the north. However, the former would be capable of serving a greater volume of traffic, due to its position south of the A19 (J49), albeit the latter route has a combination of existing and proposed facilities within 28 miles of Wetherby MSA. Overall, the balance of advantage falling to either proposal would be inconsequential.

The Ripon MSA lodge

229. Whilst the offer of overnight accommodation at a MSA is not an essential requirement, the Moto scheme includes a 100-bedroomed lodge. This would provide an additional amenity capable of supporting the safety and welfare of motorway users. In that context, the proposed lodge would provide a modest benefit over the Applegreen scheme.

Comparative economic benefits

230. Applegreen and Moto predicted seemingly disparate employment opportunities at their respective sites, with some 300 full-time equivalent (FTE) posts at the proposed Vale of York MSA (disputed by Moto) and around 200 FTE posts at the proposed Ripon MSA. However, Applegreen's witness accepted that the two schemes would be very similar in scale and content. As such, it would be too complex a calculation to seek to draw any real comparison, and that any differences would not be significant.

Comparative biodiversity gains

231. Applegreen and Moto were each critical of the other's assumptions underlying their respective Biodiversity Metric Calculations. However, it is sufficient to note that, subject to detailed design, the Applegreen proposal could achieve in the order of a 20% increase in ecological value; and the Moto scheme would be capable of reaching a minimum 10% gain in value.

232. Local Plan Policy NE3: Protecting the Natural Environment offers general support for proposals that provide net gains in biodiversity. Criterion E requires proposals for major developments to avoid any net loss of biodiversity. The Environment Bill 2020 is also a material consideration in its quest for development to deliver at least 10% improvement in biodiversity value.

233. It was agreed that both proposals would be 'policy compliant'. On this basis, despite the difference in potential gains, I consider there to be no significant point of distinction.

Designated Heritage Assets

234. The relationship of the Applegreen proposal to two designated heritage assets, in terms of a very minor adverse effect on the contribution of setting to their significance, places it at a moderate comparative disadvantage.

Overall comparison

235. Determining the better of the two proposals to be carried forward into the overall planning balance is not a linear numerical exercise. In my opinion, there is one fundamental and determinative matter, namely landscape impact and related policy conflict. This clearly favours the Vale of York scheme and outweighs any cumulative advantage that the Moto proposal might garner from other considerations.

Consistency in decision making

236. At this point it is helpful to reflect on two extracts from the 2012 principal Inspector's report. First, in respect of what was known as the Kirby Hill proposal:

> *'The Kirby Hill proposal would conflict with its development plan in terms of encroachment into the countryside, not minimising the loss of BMV land, causing visual harm and adversely affecting the character of the landscape. It would also cause limited harm to the setting of two listed buildings. With regard to the character of the landscape, significant harm would be caused by the inclusion of a large mound and substantial woodland planting. There would be visual harm to receptors at more residential properties than at the other sites. The scheme also attracted more local opposition than the other sites ……. Of particular importance is that the site is considerably off-centre and close to the absolute minimum acceptable spacing of 12 miles advocated by C01/08'.*

237. Second, in terms of what is now known to be the proposed Ripon MSA site:

> *'The Baldersby Gate proposal would conflict with its development plan in terms of encroachment into the countryside, not minimising the loss of BMV land, causing visual harm and adversely affecting the character of the landscape. With regard to the landscape character, there would be moderate harm ……'*.

238. It is evident that the Inspector identified harm in common to both proposals in terms of conflict with the development plan, countryside encroachment, loss of best and most versatile agricultural land, visual harm and an adverse effect on landscape character. These broadly coincide with two of the main issues before me. The relevance of the Listed Buildings to the Applegreen proposal remains and, like the earlier scheme, the locality of the proposed Vale of York site has a significantly greater number of nearby residential properties and it has attracted considerably more opposition. The importance of the *'absolute minimum acceptable spacing of 12 miles'* was not carried forward into the successor Circular 02/2013 and is no longer of relevance.

239. Moreover, it must be remembered that the Baldersby Gate proposal was considered alongside three other MSA candidates. In light of the demonstrable need for a new MSA, it was recommended for approval, despite its shortcomings, as the best performing scheme.

240. The current Vale of York proposal is a fundamentally different proposition to its predecessor whereas the Moto scheme has undergone comparatively minor modification. Both have drawbacks which reflect the generality of those issues considered in 2012. However, it is the Applegreen illustrative scheme and its successful response to the landscape considerations, in particular, that decisively carry it into the overall planning balance.

The Sixth Main Issue: The Planning Balance

My appraisal

241. It was a conscious decision of the Council not to include any specific policy relating to MSAs in the recently adopted Harrogate District Local Plan as any application would be considered on merit, having regard to other policies in the plan and national guidance.

242. It is evident that the local community, at Kirby Hill in particular, has drawn considerable assurance from the Local Plan as a document that it supports, and one which shows the appeal site to be open countryside and outside defined limits where development is unlikely to be sanctioned. However, where such applications arise, they are to be determined in accordance with the development plan, unless material considerations indicate otherwise.

243. One such material consideration is Circular 02/2013 which recognises the important road safety function that MSAs, and other roadside facilities, perform by providing opportunities for the travelling public to stop and take a break in the course of their journey. The recommended maximum distance between MSAs should be no more than 28 miles; but it can be shorter.

244. From my consideration of the first main issue, relating to need or otherwise, I came to the firm conclusion that a need for an additional MSA between Wetherby and Durham MSAs had been established. Despite the proximity of the site to Wetherby MSA, such a need attracts significant weight.

245. As to the second main issue relating to landscape, I have acknowledged that the proposed development would cause some harm to the character, appearance, and visual amenity of the area. However, I have reached the conclusion that the illustrative scheme had been informed by, and would be sympathetic to, the relevant Landscape Character Areas. As such, the proposals would protect the landscape character of the district in accordance with Local Plan Policy NE4. Despite some harm as described, consistency with a recently adopted policy weighs substantially in favour of the project.

246. On the third main issue, the loss of best and most versatile agricultural land is itself a negative factor to which I attach moderate weight, having regard to the area so affected and that such land is a diminishing, non-replaceable, resource. Indeed, the Framework confirms that planning decisions should contribute to and enhance the natural environment by, amongst other things, recognising the wider benefits from natural capital and ecosystem services, including the economic and other benefits of the best and most versatile agricultural land.

247. However, Policy NE8 accedes that planning permission for development affecting best and most versatile agricultural land may be granted, exceptionally, if there is an overriding need for the development and, where there is no alternative lower grade land, the benefits of the development justify the loss.

248. Turning to the fourth main issue, I have found nothing to count against the proposal, or conflict with related relevant development plan policies, in respect of highway safety; drainage, flood risk and climate change; and the local economy.

249. In terms of designated heritage assets, the proposal would have a very minor adverse effect on the contribution of setting to the significance of two Listed Buildings amounting to *'less than substantial harm'*. However, any harm to, or loss of, the significance of a designated asset, including development within its setting, should require clear and convincing justification and this harm should be weighed against the public benefits of the proposal. Case law[20] has established that *'considerable importance and weight'* should be given to the desirability of preserving the setting of Listed Buildings. In this instance, I have identified a significant and overriding public benefit in my consideration of the first main issue.

250. Moving on to a range of benefits claimed by Applegreen, I consider that the most significant would be the likely inward investment and employment opportunities which merit substantial weight. The extent of the biodiversity gain attracts moderate weight.

251. Kirby Hill RAMS also pointed to social harm set against the social objective of sustainable development in supporting strong, vibrant, and healthy communities. In this regard, the local community has endured some 25 years of collective trauma arising from repeated MSA applications at Kirby Hill, and concerns about the loss of community identity in an open rural landscape.

252. Kirby Hill RAMS drew on the empowerment afforded by the Localism Act 2011 in shaping and influencing development in their local area. Although the opportunity to produce a neighbourhood plan has not been fulfilled, the local community has spoken 'as one' in opposing the proposed development.

253. Nevertheless, opposition by itself, however strong, does not determine the outcome of an application unless it is based on sound planning grounds. My analysis of the main issues, and other matters raised, demonstrates that a number of the concerns raised locally are not borne out following consideration of all of the evidence before me.

[20] *Barnwell Manor Wind Energy Ltd v East Northants DC, English Heritage, National Trust and SSCLG* [2014] EWCA Civ 137

254. Finally, Kirby Hill RAMS maintained that the Framework exists to deliver sustainable development and that Circular 02/2013 does not promote the safety and welfare of motorists above the requirement to deliver sustainable development.

255. However, the Circular sets out as follows:

'Operating an effective and efficient strategic road network makes a significant contribution to the delivery of sustainable economic growth ……

…… the Highways Agency supports the economy through the provision of a safe and reliable strategic road network, which allows for the efficient movement of people and goods. Such a network can play a key part in enabling and sustaining economic prosperity and productivity, while also helping support environmental and social aims by contributing to wider sustainability objectives and improved accessibility to key economic and social services.

A well-functioning strategic road network enables growth by providing for safe and reliable journeys. This can help reduce business costs by providing certainty, improving access to markets, enabling competition, improving labour mobility, enabling economies of scale, and helping attract inward investment'.

256. Two of those paragraphs include the word 'safe'. Further, Annex B goes on to explain that the primary function of roadside facilities is to support the safety and welfare of the road user. Thus, read as a whole, it can be inferred that roadside facilities are a component of the sustainability objectives described in the Circular.

The Overall Planning Balance

257. In summary, considerable weight attaches to the less than substantial harm relative to the identified designated heritage assets. Loss of best and most versatile agricultural land is also a further negative factor of moderate weight. However, individually, and cumulatively, the wider public benefit in meeting the demonstrable need for a MSA, for the safety and welfare of motorists, would outweigh that harm. In addition, the proposal would accord with Local Plan Policy NE4, in its recognition of landscape character, and economic and biodiversity benefits would also accrue.

258. In conclusion, I consider that the Applegreen proposal, as described and illustrated, would be in accordance with the development plan when read as a whole.

Planning conditions

259. The initial list of draft planning conditions underwent a succession of amendments during consideration of the appeal and in discussion during the Inquiry. The final version represents a generally agreed schedule, save for some unresolved matters for my further consideration and correction of minor omissions and/or typographical errors. I am satisfied that all of the conditions referred to below meet the relevant tests.

260. Conditions 1 and 2 identify the matters reserved for subsequent approval; and the time periods for the submission of related details and the commencement of development.

261. Conditions 3 and 4 define the content and scale of the facilities within the main amenity building for certainty.

262. Condition 5 regulates the permission by reference to the parameters plan, which includes the red-line boundary, and requires the subsequent reserved matters not to exceed those specified by reference to ground levels and the heights and internal floorspaces of the proposed buildings. This is to ensure that the proposed development is generally consistent with the evidence that was presented, and on which the appeal has been considered and determined.

263. Although draft condition 6 requires a green/living roof for the main amenity building only, I consider it necessary to extend this to the HGV fuel filling facility and the drive-through coffee shop, again to reflect the way in which the development was portrayed[21], and to ensure overall site cohesiveness. Condition 7 will ensure the use of appropriate external materials for the walls and roofs.

264. A comprehensive landscaping scheme is an important prerequisite with enhancements to biodiversity secured through an Ecological Mitigation and Enhancement Scheme. These are set out in conditions 8 – 12.

265. There are a number of highway conditions to ensure appropriate design, construction, safety, and safety audits. It is also appropriate to preclude the use of the site for other purposes, in the event that it ceases to operate as a MSA, in order to maintain the integrity and the safe and efficient operation of the strategic road network. Conditions 13 – 22 apply in this regard.

266. A comprehensive construction management plan, set out in condition 23, is required to protect and maintain the functionality, operation and safety of the motorway during the construction of the development; and to ensure that harm to protected species and retained vegetation and habitats is avoided.

267. I have extended sub-clause (f) by amending *'details of loading and unloading areas'* to read *'the management of deliveries of materials and plant to the site; the management of removal of materials and plant from the site; and the related unloading and loading areas'*. I have not included *'the routing and timing of deliveries'* in light of sub-clause (g) which requires details of proposals for routing by HGV construction traffic away from unsuitable highways, that is local roads, within a 16km radius of the site.

268. I also consider that restricting the timing of deliveries would be unduly onerous. In addition, it could lead to the unforeseen consequences of vehicles arriving outside designated times (within the overall permitted hours of working) and parking locally. However, the condition as reworded provides the means through *'the management of deliveries ……'* to influence movements when traffic flows on the B6265 are anticipated to be inflated by local events.

269. In view of the location of the site, it is essential that an external lighting scheme is designed and implemented to minimise impacts on the night sky and on wildlife. This is required by condition 24.

[21] Design and Access Statement Section 4: *'The roof will appear to be a floating plane of landscape covering the main parts of the Amenity Building with similar smaller discs covering the smaller elements of the HGV Fuel Filling Station and Drive through Coffee Shop'*

270. It is recognised that the site is of potential archaeological interest, as set out in Chapter 10 of the Environmental Statement. Further investigation, identification, evaluation, recording, assessment and any mitigation will be secured through conditions 25 – 28.

271. Conditions 29 – 32 are imposed to ensure that, in the event that any contamination is found during the course of development, agreed remediation measures are implemented without unacceptable risk to either individuals or the environment.

272. Water supplies, drainage and waste storage facilities are important public health, environmental and amenity considerations as reflected in conditions 33 – 37.

273. The preparation of a Travel Plan, and subsequent management and monitoring of its effectiveness in influencing employees' travel arrangements, is a requirement of condition 38.

274. Having regard to the scale of the project, and the proximity of the site to Kirby Hill in particular, it is essential that the local community has the opportunity to be heard and represented by means of a Local Liaison Group, especially during the construction phase and thereafter when the proposed facility is in operation. This is provided for in condition 39.

275. Local Plan Policy CC4 requires new development to incorporate energy efficient measures. The Council has indicated that the development should meet BREEAM[22] *'very good'* or higher. Conditions 40 and 41 refer.

276. Finally, paragraph 110 e) of the Framework signifies that new developments should be designed to enable charging of plug-in and other ultra-low emission vehicles. Condition 42 is imposed to secure the implementation of an agreed scheme.

Overall Conclusion: Appeal A

277. From my consideration of the main issues, and all other matters raised at the Inquiry and in writing, I conclude that the appeal by Applegreen Plc should be allowed subject to the schedule of planning conditions set out in Annex A to this decision.

Overall Conclusion: Appeal B

278. From my consideration of the main issues, and all other matters raised at the Inquiry and in writing, I conclude that the appeal by Moto Hospitality Ltd should be dismissed.

David MH Rose

Inspector

[22] Building Research Establishment Environmental Assessment Method

ANNEX A: SCHEDULE OF PLANNING CONDITIONS

Reserved matters

1. No development shall take place without the prior written approval of the Local Planning Authority of all details of the following reserved matters:

   (a) access;

   (b) appearance;

   (c) landscaping;

   (d) layout; and

   (e) scale.

   Thereafter the development shall not be carried out otherwise than in strict accordance with the approved details.

2. Application for the approval of the reserved matters shall be made to the Local Planning Authority not later than three years from the date of this decision. The development hereby permitted shall be begun on or before the expiration of two years from the final approval of reserved matters or in the case of approval on different dates, the final approval of the last such matter to be approved.

Use and floor space

3. No more than one room within the MSA shall be made available for the purposes of holding conferences or undertaking training, including use by the public. The room set aside for such purposes shall have a capacity to seat no more than 15 persons at any one time.

4. The amenity building shall contain no more than 500m² of retail floor space as defined by Class E(a) of the Town and Country Planning (Use Classes) Order 1987 (as amended) and not more than 100m² of adult amusement arcade floor space shall be made available to the public.

Parameters

5. The details to be submitted under condition 1 above shall accord within the parameters identified on the Parameters Plan (AFL-00-00-DR-A-00120 rev P08 dated 28.04.20) and the ground levels and the heights and internal floorspaces of the proposed buildings shall not exceed those specified.

Appearance

6. The details of appearance to be submitted under condition 1 above shall provide for a 'green / living roof' on the main amenity building, HGV Fuel Filling Station and Drive Through Coffee Shop consistent with the principles illustrated within Section 4.0 of the submitted Design and Access Statement (dated July 2017).

7. Before the first use of any materials in the external construction of the roof and walls of the development hereby approved, samples of those materials shall have been made available for inspection by, and the written approval of, the Local Planning Authority and the development shall be carried out in strict accordance with the approved details.

Landscaping

8. The details of landscaping to be submitted under condition 1 above shall include full details of:

   (a) excavations;

   (b) ground modelling (including existing and proposed contours);

   (c) any retaining walls and structures;

   (d) means of enclosure;

   (e) all hard landscaping;

   (f) minor artefacts and structures;

   (g) the extent of the existing trees and hedgerows on the land and details of those to be retained; and

   (h) soft landscaping, including the types and species, a programme of planting, and cultivation proposals.

   Thereafter the development shall be carried out in accordance with the approved details.

9. No operations shall commence on site in relation to the landscaping plan approved in accordance with condition 1 until a detailed scheme for sustainable tree planting has been submitted to and approved in writing by the Local Planning Authority. The scheme shall incorporate underground systems and provide a sufficient area of growth medium for long term tree growth where tree development is compromised by hard landscaping such as footways, highways, car park areas and structures (if there is hardstanding on more than one side of proposed tree planting then underground systems are to be implemented).

10. All planting, seeding or turfing comprised in the approved details of landscaping under condition 1 shall be carried out not later than the first planting and seeding seasons following occupation of the buildings or completion of the development whichever is the sooner and any trees or plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species, unless the Local Planning Authority gives written consent to any variation.

11. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use until a secure boundary fence has been erected in accordance with a scheme submitted to, and approved in writing by, the Local Planning Authority. The approved fencing scheme shall be retained for the duration of the use of the site.

12. Prior to the first occupation of any building of the Motorway Service Area hereby approved an Ecological Mitigation and Enhancement Scheme including details of native tree, shrub and wildflower planting, and provision of bat bricks and bird boxes/bricks shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall include arrangements for the provision for long term management and maintenance of biodiversity on the site. The Ecological Mitigation and Enhancement Scheme shall be implemented in strict accordance with the approved timescales and thereafter retained.

Highways

13. The details of access required by condition 1 above shall provide for:

(a) the 'rear access' from the B6265 as indicated on drawing 60534927-SKE-C-0300 rev H dated 30-07-2019;

(b) the accesses from and to the A1(M) comprising the dumbbell access roundabout, accommodation structure, and associated slip roads in strict accordance with drawings 60534927-SKE-C-3000 rev G dated 19-8-2019 'Proposed MSA Motorway Access Works (720/720m) 3D model' and 60534927-SKE-C-0202 dated 28-07-2017 'Dumbbell Arrangement with DMRB Roundabout Minimum Radius Bypass - With AIL Tracks';

(c) the realignment of the A168 including works to the A168 / B6265 roundabout and the agricultural access track to the east of that realigned highway as indicated on drawing AFL-00-00-DR-A-00101 rev P10 dated 22.08.19;

(d) the field access shown on drawings 60534927-SKE-C-3000 rev G dated 19-08-2019 and AFL-00-00-DR-A-00101 rev P10 dated 22.08.19;

(e) internal access roads;

(f) parking areas for 364 cars (of which 17 shall be disabled spaces), 90 HGVs, 20 motorcycles, 18 coaches, 10 staff cars (of which 3 shall be disabled spaces), 13 caravans (of which 2 shall be disabled spaces) and a staff drop off area;

(g) servicing, turning and manoeuvring areas; and

(h) footways, pedestrian areas and cycling provision, including the extension of the existing footway in Kirby Hill from its northernmost point to connect to the 'rear access', and including any modifications arising from the further conditions of this permission.

All shall be retained for the lifetime of the development.

14. No part of the development shall be open for public use until the related areas of access to be used in connection with that part are available for use. Once constructed, these areas of access shall be maintained clear of any obstruction and retained for their intended purpose at all times.

15. There shall be no excavation or other groundworks, except for investigative works, or the depositing of material on the site, until the construction of the 'rear access' to a standard appropriate for all uses including construction traffic has been constructed in accordance with the details approved in writing by the Local Planning Authority under condition 1.

16. There shall be no excavation or other groundworks, except for investigative works, or the depositing of material on the site in connection with the construction of the access road or building(s) or other works until the following have been submitted to and approved in writing by the Local Planning Authority and the reserved matters application for access has been approved in respect of the details:

(a) the design and construction details of the method by which the proposed development interfaces with the existing A1(M) highway alignment, carriageway markings and lane destinations; the carriageway widening, together with any modifications to existing or proposed structures, with supporting analysis; traffic signing, highway lighting and alterations and modifications to motorway communications and traffic data collection equipment, and the provision of written confirmation of full compliance with current Departmental standards (DMRB) and policies;

(b) the full design and construction details for the realignment of the A168 north of the B6265 roundabout including the realignment of the roundabout entry and exit;

(c) the full design and construction details of the 'rear access' to a standard appropriate for all uses including construction traffic based upon indicative design on drawing 60534927-SKE-C-0300 rev H dated 30-07-2019;

(d) the full design and construction details of the extension of the existing footway in Kirby Hill from its northernmost point to connect to the rear access including all necessary crossings works to provide a continuous footway cycleway link at the roundabout based upon the indicative design on drawing 60534927-SKE-C0300 rev H dated 30-07-2019;

(e) a programme for the completion of all of the above proposed works including proposals for maintaining the flow of traffic on the A168; and

(f) an independent Stage 2 Safety Audit has been carried out in accordance with GG119 – Road Safety Audit or any superseding regulations and the design amended in accordance with the findings of the Audit, have been submitted to and approved in writing by the Local Planning Authority and the reserved matters application for access has been approved in respect of those details.

The works shall be constructed in accordance with the approved details and programme and shall be fully opened to traffic prior to the opening of the site.

17. Construction of the A1(M) dumbbell access roundabout, accommodation structure, and associated slip roads solely (and no other development indicated therein) shall be carried out in strict accordance with drawings 60534927-SKE-C-3000 rev G dated 19-8-2019 'Proposed MSA Motorway Access Works (720/720m) 3D model' and 60534927-SKE-C-0202 dated 28-07-2017 'Dumbbell Arrangement with DMRB Roundabout Minimum Radius Bypass - With AIL Tracks' as replicated in the details of access required by condition 1.

18. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use prior to the completion and opening for public use of all the highway works referenced in conditions 16 and 17 above together with the provision of the agricultural access from the A168 / B6265 roundabout and the agricultural track parallel to the realigned A168.

19. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use until measures to restrict the 'rear access' to the site from the B6265 to use only by staff, prearranged deliveries and the emergency services has been submitted to and approved in writing by the Local Planning Authority and implemented. The measures shall be retained operational and in full working order for the duration of the use of the site.

20. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use until:

    (a) a signing agreement with Highways England for the A1(M) motorway is in place and direction signing for the Motorway Service Area from and to the A1(M) has been provided in accordance with that agreement. At any time a signing agreement is not in place no part of the development shall be open for use by users of the A1(M) motorway; and

    (b) a Stage 3 (completion of construction) Road Safety Audit has been carried out in accordance with DMRB HD19/15, and submitted to and approved in writing by the Local Planning Authority and any amendments to the works on site have been implemented.

21. A Stage 4 monitoring Road Safety Audit shall be carried out using 12 months and 36 months of accident data from the time the relevant schemes of works set out in Conditions 13, 16 and 17 become operational. The Audits shall be carried out in accordance with DMRB HD19/15 and shall be submitted to and approved in writing by the Local Planning Authority. Where necessary the amendments to the highway networks shall be implemented in accordance with a programme submitted to and approved in writing by the Local Planning Authority.

22. In the event that the implemented Motorway Service Area development hereby approved ceases to operate, the site shall not be used for any other purpose. All accesses to the A1(M) shall be removed and the former A1(M) features and highway boundaries restored in accordance with details to be submitted to and approved in writing by the Local Planning Authority.

Construction Management Plan

23. No construction of the development hereby approved nor any site preparation or access works shall commence until a Construction Management Plan has been submitted to, and approved in writing by the Local Planning Authority. Development shall be undertaken in strict accordance with the approved Construction Management Plan and a copy or copies shall be retained on site for access by site operatives at all times.

    The Plan shall:

    (i) include a Construction Traffic Management Plan based upon the submitted Draft Construction Management Plan;

    (ii) highlight environmental impacts resulting from the development and identify sensitive receptors to the construction team;

(iii) reduce and manage environmental impacts through appropriate construction methods and by implementing environmental best practice during the construction period, for example with regard to dust mitigation;

(iv) undertake on-going monitoring and assessment during construction to ensure environmental objectives are achieved;

(v) provide emergency procedures to protect against environmental damage;

(vi) provide an environmental management structure for the construction stage;

(vii) recommend mechanisms to reduce risks of environmental damage occurring; and

(viii) provide for consultation and liaison with relevant bodies throughout the works as required including, as appropriate, the Environment Agency, Natural England, North Yorkshire County Council, Harrogate Borough Council and other stakeholders including the public.

It shall also include arrangements for the following:

(a) details of any temporary construction access to the site including measures for removal following completion of construction works;

(b) any temporary or permanent restrictions on the use of accesses for construction purposes;

(c) wheel and chassis underside washing facilities on site to ensure that mud and debris is not spread onto the adjacent public highway;

(d) the parking of contractors', site operatives' and visitors' vehicles;

(e) areas for storage of plant and materials used in constructing the development clear of the highway;

(f) the management of deliveries of materials and plant to the site; the management of removal of materials and plant from the site; and the related unloading and loading areas;

(g) details of proposals for routing by HGV construction traffic away from unsuitable highways within a 16 Km radius of the site and highway condition surveys on the B6265 between the 'rear access' and the A168 roundabout;

(h) protection of carriageway and footway users at all times during construction;

(i) protection of contractors working adjacent to the highway;

(j) details of site working hours;

(k) erection and maintenance of hoardings, security fencing and scaffolding on/over the footway and carriageway;

(l) means of minimising dust emissions arising from construction activities on the site, including details of all dust suppression measures and the methods to monitor emissions of dust arising from the development;

(m) measures to control and monitor construction noise;

(n) there shall be no burning of materials on site at any time during construction;

(o) removal of materials from site including a scheme for recycling / disposing of waste resulting from construction works;

(p) details of the precautions that are to be taken to avoid harm to nesting birds, terrestrial mammals and amphibians;

(q) details of the measures to be taken for the protection of trees in accordance with the recommendations of the JCA Tree Report ref 13543a/SR including a protective barrier in accordance with BS5387:2012 to Root Protection Areas;

(r) a Soil Resource and Management Plan produced in accordance with the Department for Environment, Food and Rural Affairs *Construction code of practice for the sustainable use of soils on construction sites* (2009);

(s) the implementation of the protective barrier around all trees and shrubs that are to be retained and for the entire area as specified in accordance with BS 5837:2012 together with ground protection detail (no dig) before any development, site preparations or access works commence on site;

(t) the level of land within the areas contained by the protective barriers not being altered;

(u) details of all construction-related external lighting equipment;

(v) details of ditches to be piped during the construction phases;

(w) detailed drawings showing how surface water will be managed during the construction phases;

(x) a detailed method statement and programme for the building works; and

(y) contact details for the responsible person (site manager/office) who can be contacted in the event of any issue.

Lighting

24. The details of layout to be submitted under condition 1 above shall include an external lighting scheme. The lighting scheme shall:

(a) provide detailed specification of the luminaires to be used including location of the luminaires;

(b) detail the levels of average maintained illuminance that will be provided to different areas of the site, which should be generally in accordance with table 4.1 Indicative Lighting Criteria detailed in Appendix 4.1 of the submitted Environmental Statement dated July 2017;

(c) detail the environmental impact of the proposed lighting (i.e. light trespass and source intensity at residential receptors) which shall not exceed the criteria for ILP Environmental Zone E2 (post curfew) as detailed in part 2.3 of Appendix 4 of the submitted Environmental Statement dated July 2017; and

(d) take into account up to date advice from Natural England (and/or equivalent bodies) on the siting and illuminance of lights.

The lighting shall be installed in accordance with the approved scheme and retained thereafter.

Archaeology

25. No development shall take place until both:

(a) a scheme of Archaeological Investigation; and

(b) a Written Scheme of Investigation for archaeological mitigation

have been submitted to and approved in writing by the Local Planning Authority.

26. The scheme of archaeological investigation required by condition 25(a) shall provide for:

(a) the proper identification and evaluation of the extent, character and significance of archaeological remains within the application area; and

(b) an assessment of the impact of the proposed development on the archaeological significance of the remains.

27. The Written Scheme of Investigation required under condition 25(b) shall be prepared subsequent to the implementation of the approved scheme of archaeological investigation in accordance with conditions 25(a) and 26 and shall include:

(a) an assessment of significance and research questions;

(b) the programme and methodology of site investigation and recording;

(c) the programme for post-investigation assessment;

(d) provision to be made for analysis of the site investigation and recording;

(e) provision to be made for publication and dissemination of the analysis and records of the site investigation;

(f) provision to be made for archive deposition of the analysis and records of the site investigation; and

(g) nomination of a competent person or persons/organisation to undertake the works set out within the Written Scheme of Investigation.

Development shall take place in strict accordance with the approved Written Scheme of Investigation.

Ground Investigations

28. The development comprising of the Motorway Service Area accessed from the slip roads from the A1(M) hereby approved shall not be brought into use prior to the completion of the site investigation and post-investigation assessment in accordance with the programme set out in the Written Scheme of Investigation approved under condition 25(b) and the provision made for analysis, publication and dissemination of results and archive deposition has been secured.

Contamination

29. In the event that contamination is found at any time when carrying out the approved development that was not previously identified:

    (a) a report in writing shall be made immediately to the Local Planning Authority; and

    (b) an investigation and risk assessment shall be undertaken by competent persons and a written report of the findings submitted to and approved in writing by the Local Planning Authority.

30. Where remediation is necessary, a remediation scheme to bring the site to a condition suitable for the intended use by removing unacceptable risks to human health, buildings and other property and the natural and historical environment shall be submitted to and approved in writing by the Local Planning Authority.

31. Any such approved remediation scheme shall be carried out in strict accordance with its terms prior to the re-commencement of development, unless otherwise approved in writing by the Local Planning Authority. The Local Planning Authority shall be given two weeks written notification of commencement of the remediation scheme works.

32. Following completion of the measures identified in the approved remediation scheme, a verification report that demonstrates the effectiveness of the remediation carried out shall be submitted to and approved in writing by the Local Planning Authority.

Water Supplies

33. Development shall not commence until a scheme of water supply for the development has been submitted to and approved in writing by the Local Planning Authority. No buildings shall be occupied or brought into use prior to completion of the approved water supply works, which shall thereafter be retained.

Drainage

34. The site shall be developed with separate systems of drainage for foul and surface water on and off site. The foul water pumped rate shall not exceed 6 litres a second.

35. Prior to the commencement of any soil stripping or foundation works to any of the buildings, except for investigative works, drawings showing details of the proposed surface water drainage strategy shall be submitted to and approved in writing by the Local Planning Authority.

    The scheme shall be based on sustainable drainage principles and an assessment of the hydrological and hydrogeological context of the development, shall not discharge to the existing local public sewerage system and will include:

    (a) a drainage system designed with sufficient on site attenuation so that flooding does not occur on any part of the site for a 1 in 30 year rainfall event, nor any flooding for a 1 in 100 year rainfall event in any part of a building (including a basement) or in any utility plant susceptible to water (e.g. pumping station or electricity substation)

within the development, except within an area that is designed to hold and/or convey water. The design shall also ensure that storm water resulting from a 1 in 100 year rainfall event, plus an allowance of 40% to account for climate change, can be stored on the site without risk to people or property and without increasing flood risk off site. Due to the relatively low percolation figures a further factor of safety should be incorporated into the on-site attenuation requirements;

(b) full hydraulic calculations for the proposed surface water drainage design;

(c) proposed control measures to manage pollution from all areas of vehicle parking and hard standing areas, including from the forecourt of filling stations, areas used for the delivery of fuel, areas used for and immediately adjacent to vehicle washing facilities and/or other similar areas where detergents are likely to be used;

(d) an exceedance flood routing plan which shall demonstrate where flooding could potentially occur if the designed drainage systems were to be exceeded or fail for any reason including rainfall in excess of the 1 in 100 year event. The routing map should indicate direction of flood flows, highlighting areas that could flood and to what depth. The plan shall demonstrate that exceedance flows will not cause risk or flooding to property/people on or off site; and

(e) details with regard to the maintenance and management of the approved scheme to include: drawings showing any surface water assets to be vested with the statutory undertaker/highway authority and subsequently maintained at their expense, and/or any other arrangements to secure the operation of the approved drainage scheme/sustainable urban drainage systems throughout the lifetime of the development.

No piped discharge of surface water from the application site shall take place until the approved works to provide a satisfactory outfall has been completed.

36. Prior to the commencement of the development hereby approved details of a scheme for foul water drainage shall be submitted to and approved by the Local Planning Authority in writing. No buildings shall be occupied or brought into use prior to completion of the approved scheme for foul water drainage, which shall thereafter be retained.

Waste Storage

37. The details to be submitted under condition 1 above shall provide for full details of waste storage facilities and undercover secure cycle parking. The facilities shall be provided in strict accordance with the approved details prior to the first occupation of any of the buildings of the Motorway Service Area hereby approved and thereafter retained as such.

Travel Plan

38. Six months prior to the first occupation of any building of the Motorway Service Area hereby approved, a Travel Plan in general accordance with details set out in the submitted Framework Travel Plan shall have been submitted to, and approved in writing by, the Local Planning Authority. The

Travel Plan shall be managed by a pre-appointed Travel Plan Co-Ordinator and provide specific, measurable, achievable, relevant, and time-bound targets against which its effectiveness can be monitored and will include the provision of a staff shuttle bus, which shall commence operation no later than the opening day of the development, and other measures to discourage the unnecessary use of the private car. Should monitoring show that targets have not been met, an action plan for additional travel plan measures is to be agreed in writing by the Local Planning Authority within six months of the date of the monitoring report and implemented in accordance with any timescale(s) prescribed in the action plan.

Local Liaison Group

39. Prior to the commencement of the development hereby approved details of a Local Liaison Group to be established, including proposed membership and ongoing facilitating arrangements, shall be submitted to and approved by the Local Planning Authority in writing. The first meeting shall be arranged prior to the date of commencement of construction of the development. Subsequent meetings shall be arranged at three-monthly intervals during the construction phase and thereafter six-monthly intervals, or such other time period as agreed by the Local Planning Authority.

Sustainability

40. No development of buildings shall take place until a Design Stage Certificate issued by BRE has been submitted to and approved in writing by the Local Planning Authority. The development shall meet BREEAM 'very good' or higher. Thereafter the development shall be carried out in accordance with the approved details.

41. A Post Construction Stage Certificate issued by BRE for the development shall be submitted for the approval in writing of the Local Planning Authority within 3 months of the first occupation of the development.

42. Prior to the first occupation of any building of the development hereby approved, an electric vehicle (EV) charging scheme shall be installed in accordance with details that have been submitted to and approved in writing by the Local Planning Authority. The scheme shall include, as a minimum, 10 rapid EV charging points. The EV charging apparatus shall thereafter be retained in an operative state until superseded by any advanced technology.

End of Schedule

ANNEX B: APPEARANCES

FOR HARROGATE BOROUGH

Stephen Whale of Counsel	Instructed by Peter Atkinson Principal Planning Lawyer Harrogate Borough Council

He called

Nigel Rockliff BA Dip. LA, CMLI	Director DRaW (UK)
Mark Simmonds BA(Hons), Dip.TP, MRTPI	Planning Consultant
Mike Parkes*	Senior Development Management Officer Harrogate Borough Council

FOR NORTH YORKSHIRE COUNTY COUNCIL (LOCAL HIGHWAY AUTHORITY)

Pam Johnson* BSc, CEng, MICE	Technical Specialist Development Management North Yorkshire County Council

FOR APPLEGREEN PLC

Rhodri Price Lewis QC Leading and assisted by Gwion Lewis of Counsel	Instructed by Nick Roberts AXIS

He called

Alastair Field BA(Hons), MSc, PIEMA, FBIAC, MI Soil Sci	Director and Company Secretary Reading Agricultural Consultants Ltd
Jon Mason BSc(Hons), Dip. LA, CMLI	Technical Director AXIS
Nick Roberts BA(Hons), Dip LA, CMLI	Director AXIS

*Mr Parkes and Mrs Johnson were introduced to take part in the discussion on draft planning conditions

FOR MOTO HOSPITALITY LTD

Peter Dixon of Counsel	Instructed by Tony Collins Collins and Coward Ltd

He called

Daniel Baird M.I. Soil Sci	Daniel Baird Soil Consultancy Ltd
Sue Illman PPLI, HonFSE, HonFellow(UoG)	Managing Director Illman Young Landscape Design Ltd
Tony Collins MRICS, MRTPI, MCIT, MILT, MEWI	Managing Director Collins and Coward Ltd

FOR KIRBY HILL RESIDENTS AGAINST MOTORWAY SERVICES (KIRBY HILL RAMS) (RULE 6)

Gareth Owens MSc(Oxon), MBCS, CITP	Local Resident and Chair Kirby Hill RAMS

He called

Dr Andrew Ramsden	Local Resident
Geoff Harris	Local Resident
Lt.Col. (Retd) Ken Lawson, OBE	Local Resident and Chair Kirby Hill and District Parish Council
Councillor Robert Windass	Harrogate Borough Councillor for Boroughbridge Ward and Member of the Planning Committee

INTERESTED PERSONS

Colin Reid	Local Resident
Councillor Nicholas Brown	Harrogate Borough Council Ward Councillor for Bishop Monkton and Newby Ward
Reverend Canon Wendy Wilby	College of Canons at Ripon Cathedral and Local Resident
Richard Compton	HM Deputy Lieutenant for Yorkshire and Local Estate Owner

Dr Rose Ferraby	Affiliated researcher in Archaeology University of Cambridge; Co-Director of the Aldborough Roman Town Project; and Local Resident
Jayne Cove	Local Resident
Councillor Pat Taylor	Mayor of Boroughbridge
Councillor Mike Collins, MBE	Chairman of Langthorpe Parish Council
Joan Whittle	Local Resident
Chris Thirkell	Local Resident
Councillor Patrick Sanderson	Chairman of Maron-le-Moor Parish Council
Judith Owens	Local Resident
Craig Helliwell	Local Resident
Linda Dooks	Secretary, Boroughbridge Historical Society & Secretary, Boroughbridge Walkers are Welcome and Local Resident
Rt Reverend Clive Handford, CMG	Local Resident and former Anglican Bishop of Cyprus and the Gulf
Dr Clare Eisner	Retired GP and Local Resident
Geoff Harris	Obo John Watson, OBE Former MP for Kirby Hill and former NYCC Councillor for the Boroughbridge Area
Sandra Shackleton	Local Resident
Councillor John Foster	Chairman Melmerby Parish Council

ANNEX C: ADDITIONAL INQUIRY DOCUMENTS

ID01	Opening Statement: Harrogate Borough Council
ID02	Opening Statement: Kirby Hill RAMS (KH06)
ID03	Opening Statement: Applegreen Plc
1D04	Opening Statement: Moto Hospitality Ltd
ID05	Email from AXIS and attachment regarding drawing error of Parameters Plan (dwg. No. 162007-AFL-00-00-DR-A-00120 P08) (28th April 2020) (CD1.31)
ID06	Extracts from Harrogate District Local Plan – Policy EC3 and GS3 (CD4.1)
ID07	GLVIA Chapter 4 (CD7.1)
ID08	Email from Mr Colin Reid correcting timings of journey in vicinity of J50 proposal
ID09	Email from Mrs Linda Dooks enclosing correspondence from the Ramblers re Proposed Map Modification Order at Moor Lane and Coach Road, Kirby Hill, Boroughbridge
ID10	Letter from Richard Compton enclosing letters from the Police Designing out Crime Officer
ID11	Statement read by Mrs Sandra Shackleton
ID12	Statements of individual objectors to the Applegreen Kirby Hill scheme (KH07)
ID13	Email from Mr Colin Reid referring to MSA proposal at J52 of the A1(M)
ID14	A1(M) Junction 50 – Google Earth Image from October 2009 (CD7.19)
ID15	A1(M) Junction 50 – Google Earth Image from March 2012 (CD7.20)
ID16	Guide to the signing of roadside facilities for motorists (September 2013) (CD9.104)
ID17	Amended Visualisation NR7.3 and statement of clarification
ID18	Kirby Hill and District Parish Council: Comments on the Harrogate District Draft Local Plan (KH7.2)
ID19	Extract of ES chapter 8 for A1 Dishforth to Barton improvements (CD8.57)
ID20	Letter from Transport Infrastructure Ireland dated 1 March 2021 (Lusk MSA) (CD8.58)

ID21 Letter from Applegreen Plc dated 2 March 2021 (proposed transaction between Applegreen Plc and Causeway Consortium Limited) (CD8.59)

ID22 Vale of York MSA – East side of A1(M) measurements (CD8.60)

ID23 Note on behalf of Applegreen re Leeming Bar Unilateral Undertaking (CD8.61)

ID24 Email trail between Moto and Harrogate Borough Council re Leeming Bar Unilateral Undertaking (CD8.62)

ID25 Certified Copy of Unilateral Undertaking (Moto)

ID26 Statement of CIL Compliance (Moto)

ID27 Ripon MSA Travel Plan (Moto)

ID28 Agreed Travel Plan Condition (Moto)

ID29 Travel Plan Monitoring Fee (Moto)

a) Email confirming payment made
b) Email confirming receipt
c) Email confirming refund on request

ID30 Consultation reply from the Economic Development Team, Harrogate Borough Council (Moto) (CD9.105)

ID31 Email confirming layout to be a reserved matter (Moto)

ID32 Coneygarth Services:

a) Block Plan
b) Design and Access Statement
c) Sections
d) Officer Report
e) Decision Notice

ID33 Thirsk Services: (KH08 – KH10)

a) Committee Report
b) Master Plan
c) Decision Notice

ID34 Final Version of Draft Planning Conditions (Applegreen)

ID35 Final Version of Draft Planning Conditions (Moto)

ID36 Closing Submissions: Harrogate Borough Council

ID37 Closing Submissions: Kirby Hill RAMS (KH11)

ID38 Closing Submissions: Applegreen Plc (+ Forest of Dean v SSCLG)

ID39 Closing Submissions: Moto Hospitality Ltd (+ SoS v Edwards)

Annex 2

There follows on the subsequent pages, copies of Correspondence between Reading Agricultural Consultants and MAFF's Farming and Rural Conservation Agency, dealing with the conflict between PPG7 and published guidance on agricultural land classification.

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Ref: LUP12AE 203

AGRICULTURAL LAND CLASSIFICATION - IRRIGATION

From: [redacted]
Date: 28 July 2000
Division: FRCA
Location: Cambridge/Field Based
Tel: [redacted]
Fax:
Field Base Tel/Fax
Email [redacted]@frca.maff.gsi.gov.uk

To: [redacted]RME'B'
(hard copy only)

cc: (minute only by Email)
[redacted]

1. [redacted] has received a letter from [redacted] of Reading Agricultural Consultants concerning an apparent inconsistency between the published Agricultural Land Classification guidelines and the advice in PPG 7. A copy of the letter is attached. It raises a point of principle as well as a technical issue, and for that reason I think it appropriate to ask whether you wish to handle the response from the Centre or whether it can be appropriately dealt with by [redacted].

2. The potential inconsistency arises because the revision of the ALC System planned in 1996 has 'run into the sand'. The history runs along the following lines.

3. The 1992 version of PPG 7 made no reference to irrigation. There was no conflict in the approach between the Agricultural Land Classification Guidelines, (the Blue Book), and PPG 7. Under that regime land benefiting from *"an adequate and reliable source of irrigation water"* should be considered for upgrading as part of the ALC assessment. It was justified on the grounds, not of the physical or chemical characteristics of the land concerned, but on its potential greater flexibility and productivity.

4. This though was seen as inconsistent with the general ALC approach which sought to classify land according to the extent to which *"its physical and chemical characteristics impose long-term limitations on agricultural use for food production"*. Part of the 1996 revision was a proposal to remove irrigation from the ALC assessment to be considered 'elsewhere' as one of the 'other factors', (i.e., other than agricultural

LVP129 E

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AGRICULTURAL LAND CLASSIFICATION – IRRIGATION

From: [redacted]
RMED - Land Tenure
and Planning Branch
Rm 108, LNH
Te[redacted]
11 August 2000

To: [redacted]

cc: [redacted]

all by e-mail only

1. Your minute of 28 July to [redacted] refers. As discussed, yes it would be appropriate for [redacted] to reply to Reading Agricultural Consultants on the lines suggested.

2. There is no news from the Minister's level on bmv.

[redacted]

[redacted]

[redacted]
Reading Agricultural Consultants
Races Farm
Aston Street
Aston Tirrold
Didcot
Oxon OX11 9DJ

Our Reference EL02/99902A

Your Reference trw-irr1.let

Date 3 October 2000

Contact [redacted]
Direct Line [redacted]
E-mail [redacted]@frca.maff.gsi.gov.uk

Dear [redacted]

ALC GUIDELINES - IRRIGATION

I am now in a position to write to you in response to your enquiry of 7 July 2000, seeking clarification of the treatment of irrigation when making an assessment of agricultural land quality in accordance with the Agricultural Land Classification System.

There are no immediate plans to bring the second revision of the Agricultural Land Classification System to a conclusion.

However, the advice that irrigation should be removed from the ALC assessment is reflected in the 1997 version of PPG7, which has irrigation classed under the 'other consideration' heading. The approach in the light of this is that irrigation should not be used to upgrade land.

Irrigation can have a significant effect on the productivity of land and is a factor which, in accordance with PPG 7 1997 (Annex B, paragraph B11), should be taken into account by local planning authorities when making land use planning decisions. Attention is drawn to the importance and increased agricultural significance which may be afforded to irrigated land relative to comparable but non-irrigated land in a locality.

Yours sincerely

for Regional Planning Adviser

racirrig