

Harwell Campus

Landscape and Visual Appraisal

by

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for

Vale of White Horse District Council

HDA ref: 728.11

Issue: 02

Date: October 2017

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1 INTRODUCTION

1.1 Instructions

1.1.1 Hankinson Duckett Associates has been appointed by the Vale of White Horse District Council to prepare a landscape report, which addresses the landscape and visual criteria that support the exceptional circumstances of development within the Harwell Campus site as a housing allocation within Local Plan Part 2. The report will consist of an assessment of the potential landscape and visual impacts of the proposal on the character and appearance of the AONB, in the context of Paragraph 116 of the National Planning Policy Framework (NPPF – Ref 1). This will include the identification of opportunities to mitigate any potential adverse landscape and visual effects.

1.1.2 The area proposed for allocation lies within the northern sector of the Harwell Campus, the site is approximately 37ha in area and has an allocation for 1000 homes. For the purposes of this report;

- Harwell Campus includes the whole campus area, including the site. This term may be abbreviated to ‘the campus’ within the report.
- The area proposed for allocation will be referred to as ‘the site’ or the ‘site allocation’

1.2 Background

1.2.1 Harwell Campus is a highly specialised science, innovation, technology and business campus, located to the south-west of Oxford, approximately 2 km to the south-west of Didcot and approximately 5km south-east of Wantage. The campus supports approximately 200 businesses, with unique facilities spread over the 287ha site (Harwell Campus website - Ref 2) and contains an Enterprise Zone, which will provide significant employment opportunities into the future. Both the Vale of White Horse District Council and Harwell Campus have identified a need for housing associated with the campus and the Council are seeking to allocate this site to meet that need.

1.2.2 Harwell Oxford Campus is located entirely within the North Wessex Downs AONB. This is a nationally recognised landscape designation with associated national and local planning policy. In response to the importance of the designation and the weight that it carries in planning terms, this report will focus on the potential effects that the proposed housing allocation is likely to have on the character and appearance of the AONB. The need for the development within this location and the cost and scope of developing elsewhere are elements of the evidence base that are being assessed by others.

1.2.3 Within Local Plan Part 1, the Council put forward two allocations adjacent to Harwell Campus. Site allocation 12 was located to the north of the campus, included 18.93ha and had an allocation of around 550 homes. Site allocation 13 was located to the east of

Harwell Campus, comprised 61.74ha of land, of which approximately 18.5ha had been allocated for open space land use and 43.24ha had an allocated for residential use, providing approximately 850 homes. The Site allocations put forward within Local Plan Part 1 are identified on plan HDA 2 and the development templates for the sites are included within Appendix 2.

- 1.2.4 Within the Inspectors' Report on the Examination into Vale of White Horse Local Plan 2031: Part 1' (Ref 3); at paragraph 121, the Inspector states that:

'In summary the need for development of sites 12 and 13 for housing has not been demonstrated and, having regard to the potential for mitigation, it would be likely to cause some harm to the landscape of the AONB and the recreational opportunities it offers. Nonetheless, and given that the campus will become an increasingly large centre for employment, there would potentially be some highway infrastructure and travel-to-work sustainability benefits in locating housing at sites 12 and 13 as opposed to elsewhere. The NPPF's exceptional circumstances and public interest tests would be ultimately applied as part of the consideration of any planning applications for housing on these sites, having regard to the evidence available at that time. However, balancing my findings in respect of all that I have read, heard and seen at this point in time, I consider it unlikely that the exceptional circumstances necessary to approve such an application would reasonably be considered to exist. Consequently, the plan's housing allocations on sites 12 and 13 are not soundly-based.'

- 1.2.5 The Council and Campus maintain that there is an identified need for housing at the Campus. As a result, a revised site has been prepared for allocation within Local Plan Part 2. The proposal falls within the existing Campus boundary and new evidence has been collated to demonstrate the exceptional circumstances that warrant a housing allocation at this location. This report will consider the potential landscape and visual effects of the revised allocation. The development template for this site is included within Appendix 2.

1.3 Methodology

- 1.3.1 National landscape guidance uses landscape character as a basis for policy. Natural England has established the current methodology for the character-based approach to landscape assessment (Ref 4). This provides a foundation, with adaptation, for use in project-specific landscape assessment. It describes the application of landscape character assessment at different scales: the national/regional scale, local authority scale and local scale. The third edition of the 'Guidelines for Landscape and Visual Impact Assessment' (2013, Ref 5) set out landscape assessment methodology, which provides a foundation, with adaptation, for use in project-specific landscape assessment.

- 1.3.2 The approach to this landscape and visual appraisal is based upon the latest guidance, and upon HDA's extensive practical experience of assessment work. HDA's Methodology for Landscape and Visual Impact Assessment is set out within Appendix 1 of this report. Site surveys were undertaken in January 2017 and August 2017, which included survey and assessment of the wider area.

2 LANDSCAPE PLANNING POLICY CONTEXT

2.1 National planning policy

- 2.1.1 The 'National Planning Policy Framework' (NPPF - Ref 1) sets the national planning context for Local Authorities revised development plan policies.

- 2.1.2 Harwell Campus lies within the North Wessex Downs Area of Outstanding Natural Beauty (AONB), a nationally designated area. Paragraph 115 of the NPPF states that: *'Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty.'* AONB's are protected solely for their natural beauty, with the conservation of wildlife and cultural heritage being important considerations. The location of the proposed allocation within the AONB is the critical issue to be addressed within this assessment.

- 2.1.3 Paragraph 116 of the NPPF confirms that major development should not be allowed within the AONB, *'except in exceptional circumstances'* (Ref 1) and sets out three principle considerations for development within an AONB. The first two considerations concern the need for the development and the potential to locate that development outside the AONB. These considerations fall outside the scope of this report and are considered further in other evidence presented by the VOWH District Council. The third consideration is an assessment of *'any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated'*. This report provides a summary assessment of the potential landscape and visual effects of the proposed allocation and the scope for mitigation. A comparison of the relative potential landscape effects of development of a similar size adjacent to the Campus but outside the AONB is included within Appendix 4.

National Planning Practice Guidance (NPPG)

- 2.1.4 The NPPG launched as a web-based resource on 6th March 2014 (Ref 6). Paragraph: 004 (Reference ID: 8-004-20140306) of the Natural Environment section of the NPPG states that: *'local planning authorities... should have regard to management plans for National Parks and Areas of Outstanding Natural Beauty. ...The management plans highlight the value*

and special qualities of these designations to society and show communities and partners how their activity contributes to protected landscape purposes.'

2.2 Local Policy

2.2.1 The Local Plan 2031 was adopted in December 2016 (Ref 7). The most relevant policy to this report is **Core Policy 44: Landscape**.

2.2.2 **Core Policy 44: Landscape** – refers to the protection of landscape features including natural features, features of cultural or historic value, important views and visually sensitive skylines and tranquillity. The policy also promotes the inclusion of landscape proposals that reflect the character of the area and seeks to preserve and promote local distinctiveness and diversity. The policy adds that:

'High priority will be given to conservation and enhancement of the natural beauty of the North Wessex Downs AONB and planning decisions will have regard to its setting. Proposals that support the economy and social wellbeing of communities located in the AONB, including affordable housing schemes, will be encouraged provided they do not conflict with the aims of conservation and enhancement.'

The AONB Management Plan

2.2.3 The North Wessex Downs AONB board have produced a Management Plan for the period 2014 – 2019 (Ref 8). The management plan *'sets out objectives and policies for AONB partners'*.

2.2.4 Chapter 8 of the Management Plan discusses development within the AONB. Particular points of relevance are the low levels of existing settlement within the AONB and the rise in development pressure on the North Wessex Downs (Ref 8). There is the recognition for a need to *'maintain a balance in promoting economic and social viability whilst retaining the character of the North Wessex Downs. Communities need to be economically viable and have adequate housing, amenities and facilities. However, the primary purpose of designation needs to be paramount when considering such issues.'*

2.2.5 Section 8.3 of the Management Plan makes reference to Harwell Oxford Campus *'which has a national profile as a centre for science and innovation, in particular space technology. As a large previously developed area, partly designated as Enterprise Zone, opportunities exist here for redevelopment and intensification of the site.'*

2.2.6 Section 11.1 considers the issues, objectives and policies concerning the landscape within the AONB. The key policy relevant to this assessment is:

'Ensure that all development in or affecting the setting of the AONB conserves and enhances the character, qualities and heritage of the North Wessex Downs landscape.'

3 LANDSCAPE AND VISUAL BASELINE

3.1 Landscape baseline (Plan HDA4)

- 3.1.1 The character of the study area is defined by its geology and landform. The elevated and steep Upper Chalk escarpment gives way to the Lower Chalk Downland Footslopes and the clay vale which extends north across the district. The landform allows long views from the top of the escarpment (the location of the Ridgeway National Trail) and provides a distinctive skyline, when the escarpment is viewed from the low-lying landscapes to the north.
- 3.1.2 The site lies within Harwell Campus and the south-eastern and south-western parcels of the site constitute previously developed land. The south-eastern section contains existing housing with associated trees and landscaping, along with recently demolished industrial buildings. The south-western section is predominantly hardstanding and car parking interspersed with amenity grassland, individual trees and is bound by tree belts (Photograph 1). The north-eastern parcel contains small fields in pasture broken up by fencing, tree belts and copses, both ornamental and native (photographs 3 and 4). The north-western parcel consists of a large arable field, contained to the south and west by tree belts, but open to the Icknield Way, to the north (Photograph 6).
- 3.1.3 Existing assessments which consider the character of the AONB surrounding Harwell Campus and the site include:
- The North Wessex Downs AONB Management Plan (Ref 8)
 - The North Wessex Downs AONB Integrated Character Assessment (Ref 9)
 - The Vale of White Horse District Wide Landscape Character Assessment (Ref 10).
- 3.1.4 Within each of these assessments, the landscape surrounding the site *'forms a transition between the high downs and the clay lowlands of the Vale of White Horse'* (page 155, Ref 9). The landscape character, special qualities and key issues surrounding the protected landscape of the AONB are set out in the AONB's Management Plan (Ref 8), which includes recurring themes of remoteness and tranquillity within an undeveloped and rural landscape. *'The sense of remoteness and tranquillity is fundamental to the character of the North Wessex Downs. It is central to the enjoyment and appreciation of the landscape'*. (AONB Management plan – Ref 8).
- 3.1.5 Other key characteristics of the local area include:
- The large scale and relatively exposed, arable fields of the Downland Footslopes which fall northwards towards the vale;
 - The presence of shelterbelts and tree lined watercourses, which provide a sense of enclosure. The shelterbelts are noticeable features when viewed from the

escarpment and form enclosure and a wooded backdrop to many of the views from within the character area;

- Spring-line villages, along the lower escarpment slopes, described as having a 'clustered' settlement pattern;

3.1.6 Harwell Campus is described as *'The most significant development within the area and arguably within the whole AONB is the Harwell International Business Centre'* (page 156, Ref 9). The land surrounding Harwell Campus shares many of the key characteristics of the AONB landscape, however the existing development on the Harwell Campus is at odds with the local landscape with regard to both settlement pattern and general built form. The campus is generally contained by mature tree belts, however a number of buildings are open to view and are prominent when viewed from the ridgeline of the Downs escarpment. The location of the Site within the northern section of the campus, results in is in a baseline condition that has already departed from the rural and tranquil AONB landscape, and the influences of the built form of Harwell Campus, create a setting that is at odds with the more rural areas of the AONB. The north-western field within the site is more consistent with the surrounding AONB landscape, however it also has close associations with the developed land within Harwell Campus, particularly to the south and east, where it abuts the built development.

Landscape sensitivity

3.1.7 The key landscape receptors that are likely to be affected by the proposed allocation are as follows:

- Harwell Campus – this includes the majority of the proposed site allocation;
- The north-eastern paddocks within the site, adjacent to the housing on North Drive;
- The north-western field within the site, which is a transitional landscape between the campus and the wider rural landscape; and
- The surrounding rural AONB landscape.

3.1.8 All identified landscape receptors are located within the North Wessex Downs AONB, which means that the landscape value for each receptor would be great; however, there would remain small variations between the landscape receptor groups due to differences at a local scale in tranquillity, landscape condition, scenic quality and representativeness, which are all measures of landscape value. The susceptibility to the proposed housing allocation would also change between receptors. In landscape terms, susceptibility is *'the ability of the landscape receptor to accommodate the proposed development without undue consequences for the maintenance of the baseline situation'* (GLVIA Page 158, Ref 5). Landscape receptors within the wider landscape would be less susceptible to the

changes wrought by a development than the rural landscapes immediately adjacent to the site.

- 3.1.9 The most sensitive landscape receptors are the rural AONB landscapes surrounding the site and campus to the north, west and south. These landscapes are typical of their respective character areas and represent the unsettled and tranquil qualities that are key to the AONB designation. The intrinsic value of these receptors is substantial and the receptors would be highly susceptible to changes in the local landscape. Subsequently their sensitivity is assessed as **Very High**. The most significant quality of the rural landscape to the north of the site is the intervisibility between the downs plain landscape that it represents and the escarpment to the south. The susceptibility of this receptor to the proposed housing allocation would be closely linked to whether the views of the escarpment could be maintained and or enhanced.
- 3.1.10 The land to the east of the campus is highly sensitive, but has a number of landscape detractors, including influences from Harwell Campus, the A34 and Didcot power station. The qualities of tranquillity and rurality are not as apparent within this local landscape and the departure from the baseline condition as a result of housing development would not be as great as within other areas of the AONB. As a result, the sensitivity of the land to the east of the site has been assessed as **High**.
- 3.1.11 The north-western field within the site has been assessed as having a **High** sensitivity to change. While the allocation remains within the AONB, its character is entwined with that of Harwell Campus and its containment from the wider landscape, with no views of the escarpment to the south, lowers the sensitivity to change of the receiving landscape. Existing landscape features are generally located at the periphery of this part of the site allocation, meaning that it would be possible to facilitate a housing development without adversely affecting these existing features.
- 3.1.12 Harwell Campus itself is an anomaly within the AONB. The campus is already built-up and contains some housing to the north (including North Drive). The sensitivity of the Campus to the proposed housing allocation is **Low**. The landscape sensitivity of the previously developed part of the site, located within the Campus is also **Low**. Some of the individual features located within this part of the site, including species rich grassland, mature tree belts, intact native hedgerows and any high quality individual trees would have a **High** sensitivity and would be a key consideration for the development of the site. Following the implementation of an extensive and robust landscape scheme, there is the potential for the quantity and quality of landscape features to increase, leading to an overall increase in potential habitat and Green Infrastructure.

- 3.1.13 The undeveloped fields in pasture to the north-east of the site are atypical of the wider AONB landscape and are heavily influenced by the adjacent campus buildings and infrastructure. These fields have been assessed as having a **Medium** landscape sensitivity to the type of change proposed. Again, some individual landscape features within this part of the site have been judged to have a **High** sensitivity to change. This includes the northern tree belt and the mature tree copses within this part of the site.

3.2 Visual baseline

Methodology

- 3.2.1 The visual baseline serves to establish the type of person or Visual Receptor (VR) that may be affected by the proposed development, the extent and character of existing views, the contribution that the site makes to each view/local visual amenity and the susceptibility to change in views. This in part correlates with the degree to which the site is visible from a VR. A detailed methodology is included within Appendix 1.

- 3.2.2 A visual appraisal of the site was undertaken from public roads and footpaths. Views were assessed based on 1) existing visibility 2) views after development. Views of the proposed development were estimated by visualising the scale and form of the proposed buildings, car park and associated tree planting. Views from properties could not be assessed from the houses themselves; in most cases, the likely extent of the view could be adequately estimated from adjacent roads or paths. Views from some properties were identified using a reverse view, i.e. an assessment of the extent to which a property was visible in views from within the site looking outwards.

Site visibility (*Plan HDA 5*)

- 3.2.3 The site lies within the northern extent of Harwell campus and already contains a number of buildings. The remainder of the campus lies to the immediate south and contains numerous large and imposing buildings. The north-eastern part of the site is contained by the existing housing on North Drive and tree belts lining the A4185 Newbury Road (Photograph 2). Dense tree belts, approximately 10m deep, line the western boundary of the site and extend north beyond the site, to the immediate west of footpath 199/16/20 (Hungerford Road), which screen views of the site from the east (Photographs 8 and 9). The north-eastern boundary also consists of a dense mature tree belt (Photograph 12). The result is that the visual envelope for the site is contained to its immediate surroundings. The combination of vegetation and built form screens views of the site from the vast majority of visual receptors further than 500m from the site boundary. The notable exception is the Ridgeway National Trail, which is located on the high ground of the escarpment, approximately 2.5 - 3km to the south of the site, which affords distant glimpses of the site (Photographs 15 – 18).

- 3.2.4 There are open views of the Harwell Campus and the land that surrounds it to the east, south and west, from stretches of the Ridgeway National Trail (Photographs 15 – 18). The A34 dual carriageway, Milton Business Park and the settlement of Didcot are also visible within the view. Didcot power station is also prominent in the view, although the prominence of the station will reduce as demolition of the towers continues over the next 2-3 years. The land to the west of the campus is more contained by the tree belts that run through the landscape. These tree belts also contain views of local settlement e.g. East Hendred such that the landscape, to the west, is substantially rural in outlook and character. Views towards the site are dominated by large buildings within the campus, including the Diamond Synchrotron. The site sits within the northern part of the campus, beyond these large buildings, within a heavily treed landscape, which make the site difficult to perceive.
- 3.2.5 The Icknield Way, a historic route, runs through the site. The eastern part of the path is enclosed by hedgerows, which reduce the visibility of the site to either side (Photograph 3). Views are of the path and hedgerows, with trees and existing buildings visible beyond. As the path gets to the centre of the site, views open out to include existing buildings and a pumping station (Photographs 4 and 5). Further west, the path lies adjacent to the north-western part of the site, which is more rural in character (Photographs 6 and 7). There are open views into the north-western field, located to the south of the path. Views consist of the perimeter security fence, with an arable field beyond, enclosed by linear tree belts. Existing buildings within the campus can be seen to the east, along with the small fields in pasture to the north-east of the site. To the north of this section of the Icknield Way, there are long open views out over the rural agricultural landscape to the north of the campus. Once outside the site boundary, the views of the site from this path diminish rapidly, due to the dense tree belts to the east and west of the site.
- 3.2.6 The north-western boundaries of the site are open and can be seen from a limited number of receptors to the north, including stretches of footpath 199/16/20 (Hungerford Road - Photograph 10), the A4185 Newbury Road (photograph 12) and Winaway (footpath number 243/17/10 – Photograph 13), a footpath cycleway which links the campus to Harwell village. Views are of the large arable field to the north of the site, with partial views of the site, set within a framework of tree belts. The downs escarpment forms the skyline to the view.

Visual Sensitivity

- 3.2.7 The visual sensitivity of a particular viewpoint location is assessed as a combination of viewer susceptibility and the value attached to the view. The type of activity that a person – or visual receptor (VR) is engaged in affects susceptibility, as does the extent to which a view can accept change of a particular type and scale without unacceptable adverse effects on its character and extent. Due to the location of The Site within the AONB, the value attached to views assessed would be high.
- 3.2.8 **Rights of way:** The most sensitive visual receptors to changes within a view are people who are likely to be focussed on the landscape – or that the view is the reason behind people visiting a particular destination. The Ridgeway National Trail is an example of a location where visual receptors would be highly sensitive to changes within the landscape, due to its presence within the AONB and that the majority of people visit the footpath to take advantage of the outstanding views of the scenery available from the top of the escarpment. These views and the popularity of the route within the AONB make it a significant and sensitive visual receptor for the purposes of this study.
- 3.2.9 The extent of the view of the site and the extent to which that view can accept change of a particular type and scale without unacceptable adverse effects on its character and extent are key considerations in judgements on visual susceptibility to change. As described at section 3.2.4, the visibility of the site is extremely limited from the Ridgeway and views towards the proposed site allocation are dominated by the existing built form at Harwell campus. The allocation of the site for housing represents a change within the campus, that is consistent with the baseline situation. Both of these factors reduce the susceptibility to change, for visual receptors using the Ridgeway National Trail. The overall sensitivity of the receptor group is judged to be **Very High**.
- 3.2.10 The visual experience of people using the Icknield Way changes with different locations along the path. The length of path to the west of the site is rural in character, tranquil and provides users with a high quality experience of the AONB landscape. People using this section of the path have a **Very High** sensitivity to change. The section of path to the east of the site is still rural in character, however there are influences from Harwell Campus and the adjacent A34 dual carriageway. The section of the path that runs through the eastern part of the site provides a mixed experience for users. The path is generally more enclosed, however there are an increasing number of detractors within the view, particularly toward the centre of the site, as the site passes the existing pumping station. The sensitivity of people on this section of the path to changes within the view has been judged to be **Medium**. As the path passes through the western part of the site, the views from the path open up and there are some attractive long views of the rural landscape to the north-west. Views into the site are more rural in character,

however they remain influenced by the existing campus buildings and infrastructure. The visual sensitivity of people using this section of the path has been judged to be **High**.

3.2.11 The only other rights of way with views of the proposed site allocation are Hungerford Road (footpath number 199/16/20), to the north-west of the site and the pedestrian / cycleway, Winaway, located to the north-east of the site. There are short sections of both rights of way which have intervisibility with the north-western field within the site. Both footpaths are rural in character and allow the public to enjoy the AONB landscape. People using these footpaths have been judged to have a **Very High** sensitivity to changes within the site.

3.2.12 **Properties:** The only properties with any views of the proposed allocation site are the existing houses on North Drive, located to the immediate north-east of the site. The two rows of terraces that face west, have open and partial views of the north-eastern part of the site. These views contain small fields in pasture, bound by security fencing, with copses of trees and lines of conifer trees. Existing Campus buildings can be seen from some properties. Local residents with open views from the primary living space of their property are accepted to be highly sensitive to changes within the view, however the changes proposed within the site allocation, are not wholly inconsistent with the baseline view experienced by these residents. The visual sensitivity of the residents of North Drive has been assessed as **Medium**.

3.2.13 **Roads:** Only one road affords any views of the site. This is the A4185 Newbury Road, which has transient views of the north-western field from a short section of the road to the north-west of the site and partial views of the south-eastern part of the site as the road passes the site access. Motorists using the road are unlikely to be focussed on the view and are likely to be travelling at speed, meaning that views of the site will be transient in nature. The visual sensitivity of motorists using this road has been judge to be **Medium**.

4 DESCRIPTION OF THE PROPOSED DEVELOPMENT (Plan HDA 5)

4.1 Description of the proposals

4.1.1 The site is proposed for a housing allocation of up to 1000 homes. The site promoters have split the site into 5 development parcels. Parcels A and C represent the previously developed land to the south of the site, which sits within the existing campus and contains existing buildings and hardstanding. Parcel B is located to the north-west of the site, adjacent to the existing housing at North Drive. Parcel D is the north-western field of the site, which is more rural in character but sits within the existing enterprise zone for

the campus. Parcel E lies within the centre of the site and is under the process of remediation.

4.1.2 The proposed development would consist of a bespoke housing solution, tailored to fit the needs of the campus and the sensitive landscape that the site sits within. Part of the approach is to concentrate high density housing within the existing, developed parts of the campus (Parcels A and C), with a medium density development within parcels B and E and a lower density and more sensitive design within the north-western field (parcel D). Housing locations and densities, within the previously developed areas of the site would need to respond to and maintain the existing high quality landscape features. It is envisaged that the provision of housing within the north-western part of the site, would be more sympathetic to the AONB landscape than the business development currently allocated to this area of the enterprise zone.

4.1.3 The phasing of the proposed development has also been planned to minimise the potential for adverse effects on the AONB landscape by focussing initial development within the developed part of the site and implementing key elements of the mitigation strategy within the first phase of development. This approach to mitigation should allow the proposed planting to become established, prior to the development of more sensitive areas of the site.

4.2 Landscape Strategy (*plan HDA 6*)

4.2.1 For the purposes of this assessment mitigation refers to the landscape proposals shown within the Landscape mitigation plan (HDA 6), designed to respond to the constraints of the site and mitigate the landscape and visual impacts that arise from the proposed development.

4.2.2 Issues and constraints identified within the baseline include:

- The location of the Site within the AONB.
- Changes to landscape character caused by development on parts of the site that consist of 'green field' land, particularly the northern fields.
- The visual sensitivity of the people using the Icknield Way and Ridgeway National Trail.
- Existing high quality landscape features within the site, which should be retained. It is expected that this constraint would be dealt with as part of a planning application within the site and goes beyond the level of detail for this report.

4.2.3 In order for landscape mitigation to be successful it should be consistent with existing landscape character. As noted in the landscape baseline, one of the key characteristics of the local area is the presence of woodland and tree belts, which are noticeable from the escarpment and form a wooded backdrop when viewed from within the character area. The fields to the west of Harwell Campus are contained by linear shelterbelts and

woodland. Tree planting is also establishing on farmland on Hagbourne Hill to the east of the A34.

4.2.4 Landscape mitigation for the northern part of the site should build on the existing woodland and tree belts to the north-east and west of the site, by introducing additional woodland to the north of the north-western field and to the west of the north-eastern field. These blocks of woodland should be a minimum of 15m in depth and would consist of native tree and scrub species. The new tree belts would connect existing lines of trees, creating additional habitat corridors and would mature to form strong containing elements to development within the campus. Views into the site from the Icknield Way, to the west of the site would be screened, however the long views out over the AONB landscape to the north-west of the site should be maintained. The new tree belts would screen the proposed development in addition to existing negative views of the campus. The enclosure of the Icknield way to the east of the site would be maintained and the design of the proposed development should seek to enhance the overall experience of this route.

4.2.5 Key landscape features identified within the site through surveys carried out by the site promoters, would be retained within areas of public open space and where features may be proposed for removal, new mitigation planting would be introduced. A green infrastructure strategy for the site (and the whole campus) is underway, which would seek to maximise the potential of the site in terms of biodiversity, connection to the wider AONB and usable space for residents and visiting members of the public to enjoy. The internal landscape of the proposed allocation would be designed to provide attractive garden spaces and outlooks for proposed residents. Streets and areas of hardstanding would be broken up with ornamental planting and trees, to soften the appearance of the site and provide seasonal colour and interest.

5 PREDICTED EFFECTS OF THE PROPOSED DEVELOPMENT

5.1 Introduction

5.1.1 The potential effects of the proposed allocations are assessed below, at year 0, when the potential effects are at their greatest and at year 10, following the establishment of the mitigation strategy. In order to assess the potential effects of the proposed housing allocation, certain assumptions have been made about the height of the proposed dwellings, the size of tree specified and the growth rates of any proposed vegetation. These assumptions are:

- Houses within the existing developed areas of the campus (in the central and southern part of the site) would be a maximum of four stories high, with an assumed maximum height of 15m to the ridge of the rooftop. The more sensitive

areas of the site, to the north and at the edges of the site would have a maximum height of 12m, but are likely to be significantly lower than this, particularly to the north-west and along the Icknield Way. Lower density, 2 storey residential development would have a lesser impact than the currently allocated business use.

- Existing trees and vegetation have an assumed growth rate of 0.35m per year.
- The trees planted within the proposed woodlands and shelterbelts would be between 1 and 4m high.
- New planting is assumed to have no growth in the first year after planting and 0.35m per year thereafter.

5.1.2 The magnitude of change is a judgement on the size or scale of effect and is combined with the landscape or visual sensitivity to give a judgement on the significance of effects resulting in the proposed housing allocations being built. It is important to note that this assessment is looking at a high level, at the potential effects of housing allocations, rather than a specific development.

5.2 Predicted landscape effects

5.2.1 The effects on the character of the existing campus and the landscape within the previously developed part of the site would be noticeable but would be consistent with the existing situation. At year 0, the proposed housing has been assessed as having a **Medium** magnitude of change, which would reduce to **Low** beneficial as the landscape surrounding the buildings matures and the new character of the campus is determined. The short-term effects have been judged to be **Minor** adverse and the long-term effects would be **Negligible** / beneficial.

5.2.2 The development of the north-eastern fields in pasture would constitute a **High** magnitude of change, as the fields are developed into housing with associated open space and infrastructure. This change would result in short term **Moderate** adverse impacts, as the changes would not constitute a great departure from the baseline condition, which is currently a degraded landscape with existing housing to the north-east. This part of the site is not high value or characteristic of the AONB landscape. In the long term, the proposed mitigation planting would screen views into the development from the wider landscape, the character of the Icknield Way running through this part of the site would be improved and an attractive and contemporary new housing development would have been created. The long-term effects have been judged to be **Minor** beneficial, particularly within the western part of the parcel (photograph 5).

5.2.3 The largest effects of the proposed housing allocation would be the changes to the character of the north-western part of the site, with the change from an arable field to a

housing development (**High** magnitude of change). This would result in **Substantial** adverse impacts in the short-term. This field lies within the existing enterprise zone of the campus, so it is accepted that some element of change is likely to occur within this landscape. The change in proposed development from business to housing is more consistent with the character of the wider AONB.

- 5.2.4 The proposed mitigation strategy for this part of the site is in keeping with the landscape structure to the west and the openness of the AONB to the north-west of the site would be maintained. The character and experience of the Icknield Way, to the north of the site, would be consistent with the baseline condition and in places would constitute an improvement to the existing situation. The proposed tree belts would screen the new housing and would visually contain the remainder of the campus to the north. By comparison, the allocated land use of employment is likely to include larger and more prominent buildings in a sensitive location, any mitigation measures are likely to take substantially longer to contain and screen the new development from the surrounding AONB. Once developed the housing would be integrated with the rest of the campus and the effects of the proposals in the long-term would reduce to **Moderate** adverse, which are not assessed as being Significant effects.
- 5.2.5 The effects of the proposals on the character and appearance of the AONB landscape outside the site would be extremely limited. There would be no perceived change in character within the AONB landscapes to the south, east or west of the site. There would be initial adverse effects on the character of the AONB landscape to the immediate north (within 500m) of the site, as the north-eastern and north-western parts of the site are developed. The magnitude of change is considered to be **Low** as such a small portion of the wider landscape would be affected, the change would be consistent with existing development within the campus and it is envisaged that the mitigation strategy for these development parcels would be implemented prior to the development of this land. These changes would result in short-term **Moderate** adverse impacts on the character and appearance of the AONB to the immediate north of the site.
- 5.2.6 Following the establishment of the mitigation strategy, the residual character of the landscape to the north of the campus would be consistent with the baseline condition; however, the overall influence of the campus on this landscape would have reduced, due to the additional screening of the campus by the mitigation planting. The residual effects on the character and appearance of the AONB to the north of the site would be **Minor** and **Neutral**. There would be no long-term harm to the character and appearance of the AONB as a result of the proposed site allocation and long-term mitigation strategy, and parts of the AONB landscape would see an improvement to the baseline character.

5.3 Predicted visual effects (*Photomontages 1-3*)

- 5.3.1 Changes to the views experienced from public rights of way are the most likely to impact on the recreational enjoyment of the AONB. Walkers using the Ridgeway National Trail have been assessed as the most sensitive visual receptors in the study area. The baseline assessment identified that there are very few locations on the Ridgeway where the site is discernible, as existing development at Harwell Campus is a dominant feature within the view and existing vegetation screens views of the site. Where changes are likely to be visible, these will be distant glimpses, seen in the context of the existing campus development, which would remain much more prominent within the view. The proposed housing would not be seen as expanding the campus and would be consistent with the baseline view. The magnitude of change has been judged to be **Very Low** and the overall change to the view has been assessed as **Minor** adverse. In the long term, the planting proposed as part of the development would mature, assimilating the proposed allocation into the wider landscape. The long-term effects of the proposals on views from the Ridgeway would be **Negligible**.
- 5.3.2 There would be no change to the views experienced from the Icknield Way beyond the extents of the site. As the site is developed, there would be views of the proposed development from the section of the Icknield Way that passes through the site and adjacent to the north-western site boundary. These changes would not be a significant departure from existing views of the campus from this stretch of the path. The magnitude of change at year 0 has been assessed as **Medium** to the east of the site and **High** to the west, resulting in **Moderate** and **Substantial** short-term effects on the visual amenity of these stretches of path. In the long term, the mitigation strategy would improve the setting to the path along the eastern section and would screen views of the housing within the north-western parcel (D), whilst maintaining the existing open views out to the rural landscape to the north-west of the site. The proposed development has the potential to provide long-term improvements to the experience of users of the Icknield way. Residual effects have been assessed as **Minor** beneficial.
- 5.3.3 There are views of the site from short sections of Hungerford Road, to the north-west and Winaway, to the north-east. These views are not experienced from the vast majority of the rights of way and the proposed development, whilst visible, would form a small part of the wider view – or the change to the view would be consistent with existing views of the campus. The proposed housing would not conceal any of the rural landscape experienced from these viewpoints and the downs escarpment would continue to form the skyline to these views. Over time, as the proposed mitigation planting matures, the view would revert to a similar character to the baseline condition and views of the existing campus and proposed housing development would be screened. The short-term

effects on these views have been judged to be **Moderate** adverse, changing to **Minor** beneficial effects as the mitigation planting matures.

5.3.4 Residents of North Drive would have open, partial and glimpsed views of the proposed housing (depending on the final landscape strategy for the scheme). The magnitude of change at year 0 is likely to be High, resulting in Moderate adverse visual impacts for residents of North Drive. The proposals would be consistent with the existing land use of North Drive (housing) and have the potential to be consistent with the existing housing development in the long term. The residual impacts on views from North Drive have been assessed as **Minor** adverse.

5.3.5 Motorists using the A4185 would have transient partial views of the proposed housing development at year 0. This has been assessed as a **Medium** magnitude of change, resulting in **Moderate** adverse effects. As the landscape within and surrounding the proposed development matures, the views of the proposed allocation would diminish. The residual visual effects on motorists using the A4185 are predicted to be **Minor** adverse.

6 CONCLUSIONS

6.1 The allocation is located within Harwell Campus. The majority of land within the site already contains some form of development – or is associated with the allocated enterprise zone of the campus. The remaining land within the site is heavily influenced by existing campus buildings and infrastructure, along with the housing on North Drive. The site does not make a significant contribution to the character and appearance of the wider AONB.

6.1 Development of the proposed housing allocation would have some initial adverse effects, notably on the character of the land within the site and land located to the immediate north of the allocation. There would also be an effect on the visual amenity of four public footpaths which have existing views of the site. The changes brought about by the development would be consistent with the overall baseline condition and the effects would be restricted to the site and its immediate surroundings. There would be no significant adverse effects on the character and appearance of the wider AONB landscape. There would be initial adverse effects on the recreational experiences of people using the Icknield Way, Hungerford Road and Winaway. However, there would be no significant adverse effects on the enjoyment of the Ridgeway National Trail.

6.2 In the longer term, 10-15 years, the proposed mitigation strategy would mature and the character of the landscape, to the north of the site, would revert to its baseline character,

with some improvement to local landscape character as the whole campus would be screened from rural viewpoints to the north. The proposed landscape scheme along the Icknield Way would also mature so that the character and appearance of the route would improve. Existing negative views of the campus, currently experienced from sections of the Icknield Way, would be screened by new planting. Attractive views to the north-west would be maintained, and new and attractive features would be introduced along the route. There would be an improvement in connectivity across the footpath network surrounding the site and the potential for better links to the wider AONB landscape, allowing more people to experience and enjoy the beauty of the AONB landscape.

- 6.3 The new location for the proposed housing allocation seeks to minimise the potential adverse effects on the AONB. The landscape strategy outlined above would mitigate the identified detrimental effects on the environment, landscape and recreational opportunities within the AONB in accordance with bullet point three of paragraph 116 of the NPPF. There would be no long-term adverse effects of the proposed allocation on the wider AONB and the proposals put forward would deliver a number of benefits to the AONB landscape.

10 REFERENCES

- Ref 1 -** Department for Communities and Local Government (March 2012), '*National Planning Policy Framework*'.
- Ref 2 -** Harwell Campus Website: <http://harwellcampus.com/about/about-harwell/>
- Ref 3 -** The Planning Inspectorate (November 2016 – Ref 5); '*Report on the Examination into Vale of White Horse Local Plan 2031: Part 1*' ref: PiNS/V3120/429/5
- Ref 4 -** Natural England (October 2014), '*An Approach to Landscape Character Assessment*'
- Ref 5 -** The Landscape Institute with the Institute of Environmental Management and Assessment, (2013), "*Guidelines for Landscape and Visual Impact Assessment*" (third edition)
- Ref 6 -** Department for Communities and Local Government (March 2014) '*National Planning Practice Guidance, Paragraph: 004, Reference ID: 8-004-20140306*'
- Ref 7 -** Vale of White Horse District Council (2016), '*Vale of White Horse Local Plan 2031 Part 1*'
- Ref 8 -** The North Wessex Downs AONB board (2013); '*The North Wessex Downs Area of Outstanding Natural Beauty, Management Plan 2014 – 2019*'.
- Ref 9 -** LUC on behalf of The North Wessex Downs AONB board (March 2002); '*North Wessex Downs AONB: Integrated Character Assessment*.'
- Ref 10 -** Vale of White Horse District Council (September 2017), '*Vale of White Horse District Landscape Character Assessment*'

HDA Document Control and Quality Assurance Record

Project Title: VoWH Harwell Campus
Project Reference: 728.11
Document Title: Landscape and visual appraisal
Commissioning Party: Vale of White Horse District Council

Issue	Description	Date of Issue	Signed
DRAFT	Landscape and Visual Appraisal	September 2017	B.J. Duckett
Rev B	Landscape and Visual Appraisal	October 2017	B.J. Duckett

	Personnel	Position
Author	Tanya Morris	Principal Landscape Architect
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APPENDIX 1

HDA LVIA METHODOLOGY

1.1 Guidance

1.1.1 The proposed development is subject to the Town and Country Planning (Environmental Impact Assessment) (England) Regulations (2011, amended 2015), which implement EC Directive 2011/92/EU. The structure of this assessment accords with Schedule 4 of the Regulations (Ref 1).

1.1.2 The methodology used in preparing this Landscape and Visual Impact Assessment has been developed by HDA from guidance given in the following documents:

- The Landscape Institute with the Institute of Environmental Management and Assessment, (2013), “Guidelines for Landscape and Visual Impact Assessment” (third edition); (GLVIA)
- Natural England (October 2014), “An Approach to Landscape Character Assessment”; and
- Countryside Agency (now Natural England) and Scottish Natural Heritage (by Carys Swanwick and Land Use Consultants), (April 2002), “Landscape Character Assessment – Guidance for England and Scotland”.

1.1.3 The assessment of likely impacts is considered in two separate but inter-linked parts defined within GLVIA (para 2.21 – Ref 2) as follows:

‘Assessment of landscape effects: assessing effects on landscape as a resource in its own right;

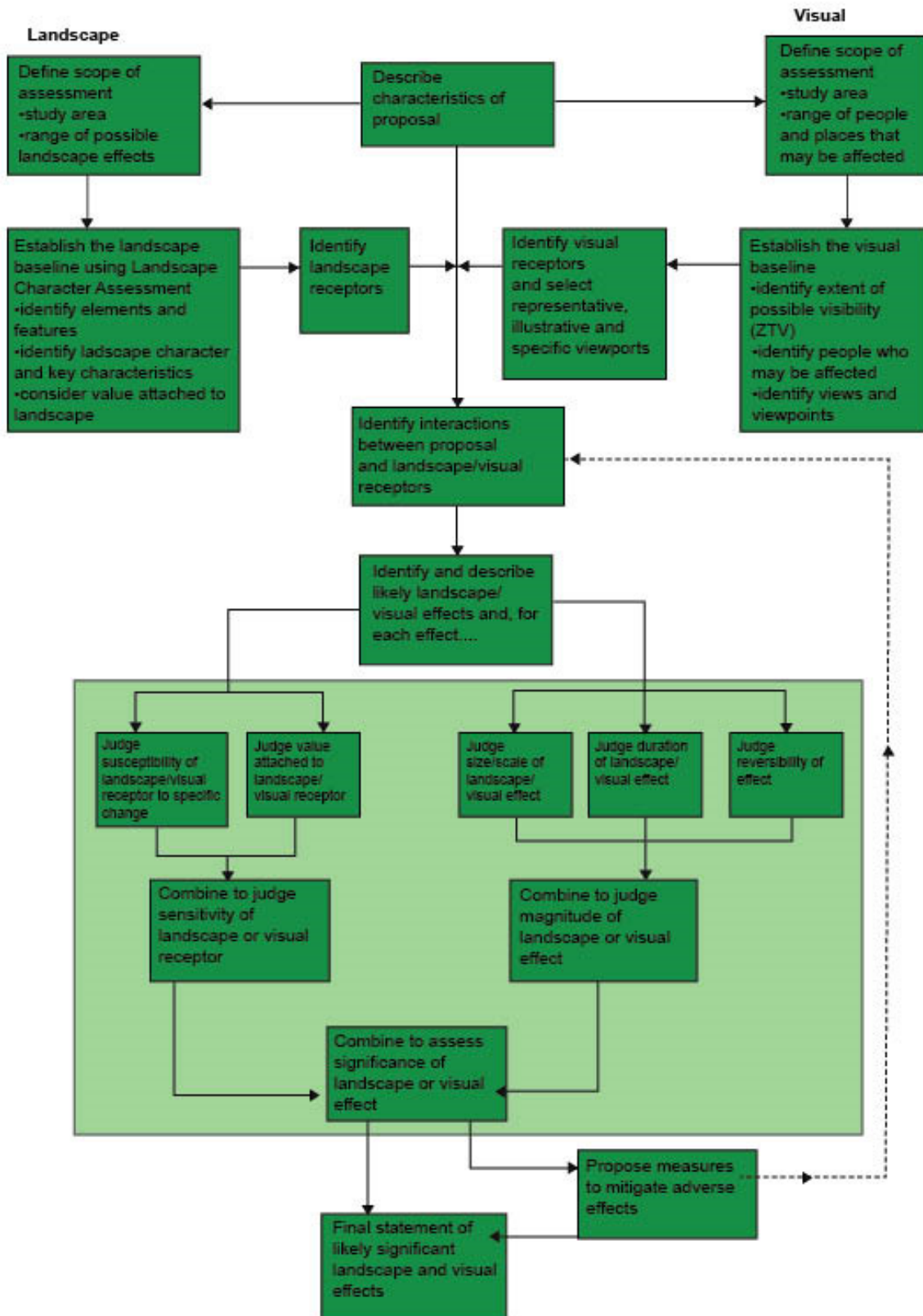
Assessment of visual effects: assessing effects on specific views and on the general visual amenity experienced by people.’

1.2 Process

1.2.1 The iterative process undertaken through the course of a Landscape and Visual Impact Assessment is illustrated in Figure 1.

1.2.2 The level of detail included within a report will be proportionate to the anticipated extent of potential impacts caused by the proposed development and is also likely to vary between a full LVIA chapter and a more concise Landscape and Visual Appraisal (LVA). Within an EIA compliant LVIA, the assessment section of the report (shown as a pale green box in Figure 1), would provide details of the relative judgement on sensitivity, magnitude of change and would provide an assessment on the significance of effects of the development on various features, character areas and views. A Landscape and Visual Appraisal (LVA) of a small development is likely to cover the key effects but not include any detailed references to judgements on significance.

Figure 1: Steps in assessing landscape and visual effects.



Referenced from figures 5.1 and 6.1 in GLVIA (Ref.2)

1.3 Desk study

1.3.1 A desk-study is undertaken to establish the physical components of the local landscape and to identify the boundaries of the study area. The following data sources were consulted:

- Ordnance Survey (OS) maps – (a range from 1:25,000 to 1:1,250) to identify local features relating to topography, field pattern/shape/size, drainage pattern, woodland cover, existing settlement pattern, rights of way network, transport corridors and any important extant historic features.
- Vertical aerial photography – used to supplement the OS information.

1.3.2 This data informs the field survey by providing a basis for mapping landscape features and to indicate the likely visibility of the proposed development.

1.3.3 Topographical analysis is used to identify the extent of potential visibility of the site and the proposed development. The zone of theoretical visibility is identified through mapping, together with potential visual receptors (VRs), for verification by field survey. The VRs include locations with public access within the visual envelope; public rights of way, public open space, key vantage points, roads, etc. together with residential properties and workplaces.

1.3.4 Natural England's National Character Area Profiles, together with local landscape character assessment, provide the landscape character context.

1.3.5 The current landscape planning context for the site is provided by the development plan documents produced by the Vale of White Horse District Council.

1.4 Field survey

1.4.1 A field survey of the site was carried out in July 2017, along with previous site visits in 2016 for Local Plan Part 1. This involved walking the site and travelling extensively through the local area, the extent of the study area being identified in the desk-study, to verify any variations in landscape character and the locations of visual receptors. The field survey also serves to understand the immediate setting of the proposed development, including the local topography, existing land uses and vegetation structure, position and condition of trees, hedgerows and stream courses.

1.4.2 The site visits were undertaken from publically accessible viewpoints around the site such as roads and public rights of way. Intervisibility analysis (projective mapping) was used to verify the zone of theoretical visibility and to evaluate the extent and nature of views from nearby properties (properties were not visited as part of the study). A working photographic record of the visit was also made.

1.5 Establishing the baseline

1.5.1 In order to form a comprehensive assessment of the effects of a proposed development, the existing situation, or baseline condition, must be established. The proposed changes resulting from the proposed development can then be identified and described. As described in section 1.1.3, the assessment considers the landscape and visual effects of the proposals.

1.5.2 GLVIA describes the landscape and visual baseline as follows:

- *'For the landscape baseline the aim is to provide an understanding of the landscape in the area that may be affected – its constituent elements, its character and the way this varies spatially, its geographic extent, its history, its condition, the way the landscape is experienced and the value attached to it.'*
- *'For the visual baseline the aim is to establish the area in which the development may be visible, the different groups of people who may experience the views of the development, the places where they will be affected and the nature of the views and visual amenity at those points.'* (page 32, para 3.15 – Ref 2)

1.6 Landscape baseline

1.6.1 For the purposes of assessment, the landscape resource is considered in two ways:

1. Local landscape character variation across the site and Study Area is described and evaluated; and
2. Existing landscape features in and immediately adjacent to the site are identified, quantified and their condition assessed.

1.6.2 The objective of the landscape baseline is first to schedule, describe, and where possible, quantify the landscape resource that potentially could be affected by the proposed development. A judgement is then made as to the Landscape Value of the Study Area.

1.6.3 Landscape value consists of:

- *'The value of the Landscape Character Types or Areas that may be affected, based on review of any designations at both national and local levels, and, where there are no designations, judgements based on criteria that can be used to establish landscape value'*
- *'The value of individual contributors to landscape character, especially the key characteristics, which may include individual elements of the landscape, particular landscape features, notable aesthetic, perceptual or experiential qualities and combinations of these contributors.'* (GLVIA page 89, para 5.44 – Ref 2)

1.6.4 Paragraph 109 of the NPPF (Ref 3) gives weight to *'protecting and enhancing valued landscapes'*, however no definition of landscape value is given. In a judgement by Mr Justice Ouseley in the case of Stroud District Council v Secretary of State for Communities and Local Government (February 2015 - Ref 4), Mr Justice Ouseley supported the inspector's finding that for a landscape to be valued it would need to *'show some demonstrable physical attribute, rather than just popularity'*. The assessment of value

should therefore first assess the intrinsic value of the physical attributes demonstrated by the site and then consider the popularity of the landscape as a community asset.

Landscape character

- 1.6.5 Landscape character areas (areas/types) are identified on plans and published descriptions and trends are summarised in the main text. Where published documents create a hierarchy of landscape areas, this is stated and the scale most appropriate to the assessment is explained. The landscape characteristics within the site are compared to the character of the wider area.
- 1.6.6 The assessment focuses on the landscape within which the site/proposed development is located. The character of a neighbouring character unit may be strongly influenced by the adjacent area, within which the site is located. This relationship may be dependent on the scale of assessment (size of landscape units), as well as landscape characteristics that affect intervisibility, e.g. topography, vegetation cover.
- 1.6.7 The degree to which the landscape character area can accommodate change arising from a particular development without detrimental effects on its character, i.e. susceptibility (Ref 2), varies with landscape value. Indicators of landscape value include:
- **Landscape quality (condition):** *'A measure of the physical state of the landscape'*. This includes land use, the intactness of the landscape and the quality and condition of the features within the landscape and the influence of incongruous features or elements;
 - **Scenic quality:** The effect that a landscape is likely to have on the senses. For example visual enclosure/openness or the pattern and scale of the landscape, whether there is a distinctive sense of place, striking landform or visual interest in the landscape;
 - **Rarity:** *'the presence of rare elements or features in the landscape or the presence of a rare Landscape Character Type'*;
 - **Representativeness:** whether the landscape or features within it are exemplary for the local area or whether the landscape being considered covers a high proportion of a particular character area;
 - **Conservation interests:** recognition of importance through designation, or local consensus. Includes features of wildlife, archaeological, historic and cultural interest;
 - **Recreation value:** *'evidence that the landscape is valued for recreational activity where experience of the landscape is important'*;
 - **Perceptual aspects:** including tranquillity and appropriateness of substitution of the characteristics affected;
 - **Associations:** *'with particular people, such as artists or writers, or events in history that contribute to perceptions of the natural beauty of the area'*.

The above list is based on Box 5.1 of GLVIA (Ref 2).

Landscape features

- 1.6.8 Key landscape features that define site character are identified on plans, together with the tables, which provide information relating to their type, condition, value, and quantification (area/length/number). The potential for impact on each landscape feature is assessed using a combination of their relationship to the site/ proposed development (e.g. within, on or adjacent to site boundary and for those outside the site, the distance from the boundary) and sensitivity.
- 1.6.9 The landscape value of site landscape features is evaluated using factors in the following checklist:
- Type of landscape feature (e.g. natural or man-made);
 - Size/extent (e.g. covers a large or small area; individual or part of a group);
 - Condition or quality of landscape feature (intact);
 - Maturity (is feature well established or recent);
 - Contribution feature makes to landscape character (e.g. distinct and recognisable pattern or limited influence);
 - Rarity (rare or widespread in local and/or regional/national context);
 - Recognised importance (e.g. designation either nationally or locally);
 - Ease with which the feature may be substituted or recreated.
- 1.6.10 The susceptibility of landscape features is closely allied to the ease with which that feature may be substituted or recreated.
- 1.6.11 The assessment of landscape features is an integral part of the initial design process and often influences the location of development. The landscape value of features is a contributory factor for the assessment of landscape character, as the assessment of the quality and condition of a landscape is intrinsically linked to its component features.

Landscape sensitivity

- 1.6.12 Landscape sensitivity is defined as:
- 'a term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor'* (Page 158 – Ref 2)
- 1.6.13 The susceptibility of the landscape to change is *'the ability of the landscape receptor to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies'* (Page 89, para 5.40 - Ref 2)
- 1.6.14 The way that landscape responds to or is affected by proposed development is determined in part by the nature of that development. The sensitivity of the landscape will vary depending on the type, form, appearance, extent or scale, duration (temporary or permanent) and phasing of proposed development. Landscape effects are also dependent

upon the *'degree to which the proposals fit with existing character'* (Page 88, para 5.37 – Ref 2), or indeed the potential to design-out potential adverse effects. Outline information about the proposed development such as type and scale helps inform preliminary judgement about the relative susceptibility of the landscape. However, the final judgement on susceptibility may change from the preliminary assessment as the scheme's detail design evolves in parallel with EIA (an iterative process).

1.7 Criteria for evaluation of sensitivity of landscape resource

1.7.1 The evaluation of overall landscape sensitivity to change is considered to be a product of susceptibility to change and the value of the receptor. The evaluation is an expression of comparative sensitivity based on a five-point scale: Very Low, Low, Medium, High and Very High as follows:

Very High:

- An exemplary part of a nationally recognised landscape, e.g. National Parks and Areas of Outstanding Natural Beauty. World Heritage Sites of international importance (if landscape reason for designation);
- Strong landscape structure, characteristic patterns and balanced combination of landform and land-cover;
- Appropriate management with distinctive features worthy of conservation;
- Sense of place (usually tranquil);
- No (or occasional) detracting features;
- Landscape not substitutable.

High:

- Part of a nationally or locally recognised landscape of particularly distinctive character, e.g. on the edge of a nationally designated landscape; part of the setting to an AONB; or a local policy designation;
- Recognisable landscape structure, characteristic patterns and combinations of landform and land-cover are still evident;
- Appropriate management, but potential scope for improvement;
- Some features worthy of conservation;
- Sense of place;
- No or occasional detracting features;
- Very limited substitutability and susceptible to relatively small changes.

Medium:

- Locally recognised, but undesignated, landscape of moderately valued characteristics;
- Distinguishable landscape structure, with some characteristic patterns of landform and land-cover;
- Scope to improve management (e.g. of hedgerows);
- Occasional detracting features;

- Landscape resource reasonably tolerant to change.

Low:

- Ordinary undesignated countryside;
- Weak landscape structure, without characteristic patterns of landform or land-cover;
- Limited management which is beginning to show signs of degradation;
- Abundance of detracting features;
- A relatively unimportant landscape, the nature of which is potentially tolerant to substantial change.

Very Low:

- Degraded to damaged/polluted or derelict landscape structure;
- Single land use dominates;
- Lack of or poor management/maintenance/intervention which has resulted in degradation;
- Presence of disturbed or derelict land requiring treatment;
- Extensive or dominant detracting features.

1.8 Visual baseline methodology

1.8.1 The visual baseline serves to establish the type of Visual Receptor (VR), the extent and character of existing views, the contribution that the site makes to each view/local visual amenity and the susceptibility to change in views (GLVIA para 6.33). This in part correlates with the degree to which the site is visible from a VR (GLVIA para 6.27).

1.8.2 All VR's (Key View Points), were visited as part of the field survey and the extent, character and appearance of their views noted. Where appropriate, the existence of temporary structures or features in the landscape that vary with the seasons and that may therefore affect visibility, such as deciduous vegetation, were noted in order to evaluate the worst case situation in the assessment. The initial appraisal is based on a grading of degrees of visibility, from not visible to fully open in close views. To indicate the degree of visibility of the site from any location, that continuum has been divided into four categories:

- **None:** no view (no part of the site or proposed development is discernible);
- **Glimpse:** only a minor area of the site or proposed development is discernible and/or the view is transient or at such a distance that it is difficult to perceive in the wider view, or sequence of views;
- **Partial:** the site or proposed development forms a relatively small proportion of a wider view. There are open views of part of the site or proposed development such that it is easily visible as part of the wider view;
- **Open:** there are open views of the site or proposed development such that it forms a substantial part (is a dominant element) of the overall view and affects its overall character and visual amenity; or the site or proposed development is the dominant feature of the view, to which other elements become subordinate and where the

site/proposed development significantly affects or changes the character of the view.

1.8.3 The type of activity that a person – or visual receptor (VR) is engaged in affects susceptibility, as does the extent of the view of the site and the extent to which that view can accept change of a particular type and scale without unacceptable adverse effects on its character and extent. The expectation of the viewer (e.g. whether or not the type of development is consistent with the content of the baseline view) is a further consideration.

1.8.4 The value attached to views should also be considered i.e. whether the visual receptor/s being assessed are within a designated landscape, the site forms the setting to a heritage asset or there are particular tourism activities associated with the viewpoint location. The combined sensitivity of views/visual amenity within the zone of visual influence of the site/proposed development, is evaluated using factors in the following checklist:

- *‘the type and relative number of people (visual receptors) likely to be affected, making clear the activities they are likely to be involved in;*
- *the location, nature and characteristics of the chosen representative, specific and illustrative viewpoints, with details of the visual receptors likely to be affected by each;*
- *the nature, composition and characteristics of the existing views experienced at these viewpoints, including the direction of view;*
- *the visual characteristics of the existing views, for example the nature and extent of the skyline, aspects of visual scale and proportion, especially with respect to any particular horizontal or vertical emphasis and any key foci;*
- *elements, such as landform, buildings or vegetation, which may interrupt, filter or otherwise influence the views.’*

(Page 111, para 6.24 – Ref 2)

1.9 **Criteria for evaluation of visual sensitivity**

1.9.1 The evaluation of sensitivity, in relation to visual receptors is considered to be a product of susceptibility to change and the value attributed to the view by the visual receptor. It is represented as an expression of comparative sensitivity, based on a five-point scale: Very Low, Low, Medium, High and Very High as follows:

Very High:

- An open view, where the site forms a dominant part of the view, seen from a viewpoint that has a high value (nationally significant), by visual receptors that would be highly susceptible to a change in the view (e.g. walkers/cyclists on rural public rights of way), whose attention or interest is likely to be focused on the landscape. For example a walker on a national trail within an AONB, where the site forms the foreground to the view and is a characteristic part of a scenic and rural landscape.

High:

- A distant open or partial view of the site from a viewpoint that has a high value (nationally significant), seen by visual receptors that would be highly susceptible to a change in the view, whose attention or interest is likely to be focused on the

landscape; for example a walker on a national trail within an AONB, where the site forms a distant part of a wider view and is seen in the context of a foreground which is characteristic and forms part of a scenic and rural landscape;

- An open view of the site from a viewpoint that **either** has a medium scenic value (i.e. is locally appreciated), seen by visual receptors that would be highly susceptible to a change in the view **or** that the viewpoint has a high value (nationally significant) but the visual receptors experiencing the view have a medium susceptibility to change (i.e. a scenic road route, where the view is transient but is still a focus).

Medium:

- An open view of the site from a viewpoint that **either** has a low scenic value (i.e. has a number of visual detractors / a degraded landscape character), seen by visual receptors that would have a medium susceptibility to a change in the view **or** that the viewpoint has a medium scenic value (i.e. is locally appreciated) and the visual receptors experiencing the view have a low susceptibility to change (i.e. a major road or an office, where the view is not the focus of people's attention);
- A partial view of the site from a viewpoint with medium value, seen by visual receptors with a medium susceptibility to change;
- A glimpse of the site from a viewpoint that has a high scenic value (nationally significant), seen by a high number of visual receptors and / or visual receptors that would be highly susceptible to a change in the view and whose attention or interest is likely to be focused on the landscape.

Low:

- A partial view of the site from a viewpoint that has **either**:
 - a low scenic value, seen by visual receptors that would have a medium susceptibility to a change in the view;
 - a medium scenic value and the visual receptors experiencing the view have a low susceptibility to change; **or**
 - that the viewpoint has a low scenic value and the visual receptors experiencing the view have a low susceptibility to change;
- A glimpse of the site from a viewpoint with medium value, seen by visual receptors with a medium susceptibility to change;
- No view of the site, but that the viewpoint has a high scenic value and would be seen by a high number of visual receptors and/or visual receptors that would be highly susceptible to a change in the view, whose attention or interest is likely to be focused on the landscape.

Very Low:

- A glimpse of the site from a viewpoint that has **either**:
 - a low scenic value, seen by visual receptors that would have a medium susceptibility to a change in the view;
 - a medium scenic value and the visual receptors experiencing the view have a low susceptibility to change; **or**
 - that the viewpoint has a low scenic value and the visual receptors experiencing the view have a low susceptibility to change;
- No view from a viewpoint with medium value (or lower), seen by visual receptors with a medium susceptibility to change (or lower).

1.12 Summary of landscape/visual baseline

- 1.12.1 The baseline survey identifies the landscape resource (landscape features and character) and visual receptors (VRs) likely to be affected by the proposed development, and then evaluates the susceptibility, value and combined sensitivity of each to the likely effects of the proposed development.

2 Mitigation

- 2.1 Mitigation is defined in the Guidelines as:

'Measures proposed to prevent/avoid, reduce and where possible remedy (or compensate for) any significant adverse landscape and visual effects...' (p57, para 4.21 - Ref 2).

- 2.2 Mitigation proposals are designed to respond to the constraints of the site and mitigate the landscape and visual impacts that arise from the proposed development. The mitigation measures considered fall into two categories: primary and secondary mitigation.

- Primary mitigation – the iterative process of masterplanning
- Secondary mitigation – additions or changes to the landscape proposals as a direct response to the results and comments obtained through public consultation.

3 Assessment of landscape effects

- 3.1 The landscape impact assessment addresses both direct and indirect impacts of the proposed development. Firstly, the direct effects of the development on the site itself are categorised, through an assessment of the magnitude of change. The magnitude of change is a judgement on the size/scale of effect, including the consistency of the proposed development with the baseline assessment, the extent of the area influenced and the duration and reversibility of the proposed effects. The focus is on the loss or change to identified landscape features within or adjacent to the site, together with the creation of new landscape elements.

- 3.2 Landscape character: The effects on local landscape character that would result from the proposed development are assessed. The effect on site landscape character directly correlates with the impact on landscape features (extent and duration). The effect on landscape character in the environs of the site is dependent on a range of factors (sensitivity) and overlaps with the visual assessment because the extent to which the proposed development would be visible from the surrounding countryside may influence neighbouring character areas. Effects on landscape character will also be directly influenced by the type of development proposed and whether it is consistent with existing land-use patterns.

- 3.3 Changes to landscape features and character may be adverse, beneficial or neutral. The erosion of a feature/character equates to an adverse impact, whilst strengthening of

features/characteristics is regarded as beneficial. The substitution of a landscape feature/character area with another that is different but locally appropriate may be assessed as a neutral impact.

- 3.4 For the purposes of this assessment, 'magnitude of change' on each landscape feature and landscape character area is classified using the categories listed below (Whilst potential effects may be adverse or beneficial, for simplicity, the following definitions use examples of adverse impact, bearing in mind that significant effects on landscape features, in the context of LVIA, usually equate with total or partial loss. Where effects are deemed to be beneficial this will be clearly stated in the assessment text):

High:

- Notable change in landscape characteristics over an extensive area;
- The proposals are the dominant feature and there is substantial damage (or major improvement) to key characteristics, features and elements that contribute to landscape, and/or the effects are long term and irreversible;
- Effect on a landscape feature of designated importance that cannot be replaced; total loss of features that would be difficult to replace;
- Loss of existing landscape character and its replacement with characteristics that are atypical of the character area;
- The proposed development is inconsistent with existing land-use patterns.

Medium:

- Moderate changes in localised area;
- The proposals form a visible and immediately apparent new feature that results in partial damage to (or addition of) key characteristics, elements and features that contribute to landscape, and/or the effects are medium to long term and largely irreversible;
- Total loss of feature that may be recreated over time; loss of small proportion of a feature that would be difficult to replace (e.g. mature woodland or historic species rich hedgerow);
- A considerable change to landscape character (proposed landscape character appropriate to character area but different from adjoining areas).

Low:

- Small change in any components;
- Some measurable change where the proposal constitutes a minor feature in the landscape and results in loss (or addition) of one (or maybe more) key characteristics, and/or the effects are short to medium term or could be irreversible;
- Total loss over sizeable area of a feature that can be recreated relatively easily (e.g. arable farmland); partial loss of feature that may be recreated over time, (e.g. young plantation/hedgerow); very minor loss of feature that would be difficult to recreate (e.g. woodland);
- A noticeable change to landscape character (proposed landscape character similar to existing landscape character of the area).

Very Low:

- Virtually imperceptible change of a temporary nature;
- The proposals result in very minor loss (or benefit) to the characteristics, features and elements that contribute to character, and/or effects are likely to be short term or could be reversible;
- Partial loss of feature that can be recreated relatively easily or which would regain its characteristics over time; minor or temporary effect on feature that can accommodate limited removal without noticeable change (e.g. gappy hedgerow);
- A barely perceptible change to landscape character.

3.5 The degree of significance of the landscape effect of the development is a product of sensitivity and magnitude of change.

4 Assessment of visual effects

4.1 The degree of significance of visual effects are assessed at two levels:

- i. The significance of the effect on each individual VR;
- ii. The overall significance of the visual effects in the context of the zone of visual influence and the range of VRs as a whole.

4.2 In accord with the visual baseline, the degree of visibility of the proposed development from each VR is assessed based on the same four categories: No view; Glimpse; Partial view, Open view. The view as it would be both during construction and operation of the proposed development is described. A direct comparison of the descriptions of the view following development (or during construction) with that of the existing situation, together with degree of visibility, indicates the extent of the change to the view. The relationship between visual intrusion and extent of change to the view is dependent upon the character of the development in the context of the view and whether they are consistent or contrasting.

4.3 The scale or magnitude of visual change has been made with reference to the following:

- *'The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development;*
- *The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture; and*
- *The nature of the view of the proposed development, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpses.'*

(Page 115, para 6.39 – Ref 2)

4.4 The geographical extent of a visual effect will vary with different viewpoints and is likely to reflect:

- *'The angle of view in relation to the main activity of the receptor;*

- *The distance of the viewpoint from the proposed development; and*
- *The extent of the area over which changes would be visible.'*

(Page 115, para 6.40 – Ref 2)

4.5 The magnitude of change can be classified as follows:

High:

- Total loss of, or major alteration to, key elements of the baseline view, and/or introduction of elements considered to be uncharacteristic of the baseline view. The development would occupy most of the view (open or panoramic view) resulting in significant change in the existing view.
- The proposals would cause a significant deterioration/improvement in the view. (If adverse, the proposals would be a dominant and incongruous feature in the view).

Medium:

- Partial loss of, or alteration to, (one or more) key elements of the baseline view, and/or introduction of elements that may be prominent but may not necessarily be considered to be substantially uncharacteristic to the baseline view.
- The development may affect a partial view of most of it, or viewers would have a clear view of only a small part of the development. Also refers to distant views in which the site forms a significant proportion of the wider view resulting in a noticeable change in the existing view;
- The proposals would cause a noticeable deterioration/improvement in the view. (If adverse, the proposals would form a visible and recognisable incongruous new element readily noticed by a casual observer. If beneficial, the proposals would form a recognisable improvement that could be noticed by a casual observer.)

Low:

- Minor loss of, or alteration to, one or more key elements of the baseline view, and/or introduction of elements that may not be uncharacteristic of the baseline view. Poor or difficult view of the development resulting in a perceptible change in the existing views; and
- The proposals would cause a minor deterioration/improvement in the view. If adverse, the proposals would be a small incongruous element in the view that could be missed by a casual observer. If beneficial, the proposals would form a small improvement to the view that could be missed by a casual observer.

Very Low:

- Very minor loss of, or alteration to, one or more key elements of the baseline view, and/or introduction of elements that are not characteristic of the baseline view.
- Poor or difficult view of the development resulting in barely perceptible change of a temporary nature. Approximating to the 'no change' situation, where the proposals overall would not form a noticeable deterioration or improvement in the view.

5 Landscape and Visual Significance

5.1 The methodology is first to identify the sensitivity of the landscape features, local landscape character or the viewer and then the scale of change. From these the significance of the effects arising from the proposed development are assessed. At its

simplest; sensitivity x scale of change = significance of effects, but modified by professional judgement.

5.2 Significance matrix for landscape and visual effects

		<i>Sensitivity of receptor</i>				
		Very High	High	Medium	Low	Very Low
Magnitude of change	High	Major	Substantial	Substantial/ Moderate	Moderate	Minor
	Medium	Substantial	Substantial/ Moderate	Moderate	Minor	Negligible
	Low	Moderate	Moderate	Minor	Negligible	Negligible
	Very Low	Minor	Minor	Negligible	Negligible	Negligible

Major effect: an effect of international/national importance and is important to the decision-making process;

Substantial effect: an effect of regional/district significance and could be a key decision-making issue; prominent changes to a sensitive view or substantial change or widespread loss of characteristic features in a sensitive landscape with little capacity for change;

Moderate effect: an effect of local significance and not likely to be a key decision-making issue; noticeable change to view in an average, ordinary landscape with some capacity to accommodate development; in combination the cumulative impacts of VR's with a moderate significance could be more significant (district significance) and a key decision-making issue.

Minor effect: an effect of very local significance and unlikely to be of importance to the decision-making process; small scale or temporary changes to view or to a low sensitivity landscape with capacity to accommodate development;

Negligible effect: not significant to the decision-making process.

5.3 Effects are judged to be 'Significant' if they are assessed as being Substantial effects or higher. The professional judgement of experienced landscape assessors is used throughout the assessment, particularly in those cases where the outcome lies between two levels of assessment, such as Substantial/Moderate and Moderate/Minor. This may result in levels of significance that are greater or lesser than the application of the landscape and visual impact significance matrices, which are not a rigid formula.

REFERENCES

- Ref 1 - Town and Country Planning; 2011; Statutory Instrument No 1824 - Town and Country Planning (Environmental Impact Assessment) Regulations 2011 Department for Communities and Local Government; 2012; National Planning Policy Framework
- Ref 2 - Landscape Institute and Institute for Environmental Management and Assessment; 2013; Guidelines for Landscape and Visual Impact Assessment (third edition)
- Ref 3 - Department for Communities and Local Government (March 2012), '*National Planning Policy Framework*'
- Ref 4 - Judgement by Mr Justice Ouseley in the case of '*Stroud District Council v Secretary of State for Communities and Local Government*' (February 2015)

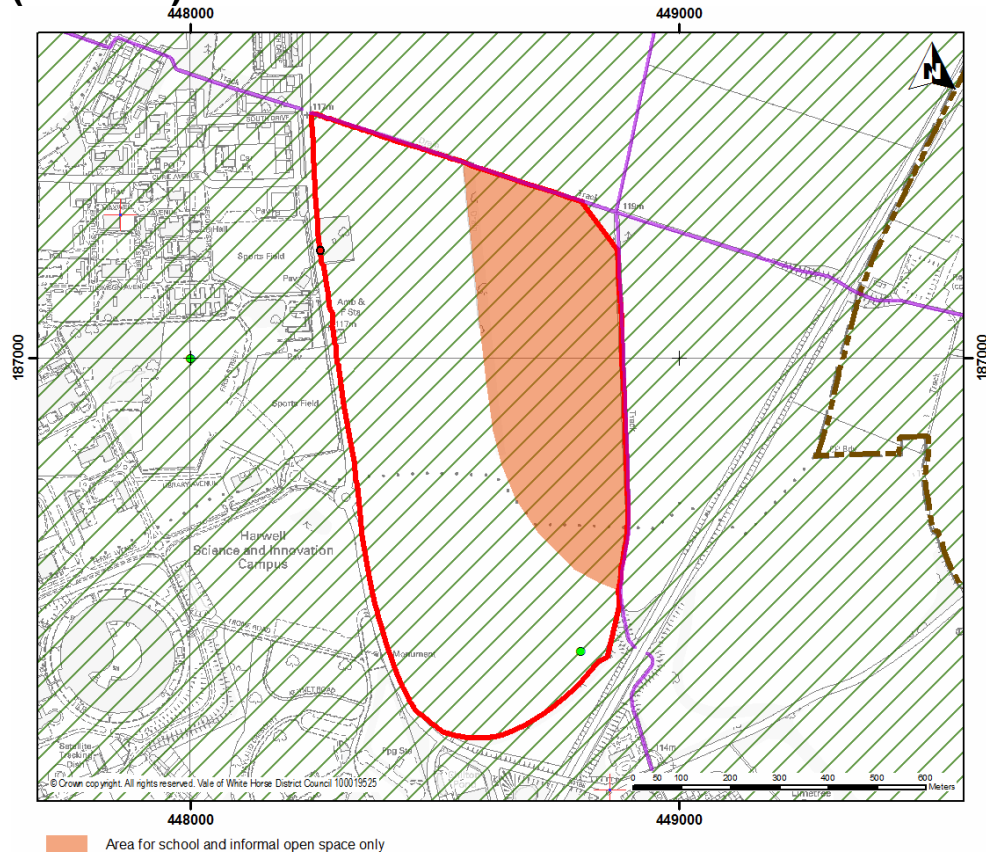
APPENDIX 2

DEVELOPMENT TEMPLATES FOR HARWELL CAMPUS (PREVIOUS AND CURRENT SITES).

4. South East Vale Sub-Area

In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.

East of Harwell Campus (Harwell and Chilton Parishes) (61.74 ha)



Use: Around 850 homes to the east of the campus.

Key objectives:

- The development of this site shall take into account the design and layout of nearby strategic housing sites, including Valley Park, North West Valley Park and Milton Heights, with respect to each of the following:

- Pedestrian and vehicular access routes, including public rights of way (PROW).
- The location of facilities and services and the creation of desire lines in the direction of these.
- Green Infrastructure.
- Areas of open space.
- Unique opportunity for a parkland campus settlement in a sensitive AONB setting that demands the highest standards of landscape masterplanning and urban design.
- Advance planting strategy.
- Opportunity for exemplary modern design next to a world class science park, a unique setting that demands a unique design response.
- Parkland and open space fringe to the north and east of the site to minimise and soften landscape impact.
- To deliver a high quality and sustainable community that is integrated with the internationally significant Harwell Campus.
- To contribute towards infrastructure in the Science Vale Area Strategy as set out in the Oxfordshire Local Transport Plan.
- To provide or support additional high quality facilities, to complement those already available on the campus.
- To ensure that development is sensitively planned to reflect the site's location within the North Wessex Downs Area of Outstanding Natural Beauty (AONB).

Urban design principles:

- Masterplanning should take into account the strategy for growth in this area and ensure that development positively contributes to the wider objectives of Science Vale; a vital area for UK economic growth.

4. South East Vale Sub-Area

In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.

- Proposals should have regard to the recommendations set out in the Harwell Campus Landscape and Visual Impact Assessment (LVIA). Only the western part of the site (labelled areas A and B in the LVIA) is suitable for built development. The eastern part of the site may be suitable for school provision (area C) and informal open space (area D). Higher density development should be concentrated in the southern part of the site.
- The spatial layout of the site should ensure that both the residential and employment parts of the Harwell site can be served by the same bus route.
- The design of development should reflect the campus character of the adjacent Harwell Campus, creating a cohesive identity for the development as a whole. The proportion of public open space will be higher than the normal requirements.
- Green routes will need to be incorporated into the site and linkages created with the adjacent site for pedestrians, cyclists, public transport users and car users.

Utilities:

- A detailed water supply strategy will be required.
- Upgrade the sewer network.

Access and highways:

- Investigate access arrangements. Satisfactory accesses may be possible from the A4185 Newbury Road. Strategic access to the A34 south would be via Chilton interchange and this may require an upgrade for capacity provision.
- Provide a network of footpaths and cycle ways to the campus, local facilities and the countryside which connect to the Icknield Way (which runs along the northern boundary of the site) and the wider footpath network.

- Retain the Icknield Way and maintain the open character of this route where possible.
- Contribute towards a new high quality bus service to Didcot town centre/railway station and to Milton Park, Harwell Campus and Valley Park, until such time as these services can be operated on a fully-commercial basis.
- Design roads to permit the operation of bus routes through the site from Didcot centre to Milton Park and Valley Park.
- Contribute towards additional buses to serve the residential site along with service enhancements (such as evening and Sunday services).
- Contribute towards any necessary mitigation measures identified through the site Transport Assessment.

Social and community:

- A new 'two form entry' primary school (on 2.22 ha of land) will be required to accommodate growth at East of Harwell Campus and North West of Harwell Campus. This is likely to be located to the east of the East of Harwell Campus site.
- Contribute towards secondary school capacity in the area.
- Development will need to provide public open space and recreational facilities in accordance with the Vale's emerging playing pitch strategy and the emerging Science Vale Area Action Plan.
- A police presence is required on site either through a neighbourhood office or as part of a community hub.

Environmental health:

- Investigate potential noise and air pollution impacts from the A34 and A4185 and mitigate (if required) to offset any adverse impacts.

4. South East Vale Sub-Area

In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.

Landscape considerations:

- Development must have regard to the high level Landscape and Visual Impact Assessment (LVIA) undertaken for this site on behalf of the council. Any development must have regard to this report in association with additional more detailed LVIA work to inform the site design, capacity and any necessary mitigation requirements.
- Mitigation to minimise impacts on:
 - the landscape character of the site, including the open, rural setting of the Icknield Way; and
 - the purposes and special qualities, including the setting, of the North Wessex Downs AONB.
- The mass and scale of the built form should be designed to avoid being visually intrusive in sensitive views from the surrounding countryside within the AONB.
- Landscaping and design features should be used to minimise any noise and light pollution impacts on the AONB.
- Retain the historic field pattern within the site, utilising hedgerows as a framework for the subdivision of the site into development land parcels. The sub-division of the site should be maximised and significant new tree planting incorporated.
- Retain, enhance and sensitively integrate existing vegetation.
- Plant a new woodland edge along the northern boundary.
- The layout and design should allow for open views to the Ridgeway in key locations and for some long distance views to be retained.

Biodiversity and green infrastructure:

- Contribute towards redressing the identified Green Infrastructure deficit in the area surrounding Harwell.

Flood risk and drainage:

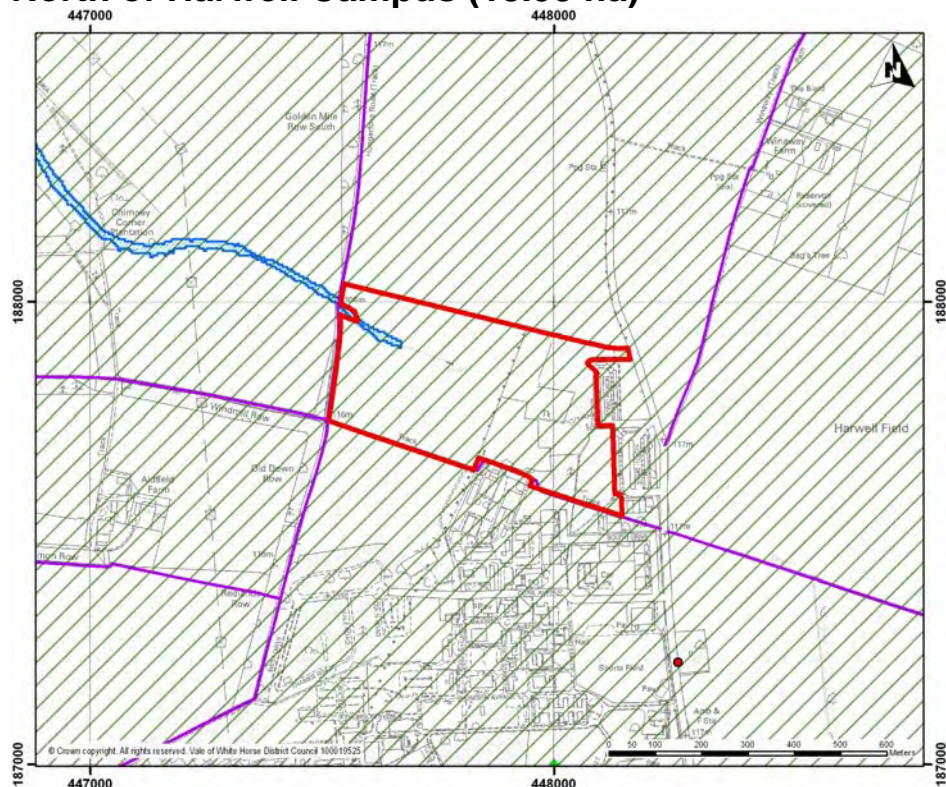
- Areas to the centre and east of the site are susceptible to surface water flooding; investigate and mitigate (if necessary).

Further policy requirements may be set out in the Science Vale Area Action Plan.

4. South East Vale Sub-Area

In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.

North of Harwell Campus (18.93 ha)



Use: Around 550 homes, subject to masterplanning.

Key objectives:

- The development of this site shall take into account the design and layout of the existing commitment to the south (permission for 120 homes) and be masterplanned to collaborate with the East of Harwell Campus to deliver a self-sufficient and sustainable community.

- To contribute to balanced employment and housing growth in the Science Vale area.
- To contribute towards infrastructure in the Science Vale Area Strategy as set out in the Oxfordshire Local Transport Plan.
- To ensure that development is sensitively planned to reflect the site's location within the North Wessex Downs Area of Outstanding Natural Beauty (AONB).

Urban design principles:

- Masterplanning should take into account the strategy for growth in this area and ensure that development positively contributes to the wider objectives of Science Vale; a vital area for UK economic growth.
- Proposals should have regard to the recommendations set out in the Harwell Campus Landscape and Visual Impact Assessment (LVIA). Higher density development should be concentrated in the southern part of the site.
- The design of development should reflect the campus character of the adjacent Harwell Campus, creating a cohesive identity for the development as a whole.
- Adopt a permeable, perimeter block layout to optimise connectivity within and beyond the site to employment, housing and facilities.
- Carefully consider street frontages in order to create an appropriate building line and incorporate active frontages.
- Public open space should form a well connected network of green areas suitable for formal and informal recreation.
- Buildings should be predominantly two storeys.

Utilities:

- Upgrade the sewer network.

4. South East Vale Sub-Area

In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.

Access and highways:

- Investigate access arrangements.
- Site access would be taken from A4185 Newbury Road at the location of the existing residential access.
- Contribute towards any necessary mitigation measures identified through the site Transport Assessment.
- Provide improved pedestrian and cycle links to Chilton Primary School.
- Site layout should ensure public transport can be accessed through the site or that the site is within walking distance of improved bus services within the campus.
- Construct Curie Avenue and internal roads within the new development to Oxfordshire County Council adopted road standards.

Social and community:

- A new 'two form entry' primary school (on 2.22 ha of land) will be required to accommodate growth at East of Harwell Campus and North West of Harwell Campus. This is likely to be located to the east of the East of Harwell Campus site and contributions will be required towards it.
- Contribute towards the expansion of the appropriate secondary school in the area.
- Contribute towards improving the existing services and facilities on the adjacent campus.
- Allow appropriate access to existing public open space and recreational facilities opposite the site and/or within the campus.

Environmental health:

- Decommission the sewage treatment works.
- Undertake contaminated land investigations to ensure that the land is safe and suitable for the intended use.

Landscape considerations:

- The site lies within the North Wessex Downs Area of Outstanding Natural Beauty (AONB). A comprehensive landscape scheme will be required to minimise impact on the AONB.
- The mass and scale of the built form will need to be designed to avoid being visually obtrusive when viewed from the surrounding countryside within the AONB.
- Landscaping and design features should be used to minimise any noise and light pollution impacts on the AONB.
- Plant a new woodland edge along the northern and western boundary.
- Retain existing trees and hedgerows where possible.

Biodiversity and green infrastructure:

- A campus-wide mitigation strategy will be required and a suitable receptor site/ nature reserve identified.
- Contribute towards redressing the identified Green Infrastructure deficit in the area surrounding Harwell.

Flood risk and drainage:

- Incorporate Green Infrastructure within SUDs to improve biodiversity and water quality.
- Mitigation measures may be required to prevent any detrimental impact on groundwater quality.

4. South East Vale Sub-Area

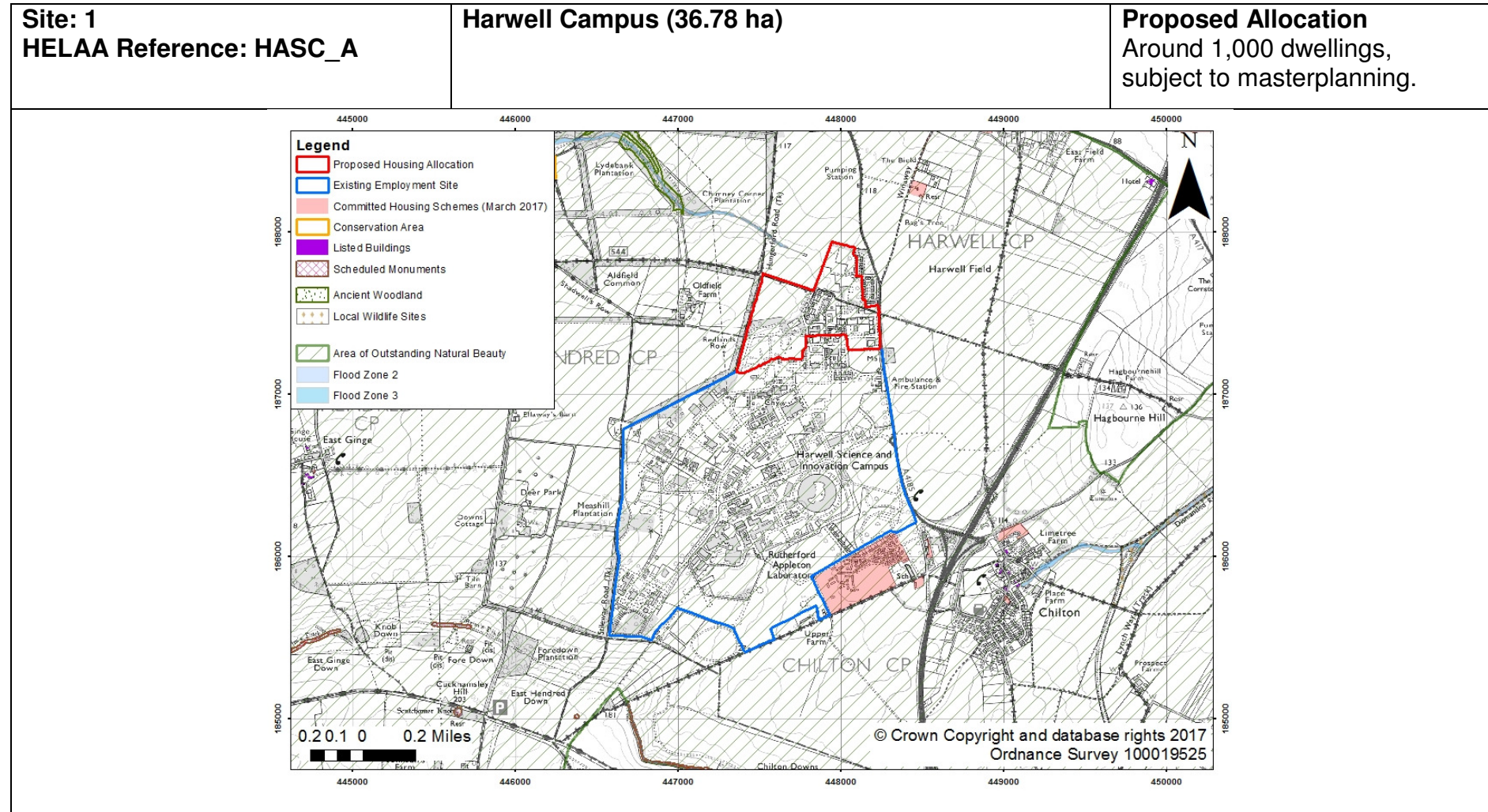
In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.

- A porous pavement system rather than soakaways should be used due to the underlying chalk geology.

Further policy requirements may be set out in the Science Vale Area Action Plan.

3. South East Sub Area

In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.



Site: 1 HELAA Reference: HASC_A	Harwell Campus
<p>Site Specific Requirements:</p> <p>Key Objectives</p> <ul style="list-style-type: none"> • To deliver a high quality and a self-sufficient sustainable community, that follows a comprehensive development framework approach to planning for the Campus as a whole in accordance with Core Policy 15b: Harwell Campus Comprehensive Development Framework. • To provide a tailored mix and tenure of housing to meet the identified needs of the Campus in accordance with Core Policy 15b as specified below. • To contribute towards infrastructure in the Science Vale Area Strategy as set out in the Oxfordshire Local Transport Plan. • To ensure that development is sensitively planned to reflect the site's location within the North Wessex Downs Area of Outstanding Natural Beauty (AONB). <p>Urban Design Principles</p> <ul style="list-style-type: none"> • Masterplanning should take into account the strategy for growth in this area and ensure that development positively contributes to the wider objectives of Science Vale; a vital area for UK economic growth. • The site's masterplan should be developed in accordance with Core Policy 15b and follow a comprehensive development framework approach, resulting in an exemplar scheme that provides for the specific needs of the campus, as a whole. • Masterplanning of the site needs to ensure that there are no significant adverse impacts within the North Wessex Downs AONB. <p>Utilities</p> <ul style="list-style-type: none"> • Upgrade the sewer network. • Off-site reinforcement works may be required to the existing high voltage distribution network. <p>Access and Highways</p> <ul style="list-style-type: none"> • Investigate access arrangements. • A transport assessment will be undertaken on how the cumulative impact of development has impacted the traffic flow of the A34. • Contribute to the reconfiguration and new access junctions along the A4185, if required. 	

- Contribute towards any necessary mitigation measures identified through the site transport assessment.
- Contribute towards improved bus services for the area.
- Contribute towards improvements of NCN route 544 (Icknield Way).
- Surface upgrades to Hungerford Road (byway) between junction with Icknield Way and the A417.
- Ensure walking and cycling routes are integrated into the rest of Harwell campus site.

Social and Community

- A new primary school will be required on the site. This should be on a 2.2 ha site to allow for future growth.
- Contribute towards improved healthcare provision for the area.
- Contribute towards increasing secondary and SEN school capacity in Didcot and Wantage.
- Contribute towards improving the existing services and facilities on the adjacent campus.

Environmental Health

- Undertake contaminated land investigations to ensure that the land is safe and suitable for the intended use.
- Investigate potential noise, air and light pollution impacts from the A4185 and the existing employment uses; mitigation measures may be required to offset any adverse impacts on existing environment.

Landscape considerations

- The site lies within the North Wessex Downs Area AONB. A comprehensive landscape scheme will be required to minimise impact on the AONB, liaising closely with Natural England and the AONB Partnership in accordance with **Core Policy 15b**.
- A Landscape and Visual Impact Assessment will be required.

Biodiversity and green infrastructure

- A biodiversity new gain is required for the development site. If it is unachievable on site then an adjacent or off-site location may be considered acceptable.
- Conserve and enhance areas of wildlife value, having regard to the woodland in the south west corner as a key biodiversity area in accordance with **Core Policy 15b**.
- Archaeology: Predetermination evaluation and appropriate mitigation may be required.

- A holistic approach should be taken to green infrastructure, including biodiversity and landscape enhancements within the site and surrounding area.

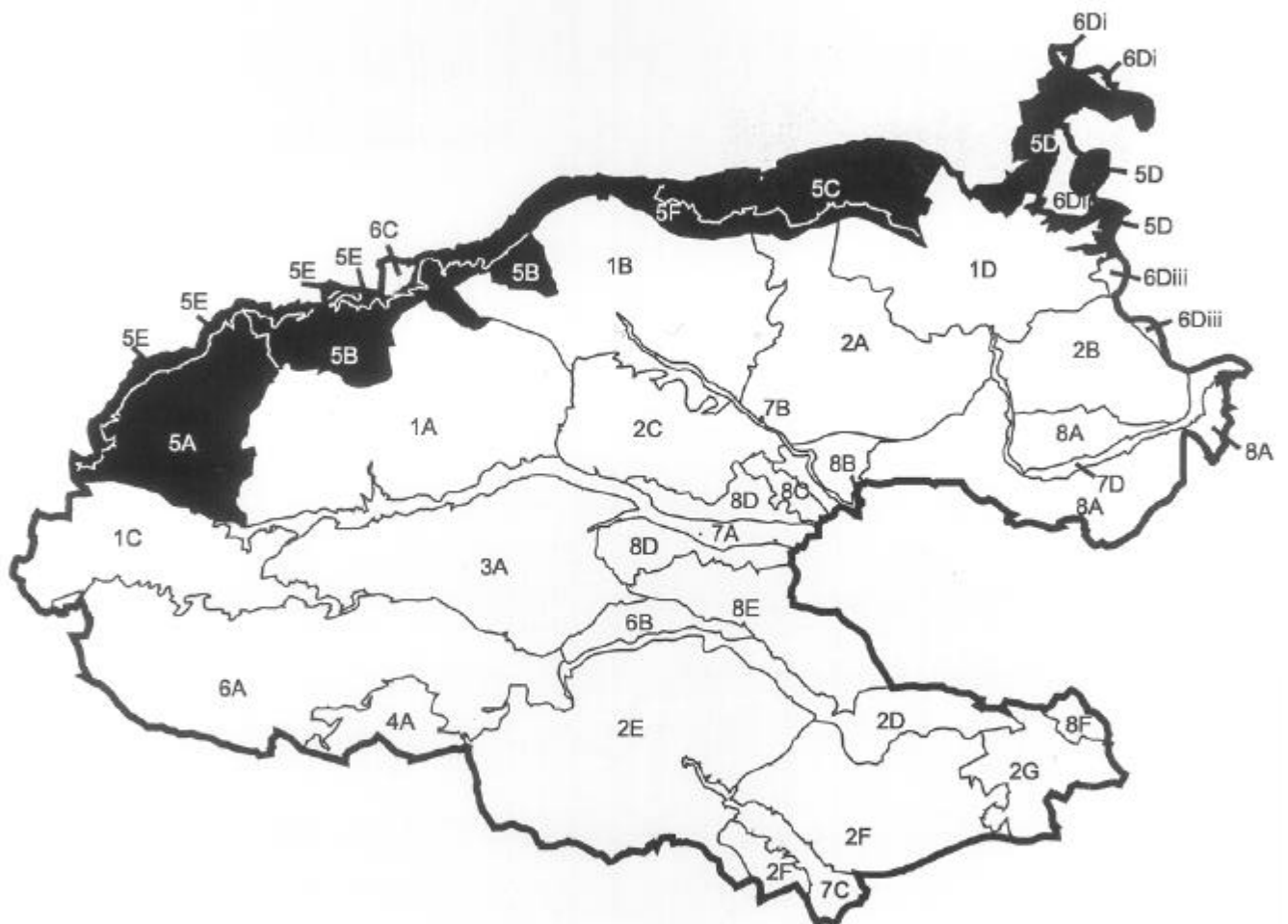
Flood Risk and Drainage

- Mitigation measures may be required to prevent any detrimental impact on groundwater quality.
- Incorporate Green Infrastructure within SUDs to improve biodiversity and water quality.
- Significant infrastructure for waste water facilities will be required alongside the growth of the Campus.

APPENDIX 3

**EXTRACT FROM THE NORTH WESSEX DOWNS AONB INTEGRATED LANDSCAPE
ASSESSMENT: DOWNS PLAIN AND SCARP AND THE 5C HENDRED PLAIN
CHARACTER AREA.**

Landscape Type 5 - Downs Plain and Scarp



12. LANDSCAPE TYPE 5: DOWNS PLAIN AND SCARP

Location and Boundaries

- 12.1. The Downs Plain and Scarp landscape occurs along the northern edge of the AONB, extending from Cherhill in the west to Chilton in the east. It is largely differentiated by geology, with the Plain being formed by the eroded surface of the Lower Chalk resulting in a lower and more level land surface compared with the Upper and Middle Chalk of the Downlands. The base of the dramatic escarpment, which is generally coincident with the AONB boundary, forms the northern edge of the landscape type. Similarly an internal escarpment marking the transition of the Lower Chalk to the harder Middle/Upper Chalk frequently forms the southern boundary, although this is not always a clear physical feature and in places the Plain merges with the high downlands (landscape type 1).

Overview

The landscape of the Downs Plain and Scarp extends along the entire northern edge of the North Wessex Downs. It is defined by geology with the plain formed by the eroded surface of the Lower Chalk, creating a low, level surface extending as a ledge at the foot of the high downs, linked to a distinctive steep escarpment. The scarp slope descends abruptly to the adjacent Vale, except in the eastern part of the AONB where the slope curves to the south and forms the backdrop to the plain. Together, these two interlinked areas of plain and scarp, are described as a single landscape type. It is characterised by two of the most emblematic features of the North Wessex Downs: the prehistoric route of the Ridgeway running along the scarp top; and Avebury World Heritage Site with its unique concentration of Neolithic monuments.

The dramatic scarp landform creates a recognisable horizon visible from the lower lying landscapes to the north. The summit of the slope is characterised by Bronze Age barrows clustered along the skyline and Iron Age hill forts, connected by the prehistoric route of the Ridgeway. Waylands Smithy long barrow, Uffington Hill Fort and the enigmatic chalk-cut figure of the Uffington White Horse are among many symbolic landmarks that characterise these highly visible slopes. The long, sleek figure of the Uffington White Horse is undoubtedly Britain's oldest and most famous hill figure (at least 3,000 years old) and may have inspired the subsequent creation of further chalk carvings within the North Wessex Downs. The route of the Ridgeway has been celebrated in art and literature and today, walkers and cyclists continue to enjoy the experience of the Ridgeway National Trail.

The steep scarp is cut by springs creating a convoluted edge. The slopes are alternatively under woodland or pasture, with the variation in land cover reflected in their high biodiversity interest, with a notable number of SSSIs. These include an abundance of herb-rich chalk grasslands and linear hanging woodlands clinging to the steep slopes. The presence of parks and designed landscapes is a particular feature, where their positioning on the scarp allows enjoyment of both the extensive views and the water resources, with springs and streams frequently incorporated

into landscape schemes. By comparison, the flat level Plains are almost entirely in intensive arable cultivation, with large regular fields bound by close trimmed hawthorn hedgerows, the product of Parliamentary enclosure generally creating a much more uniform, open landscape.

To the far west of the plain lies Avebury Plain, one of the most extensively utilised areas in Europe in prehistory. It contains one of the densest concentrations of Neolithic monuments in Britain, including the distinctive stone circle at Avebury, the monumental mound at Silbury Hill and a Neolithic causewayed enclosure at Windmill Hill. Its international importance was formally recognised in 1986 when it was designated as a World Heritage Site.

Settlement is characterised by a string of attractive, small, clustered springline villages along the base of the scarp. This distinct pattern of settlement contrasts with the largely uninhabited plain, where former military airfields are often the only significant development.

Key Characteristics

Downs Plain

- underlain by the eroded surface of the Lower Chalk, a softer clayey substrate compared to the hard Middle and Upper Chalks;
- the Plains appear as an almost flat, level, surface;
- bleak open landscape dominated by arable land, within large fields without enclosure or hedge, scrub or tree cover – notable absence of hedgerow trees;
- Avebury Plain is the landscape setting for the unique complex of Neolithic monuments of the World Heritage Site;
- field patterns are characterised by large, regular fields, primarily the product of Parliamentary enclosure, with more recent boundary removal;
- general absence of settlement, which tends to be concentrated on the scarp;
- airfields and redundant military sites are a particular feature.

Scarp

- a dramatic landform feature marking the northern edge of the AONB and creating a very visible horizon and skyline from the lower lying clay Vales to the north and west;
- numerous springs issuing at the junction of the greensand and clay create distinctive combs incised into the slope;
- a mosaic of pasture, woodland and parkland in close proximity, forming a richly textured landscape pattern and important ecological resource;
- an abundance of herb-rich chalk grasslands including numerous SSSIs;
- western scarp extensively wooded with linear hanger woods and estate land with many trees;
- parkland and estates are a particular feature of the scarp, where their strategic position offers extensive views. Springs and streams are frequently being incorporated into designed landscape schemes;
- Bronze Age round barrows are characteristically located on the skyline in positions meant to be seen from below. Iron Age hillforts are also a feature of the scarp top;
- the prehistoric route of the Ridgeway running along much of the scarp top remains well used to this day as a National Trail. It links many archaeological sites, which are all important visitor 'honeypots';
- attractive springline villages clustered along the scarp;
- generally, this landscape type has experienced a small decrease in population over

the past 20 years. Parishes are poorly served in terms of facilities, suggesting a high car ownership and high traffic levels on the rural lane network.

Physical Influences

- 12.2. **Geology and Soils:** The area is underlain by the eroded surface of the Lower Chalk, a softer clayey substrate compared to the hard pure white Middle and Upper Chalk. Along the northern and western edge the scarp descends to the heavy Gault Clays and Greensands of the surrounding low-lying Vales. Soils reflect the underlying geology and tend to be shallow and calcareous with some heavier clay.
- 12.3. **Landform:** The softer eroded geology has given rise to a lower and more level land surface, which forms a ledge at the foot of the Downs. The Plains generally slope gently towards the scarp but appear almost flat. There are very few valleys on the Lower Chalk Plain and where they exist they are shallow and generally insignificant.
- 12.4. One of the most dramatic landform features within the whole AONB is the steep northern escarpment, which creates a highly visible horizon over much of the lower lying clay Vales to the north and west and signals the edge the North Wessex Downs from a wide area. Numerous springs issue at the junction of the chalk and clay, creating distinctive coombes incised into the slope. The presence of parks and designed landscapes is a particular feature of the scarp, where their strategic positioning allows them to enjoy both the extensive views and the water resources, with springs and streams frequently incorporated into designed landscape schemes.

Biodiversity

- 12.5. The steep chalk scarp, along with its coombes and valleys, contains a large number of important chalk grasslands. The western part of the scarp is extensively wooded with linear 'hanger' woodlands clinging to the steep ground along the scarp, as well as smaller wooded coombes. Estate land is also a feature of the scarp and these areas, with their trees and hedged fields also create a wooded character. Woodlands vary greatly according to the local conditions and include beech hangers and ancient semi natural ash and hazel coppice with oak, and wet ash-maple woodland on lower slopes. The mosaic of farmland, woodland and remnant areas of chalk grassland habitat, all in close proximity, makes the scarp a rich ecological resource. By contrast, the flat level surface of the Downs Plain has proved attractive for intensive farming and is dominated by open arable areas with very little hedge, scrub or tree cover, and has relatively little ecological interest under present management regimes.

Historic Environment

- 12.6. **Landscape Development:** Avebury Plain was one of the most extensively utilised areas in Europe in prehistory with a plethora of major archaeological sites and smaller residential community sites. Much of this area was used for arable cultivation in prehistory, resulting in soil depletion by early historic times and thus a change to a primarily pastoral use. It was this that provided the classic sheep-grazed downland.

Arable cultivation only returned to these areas in the post-war years, with the onset of steam, and then mechanised ploughing and fertilisation.

- 12.7. The scarps, however, were unsuited to tillage by view of their steep (up to 30°) slopes, and thin grey rendzina soils. Without agriculture and intensive grazing, many of these areas were wooded until the eighteenth and nineteenth centuries, when they were cleared for timber and for pasture.
- 12.8. **Neolithic Monuments:** The density of major Neolithic monuments around Avebury including the henge, the West Kennet Avenue, Silbury Hill, the Sanctuary and Bronze Age round barrows, is unparalleled in the AONB. The distribution of earthwork monuments suggests that other areas of the North Wessex Downs saw less intensive inhabitation during the Neolithic and Early Bronze Age. Nonetheless, the character of Neolithic and Early Bronze Age occupation would appear to have been different in these areas, with far less emphasis on long barrows and communal monuments such as henges.
- 12.9. **Bronze Age Round Barrows:** Round barrows are a ubiquitous feature; the great majority found in clusters or groups of three or more, typically situated on high ground, along the skyline of the scarp and often on spurs. The barrows are meant to be seen from below.
- 12.10. **Field patterns:** The landscape type is characterised by large, regular sized fields which are principally the product of formal post-medieval Parliamentary enclosure. On the scarp edge, there are some examples of strip lynchets, for example, on Charlbury Hill (5F: Liddington - Letcombe Open Scarp). These are the terraces by which cultivation was extended up the hillsides, thereby enabling more land to be ploughed. Unfortunately, such features are difficult to date, although it is clear that the great labour involved in their construction would not have been undertaken without considerable pressure on available arable land and an increased demand for food, for example, during the population expansion of the thirteenth century.

Settlement and Building Character

- 12.11. The very distinct settlement pattern consists of a string of small clustered springline villages along the base of the scarp. These include a number of attractive estate villages as well as houses and parklands.

Recreation Character

- 12.12. The many archaeological features and spring line villages within the landscape type are well connected by an intricate network of footpaths, bridleway and byways. These include linear routes, which utilise the slightly lower land on the edge of the high downs, as well as routes cutting up and down the scarp slope connecting the Vales and the downs. The landscape type contains many well-promoted long distance routes, including the Ridgeway National Trail, which runs along virtually the whole of the scarp top, plus the ancient Icknield Way, which runs along the foot of the Lower Chalk, above the point where springs issue onto the Greensand. The landscape also includes sections

of the Thames Valley Cycle Route, the Severn and Thames Cycle Route, the Chiselden and Marlborough Railway Path and the Downland Villages Riding Route (promoted by the British Horse Society). Letcombe Castle, Uffington Castle and Uffington White Horse are amongst the many impressive archaeological features and visitor 'honeypots' to be found in the landscape type. The steep scarp slope also includes numerous areas popular as hang-glider launching sites. Sites with open access include National Trust properties at Hinton Parva, Ashdown Park and Uffington. Other examples of open access land include the Little Wittenham Nature Reserve run by The Northmoor Trust. A Youth Hostel at Wantage Down provides accommodation for walkers and cyclists.

Social and Economic Characteristics

- 12.13. The spring line villages clustered along the scarp are a distinctive feature of the AONB. Surprisingly, many of the parishes within this Downs Plain and Scarp landscape type have experienced a small decrease in their population over the past 20 years, which is interesting given their location on the edge of the AONB and comparative accessibility to expanding areas such as Didcot and Swindon. The populations of Letcombe Bassett and East Hendred have, for example, experienced out-migration of approximately 15%.
- 12.14. The parishes within this landscape type are quite poorly served in terms of facilities. This may contribute to the fact that many have witnessed a population decline over the last twenty years. Chiseldon, located in close proximity to Swindon, is the only parish experiencing population growth and has the greatest range of facilities. The reliance upon services available elsewhere would suggest high car ownership within the area and high traffic levels. The actual impact on the landscape character is more difficult to assess. The villages appear as highly attractive, small settlements and, with the exception of Chiseldon, new development has been very restricted presenting an 'unspoilt' character. However, this picture disguises underlying trends with villages losing their younger populations as well as their services - so that in the day time the settlements are essentially empty with no internal life. Located on the edge of the AONB connections are mainly with the urban centres of Swindon, Wantage, Didcot and Oxford rather than the market towns within the AONB.

Key Issues

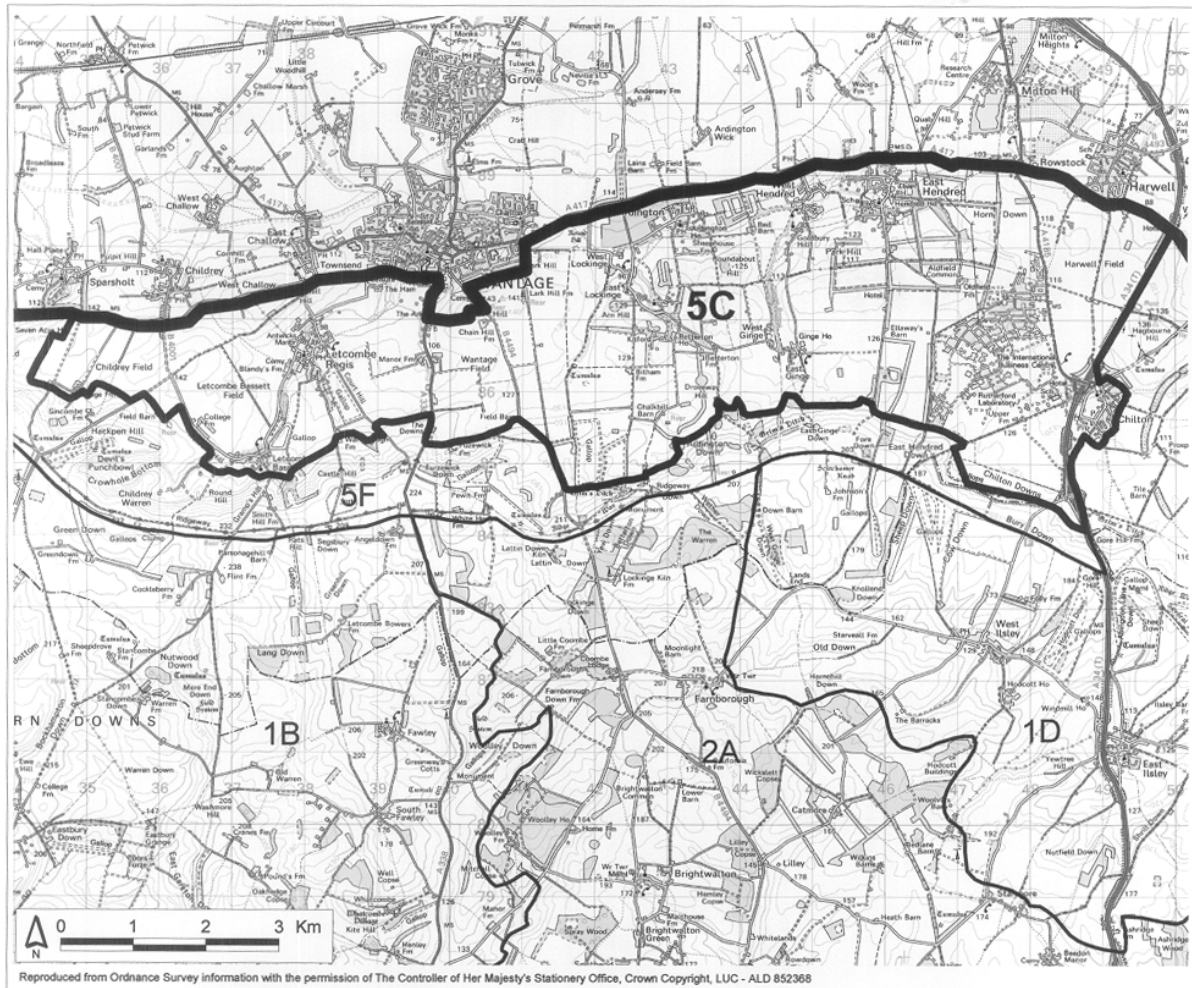
- in the past, agricultural intensification leading to **loss of environmental assets** including biodiversity (e.g. chalk grassland) archaeological features and landscape character;
- changes in farming practices - including loss of livestock with some marginal areas on the scarp slope no longer being grazed leading to **scrub encroachment, most notably on the steeper scarp slopes**;
- **loss of hedgerows boundaries** and particularly mature hedgerow trees, plus **poor management** of remaining hedgerows. This is a particular concern on the Plain, where field boundary loss has resulted in some very large open landscapes;

- **lack of appropriate woodland management** particularly the small ancient and semi natural woodlands of the scarp formerly managed by coppicing;
- **climate change** - potential impacts on chalk grassland habitats and requirement for irrigation of arable land - including construction of reservoirs and intrusive infrastructure. Impact on woodland and parkland with potential increase in non native species and tree loss (drought/windthrow);
- **Intensive recreational pressures** around 'honeypot' sites;
- **vulnerability to large scale development**, particularly tall structures (e.g. masts or turbines) on the scarp summit and re-use of redundant military infrastructure on the Plains, with associated impacts, e.g. traffic generation;
- **pressures for housing** and peripheral development of attractive springline villages along the scarp - potential loss of local vernacular character, and decline in rural services;
- impact of **development of the edge of the AONB**, for example at Wantage, Swindon, Harwell, Didcot - visual impact plus increased pressures on housing, roads, etc.;
- **loss of rural tranquillity**, resulting from the combination of the above.

Key Management Requirements

- 12.15. The overall management objective is to conserve and enhance the distinctive and contrasting character of the Downs Plain and associated Scarp. This includes:
- the distinct landform and clear skyline;
 - the mix of landcover including woodland, pasture and historic parklands;
 - the Ridgeway and unique collection of archaeological sites including management of recreational pressure around key sites;
 - attractive spring line villages along the base of the scarp and the contrasting open, uninhabited plain;
 - conservation of existing areas of chalk grassland and opportunities for habitat recreation to extend and link sites.
 - restoration of landscape character by reinforcing the hedgerow pattern and considering opportunities for further woodland planting, particularly on the plain.
- 12.16. Consideration should also be given to the impact of development on the boundary of the North Wessex Downs on views from the higher ground of the Downs Plain and Scarp.

CHARACTER AREA 5C: HENDRED PLAIN



- 1.46. **Location and Boundaries:** The Hendred Plain forms a low ledge of Lower Chalk extending in front of the Liddington - Letcombe Open Scarp that runs along the northern edge of the AONB. It is a comparatively small area but has a very distinct character forming a transition between the high downs and the clay lowlands of the Vale of White Horse.

Landscape Character Description

- 12.47. The ledge of Lower Chalk protruding from the higher downs is a distinctive landform feature on the northern edge of the AONB, providing a transitional landscape between the high downs and the clay lowlands. Although essentially a flat level Plain, local variation is created by the numerous valleys that cut through the area. These create a more undulating landform compared to Avebury Plain and Wanborough Plain, for example. In addition the wooded stream sides form a much softer enclosed landscape. At Letcombe, the brook has been dammed to create a lake as part of a designed landscape scheme, and the presence of small parks and mansions at the point where springs emerge is a particular feature of the area. Other examples include Ginge House and Ardington House, with a deer park at East Hendred. These areas are frequently associated with extensive woodland and parkland planting. The narrow linear and small circular plantations, around East Hendred and Lockinge are an unusual feature and create a slightly discordant landscape pattern, particularly in views from the higher land to the south, although at close quarters they create a wooded backdrop.
- 12.48. The majority of the area is under arable cultivation. The landscape consists of large fields with insignificant boundaries, although the shelterbelts and waterside woodlands provide a sense of enclosure. Orchards lie along the northern edge, around East Hendred, and provide further diversity in land cover. The area includes a large number of straight north-south running lanes, byways or tracks which cross the Plain and terminate on the high downs, where they join the Ridgeway. These tracks would have formerly connected the resources of the Vales and the high downs, but today form good routes for recreational access.
- 12.49. The area is well settled and includes the attractive springline villages of Letcombe Regis, East Hendred, West Hendred and Ardington. These have a very varied built character and include blue flint and tile (east) plus stone and clunch (west). They generally have a clustered character, although new development has spread out from the centre. The Estate villages (e.g. Lockinge, Ardington, East Hendred) have a particular unity of character. There are, in addition, a large number of stables and equestrian establishments, as well as isolated large houses and mansions. The most significant development within the area and arguably within the whole of the AONB is the Harwell International Business Centre on a former airfield site.
- 12.50. The boundary of the AONB follows the line of the main A417 road. The accessibility this provides and the proximity to main employment centres means that this area is inevitably subject to development pressures. Harwell and Wantage are both expanding settlements located on the border of the AONB.

Key Characteristics

- a generally level surface which dips gently to the north. A locally more undulating landscape near West Hendred where the Plain is cut by numerous valleys;
- numerous springs, with small streams flowing down into the River Ock on the Vale;
- largely under arable cultivation within large regular Parliamentary enclosure fields with insignificant boundary features;
- shelterbelts, 18th and 19th century plantations, ornamental and waterside woodlands provide a sense of enclosure. Orchards along the northern edge around East Hendred provide diversity in land cover;
- small landscape parks and mansions, e.g. Lockinge House, are a particular feature of the area;
- a settled landscape with many springline villages e.g. Letcombe Regis, East Hendred, West Hendred and Ardington which generally have a clustered form. Estate villages have a particular unity of character;
- built form varies and includes blue flint and tile (east) plus stone and clunch (west);
- a large number of stables and equestrian establishments and gallops;
- Wantage and Harwell, located on the boundary of the AONB, plus Harwell Business Centre, on a former air field site within the AONB;
- overall, a quiet rural character.

Physical Influences

- 12.51. The area is almost entirely underlain by Lower Chalk, with Upper Greensand appearing along its northern edge, where the landform drops down to the Vale to the north. The higher land of the Upper Chalk forms a backdrop appearing as a range of higher hills to the south. The plain generally has a level surface dipping gently to the north, although is more undulating near West Hendred where it is cut by a series of small valleys as at Ginge Brook and Betterton Brook. Springs and small streams flowing down into the River Ock on the Vale are a feature. The valley of Ardington Brook, which runs along the northern edge of the character area between Ardington and East Hendred, forms a narrow band of the low lying Vale landscape.

Historic Environment

- 12.52. **Prehistoric routeway:** The Icknield Way may be later prehistoric or Roman, the line of which is still respected today by minor roads, tracks and field boundaries.
- 12.53. **Saxon and Later Settlement:** Wantage (on the AONB boundary) was a royal manor in the Saxon period, and a Saxon cemetery has been excavated at Arm Hill, just to the south-east of East Lockinge. The villages of West and East Hendred date to at least the medieval period and it was during this period that Wantage became an important local market centre, including a focal point for malting during the sixteenth and seventeenth centuries. The town continued to prosper from trade in cattle, sheep, corn and cheese and during the nineteenth century, foundries and agricultural implement makers were established.
- 12.54. **Field Patterns:** The landscape of the area is essentially open and was probably mostly under open downland grazing until formal Parliamentary enclosure in the eighteenth or

nineteenth centuries created the vast majority of the regular, straight-sided fields visible today.

- 12.55. **The Modern Landscape:** Landscaped Gardens and Estates were created around Lockinge House, including ornamental tree plantings such as those on Ardington Down. The area also includes many rides and gallops.

Biodiversity

- 12.56. There are 4 sites with non-statutory designation in the Hendred Plain Character Area, 3 of these sites are wetland sites, namely Letcombe Cress Beds, Letcombe Reed and Swamp Ginge Brook. The fourth site is a grassland site known as Harwell Grassland. There are no sites considered nationally important in this Character Area.

Key Issues

- almost exclusively in intensive arable cultivation with of **loss of environmental assets** including biodiversity (e.g. chalk grassland) archaeological features and landscape character with creation of large 'prairie' fields;
- **absence of hedgerow enclosure and woodlands**, plus **poor management** of remaining hedgerows creating a very open landscape;
- need for management of the **small woodlands** and the linear riparian tree belts;
- management of the numerous **historic parklands and designed landscapes**;
- **open landscape with particular vulnerability to large scale development** - high visual impact of existing buildings including Harwell Business Centre on a former air field site. Potential impact of tall structures (e.g. masts or turbines);
- **development pressures** within the attractive small spring line villages, with expansion from their traditional clustered form;
- development on **AONB boundaries** at Harwell and Wantage - with visual and other associated impacts.

Key Management Requirements

- 12.57. The overall management objective is to conserve and enhance the quiet, rural character of the Hendred Plain, which provides a transition between the Vale of White Horse and the high downs.
- 12.58. The key features to be conserved and enhanced include: the pasture and woodlands along the streams with opportunities for reinstatement of pasture, particularly along watercourses; the distinctive settlement pattern with a concentration of nucleated villages along the springline, estate villages, plus widely dispersed large houses and mansions; the historic field pattern, with opportunities for hedgerow boundary

restoration; the historic designed park and gardens; and the strong skyline of the higher hills to the south.

- 12.59. Particular consideration should be given to the impact of new development on the boundary of the AONB (at Harwell and Wantage) on the character of this part of the North Wessex Downs and views from this area.

APPENDIX 4

SCOPE FOR DEVELOPMENT NEAR TO HARWELL BUT OUTSIDE THE AONB.

- 1.1. Bullet 2 of paragraph 116 of the NPPF looks at 'the scope for developing elsewhere outside the designated area'. Much of the evidence base relating to exceptional circumstances lies outside the scope of this report. However, this assessment does review the potential landscape effects of alternative development locations as part of the case for exceptional circumstances for development in the AONB. The alternative sites, which are located outside the AONB, have been put forward for consideration by the council in this latest review and the likely mitigation of their effects on the spring-line villages and character of the local landscape have been assessed.
- 1.2. At paragraph 119 of the Inspectors report to Local Plan Part 1 (Ref 1), the Inspector states that

'I recognise that the proposed "work-live-play community" at Harwell could not be delivered by development outside the AONB...

...There is nothing to suggest that alternative sites for this housing, outside the AONB but within/close to Science Vale, could not be found if necessary. However, I appreciate that housing on sites 12 and 13 could be accommodated without the need for significant highways infrastructure upgrades which might be necessary if the housing were to be provided for elsewhere outside the AONB. Moreover, notwithstanding the lack of evidence of need for housing of the scale proposed at the campus, I recognise that, were it be provided, there would potentially be sustainability benefits in terms of shorter journeys to work (which would also be more likely to be made on foot/by cycle) for residents working at the campus.'
- 1.3. In March 2017 the VoWH commissioned a Landscape capacity study (Ref 2), which looked at the relative development potential of different sites within the Vale in landscape terms. This report was followed in August 2017 by an addendum report (Ref 3), which considered amended sites and some additional sites that had been brought forward after the reg. 18 consultation. A number of sites were put forward for consideration for allocation within the undesignated landscape to the north of the AONB.
- 1.4. The proposed allocation within the Harwell campus site would allow for high density development, due to the existing mature landscape framework, the built-up nature of the site and an existing business park character, with a number of tall and bulky buildings and

modern architecture. The land to the north of the A417, is open and rural in character, with few detracting features. Much of the land has high intervisibility with the AONB landscape. The villages of Harwell and East Hendred are small scale and of a traditional village character. It would be difficult to locate the scale of housing proposed within the Harwell allocation, to areas north of the A417 without:

- a) The requirement for a higher land take, in order for the proposed settlement to fit comfortably with the existing settlement patterns and densities of the villages
- b) Harming the character of these rural villages through a significant increase in their size and population.
- c) Adversely affecting the rural landscape to the north of the A417, which has the potential to adversely impact on the setting of the AONB.
- d) Significantly affect the separation between settlement and lead to coalescence along the A417.

1.5 A total of 6 alternative sites were considered, which have the potential to deliver a comparable housing allocation to that proposed at Harwell Campus. The sites and their capacity for development in landscape terms are listed below.

Site	Landscape Capacity	Summary judgements
1: Harwell Campus	Medium / High	The capacity varies across the site. The north-western field has a higher landscape sensitivity due to its strong relationship with, and contribution to the character and appearance of the AONB. This area of the site, in its current form, has a lower capacity for development than the previously developed areas to the east and south.
2: 5A: West of Harwell Village - South	Low	The site forms part of the setting to the AONB and the essential separation between Harwell village and Rowstock. The recreation ground to the south-east of the site is a community asset.
7A: Rowstock - East	Low	The site forms part of the setting to the AONB, the essential separation between Harwell village and Rowstock and a significant part of the separation between East Hendred and Harwell.
7B: Rowstock - West	Low	The site forms part of the wider open landscape and setting to the AONB. The site also forms the essential separation between East Hendred village and Rowstock and a significant part of the separation between East Hendred and Harwell.

8A Milton Heights - East	Medium / High (reduced size of site)	The north-western parcel (to the north of The Grove) is suitable for development. The southern and south-eastern fields are more sensitive to development, form an important part of the separation between the fields to the south of The Grove Farm and should not be developed. The existing access could be used to provide a secondary road link.
8B Milton Heights - West	Medium (reduced size of site)	The northern section is well contained and largely in arable production. The southern area is well established orchards. The northern field has a higher landscape capacity for development than the areas of orchard.
31 East Hendred	Low	The site is rural, open and exposed, with a strong relationship to the wider rural landscape. Development within the site would have adverse landscape and visual effects and would be difficult to mitigate without fundamentally changing the character of the landscape.

1.6 Of the sites considered within the capacity studies, only sites 8A and 8B have an equivalent landscape capacity to the proposed allocation at Harwell Campus. Both of these sites are currently rural green field sites, located approximately 3km to the north of the campus. If both of these sites came forward, the scale of development at Milton Heights would double and the separation between Milton Heights, Harwell village, Rowstock and East Hendred would substantially reduce.

1.7 The harm to the local landscape and the impact of such development on the settlement pattern in this rural location are such that the allocation at Harwell Campus would be more appropriate and potentially have lower landscape impacts than any of the alternative sites considered, despite its location within the AONB. The assessment of the landscape and visual impacts of the proposals of the Campus allocation has identified that there could be adequate mitigation to protect the character and appearance of the surrounding AONB. The above assessment of alternative sites and the extent to which the mitigation proposals for the Campus allocation can avoid any long term harm to the AONB form part of the exceptional circumstances that support the current Local Plan allocation.

REFERENCES

- Ref 1 -** The Planning Inspectorate (November 2016); *'Report on the Examination into Vale of White Horse Local Plan 2031: Part 1'* ref: PiNS/V3120/429/5
- Ref 2 -** Vale of White Horse District Council (March 2017), *'Vale of White Horse District Local Plan Part 2: Landscape Capacity Study'*
- Ref 3 -** Vale of White Horse District Council (March 2017), *'Vale of White Horse District Local Plan Part 2: Landscape Capacity Study - Addendum'*