



Oxfordshire County Council

**Strategic Landscape Assessment of
potential minerals working at Cholsey and
Caversham: impacts on Protected
Landscapes.**

February 2012



Oxfordshire Minerals and Waste LDF Landscape Study

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Section 1. Aims and Scope

Background

- 1.1 Oxfordshire's draft Minerals and Waste Core Strategy was published for public consultation in September 2011. A concern was identified in the responses made by the Chilterns Area of Outstanding Natural Beauty (AONB) and North Wessex Downs AONB. This related to potential landscape impacts on the Protected Landscapes of minerals developments within two proposed broad areas for sand and gravel working at Cholsey and Caversham. This study identifies the nature of these impacts, and potential mitigation measures which could help reduce the impacts.
- 1.2 The impacts identified will refer both to the operational phase of any development, and restoration phases. Recommendations may help to identify potential restoration priorities, and mitigation measures.

Aims

- 1.3 The aim of the study is to carry out an assessment of the potential landscape impacts of minerals development within two proposed areas for mineral working on the setting of Oxfordshire's AONBs. The study will set out the extent to which each area could accommodate mineral development without significant detriment to its character, or that of the AONB setting, taking into account current practice of design and mitigation.

Sites & scope

- 1.4 The draft Core Strategy identifies broad areas within which future sand and gravel working is proposed to take place. This study focuses on the broad areas. Proposals for specific sites within these areas will be addressed through a proposed subsequent site allocations development plan document and any planning applications, including (where required) through Environmental Impact Assessment (EIA) legislation. Two particular broad areas have been identified as having particular landscape impacts due to their proximity to Areas of Outstanding Natural Beauty:
- a) Caversham
 - b) Cholsey

The methodology is designed so that the study can be extended to other areas if required.

- 1.5 This study does not constitute an EIA or any of its constituent parts (such as Ecological Assessment, Landscape and Visual Impact Assessment). This study is strategic in nature, looking at potential broad areas for mineral working undertaken to inform the Core Strategy. A full assessment, where necessary through an EIA, would still need to be undertaken and submitted for any development application, relating to the specific detail, impacts, scale and nature of the development being proposed.
- 1.6 The report has been produced by an in house team for Oxfordshire County Council.

Section 2. Methodology

Overview of Methodology

2.1 Strategic landscape studies for minerals and waste developments have been undertaken in counties such as Dorset¹, Hampshire², Buckinghamshire³ and West Sussex⁴, where techniques have been developed to evaluate the capacity of landscapes to absorb change. The methods used in those studies have been applied here, with specific reference to the AONBs and their special qualities. The methodology will be undertaken in accordance with principles and techniques outlined the following publications and as applied in the studies listed above:

- The Landscape Institute and IEMA (2002) Guidelines for Landscape and Visual Impact Assessment, Second Edition.
- Scottish Natural Heritage and The Countryside Agency (2002a) Landscape Character Assessment: Guidance for England and Scotland.
- Scottish Natural Heritage and The Countryside Agency (2002b) Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity.

2.2 The approach described in Topic Paper 6 suggests that landscape capacity to accommodate a specific type of change is a function of landscape character sensitivity, visual sensitivity, and landscape value. These terms and techniques are described further in Sections 2.4 onwards; the steps undertaken are described below.

2.3 The methodology used in this study will comprise the following tasks:

- A. Policy context – setting out national and local policy drivers relating to landscape, including Protected Landscapes and policies relating to the setting of AONBs.
- B. Desk based study:
 - Relevant GIS datasets
 - Description of Landscape Character from existing studies
 - Identification of potential locations of visual ‘receptors’ (landscape elements directly affected by potential development)
 - Identification of landscape values, including Designated Landscapes, and people likely to be affected by potential development.
- C. Site assessment:
 - Landscape character of proposed areas for mineral working
 - Sensitivity of landscape character to minerals development
 - Visual sensitivity of proposed areas for mineral working
 - Landscape values not identified via desk study – e.g. use of land within areas, people and groups affected by the development.
- D. Evaluation
 - Presentation of results and scoring/evaluation techniques
 - Evaluation of impacts on AONB designations
 - Recommendations.

¹ LDA Design (2009): *Dorset Landscape and Visual Assessment of Potential Minerals Sites*

² Hampshire County Council (2011): *Hampshire, Portsmouth, Southampton, New Forest and South Downs Strategic Landscape and Visual Assessment*

³ Jacobs (2011): *Buckinghamshire County Council - Minerals and Waste Core Strategy Landscape and Visual Assessment*

⁴ Land use Consultants (2011): *West Sussex Landscape Sensitivity and Capacity Study for Potential Mineral and Waste Sites*

Assessment of landscape capacity

2.4 Landscape capacity refers to the degree to which a particular landscape character type or area is able to accommodate change without significant effects on its character, or overall change of landscape character type. Capacity is likely to vary according to the type and nature of change being proposed.

2.5 Topic Paper 6 suggests that capacity assessments should reflect:

- The inherent sensitivity of the landscape itself and its sensitivity to development/change (minerals development) – i.e. will reflect both the sensitivity of the landscape resource and its visual sensitivity
- The value attached to the landscape or to specific elements in it.

2.6 The technique used to determine capacity therefore comprises the following steps:

- Describe/Assess Landscape Character
- Evaluate sensitivity of landscape character to minerals development
- Assess visual sensitivity of the proposed areas for mineral working
- Determine value based on national designations, values attached to particular landscape elements and characteristics.

Landscape Character Assessment

2.7 Landscape Character Assessment is defined by Natural England as a tool used to help understand and describe the character of the landscape. It helps identify the features that give each locality its 'sense of place' and pinpoints what makes it different from neighbouring areas.

2.8 Landscape character comprises many different elements and characteristics. Elements are individual features that make up the landscape such as hedgerows, buildings, valleys, woods and hills – generally quantifiable and easy to describe. Characteristics may be more subjective, including experiential qualities of the landscape such as tranquillity. Together these contribute to landscape character – the particular combinations and patterns of elements and characteristics that create the particular sense of place of different areas.

2.9 Landscape Character Assessments use both Types and Areas to map and classify. Types are generic, used to classify sets of patterns which may repeat themselves across the study area; Areas are geographically specific, describing the characteristics unique to a particular place. There is no definitive guidance for when and how to use types and areas. Some of the assessments undertaken in Oxfordshire delineate large types, split into smaller character areas (e.g. the North Wessex Downs); others start with smaller types aggregated into larger areas (e.g. Oxfordshire Wildlife and Landscape Study). The different approaches are not incompatible, but merely describe patterns using slightly different techniques.

2.10 The following landscape character assessments of the study areas will be reviewed as part of the desk-based study to help draw out landscape character if relevant and available:

- Natural England Character Areas
- Oxfordshire Wildlife and Landscape Study
- AONB LCAs
- District LCAs

Site visits will also be undertaken to evaluate landscape character in relation to the existing studies, alongside desk-based use of GIS datasets (Appendix 1) to help identify specific elements of the landscape and values.

Landscape Sensitivity to change

2.11 The definition of landscape sensitivity set out in *Landscape Institute & IEMA (2002)* is:

The degree to which a landscape can accommodate change without adverse effects on its character – sensitivity is therefore likely to vary according to the existing landscape, the nature of the proposed development, and the type of change being considered

2.12 The technique used here to evaluate sensitivity therefore identifies key landscape elements and applying criteria set out in 2.18. These criteria take into account the scale and nature of the development against factors such as:

- Existing land use
- The pattern and scale of the landscape
- Visual enclosure/openness to views
- The scope for mitigation in character with the existing landscape.

Visual sensitivity

2.13 Visual sensitivity is assessed in terms of a combination of factors such as views, visibility, the number and nature of people perceiving the landscape, and the scope to mitigate visual impact (*Landscape Institute & IEMA, 2002*):

- The probability of development in the landscape being highly visible based on landform and extent of tree cover
- Numbers of people likely to perceive change and their reasons for being in the landscape (residents, visitors, people travelling through, people working there)
- The likelihood that development could be mitigated, without the mitigation measures themselves having an impact (e.g. planting trees in an open landscape).

2.14 This study will identify:

- Key viewpoints to and from the proposed areas for mineral working
- Inter-visibility of the site
- Key landmarks
- Visual 'receptors' (places where people can see/experience the area)
 - Occupiers of properties with views of the area
 - Communities who may experience change to the landscape setting
 - People travelling through the landscape along existing transport routes
 - Users of public rights of way and greenspaces.

2.15 Criteria set out in 2.18 will be applied.

Landscape Value

Definition

2.16 Landscape value is concerned with the relative value that is attached to different landscapes by the people who live and work in them. Formal values are one measure, but a landscape may be valued by different communities for many different reasons without formal designation, through for example:

- Use of the landscape e.g. for recreation, or because it provides us with other beneficial 'ecosystem services'
- Perceptual aspects such as scenic beauty, tranquillity or wildness
- Special cultural associations
- Nature conservation or historic environment interests
- The existence of a consensus about importance, either nationally or locally.

2.17 A GIS based assessment will be used to identify formal landscape values – e.g. designations. Site visits will also be used to help determine non formal values, such as use of the landscape.

Criteria

2.18. The following types of criteria will be applied to the landscape data to evaluate capacity, using the approaches set out above.

	Large adverse	Moderate adverse	Slight adverse	Neutral	Slight Beneficial
Landscape Characteristics and elements	<p>Development at considerable variance with landform, scale, patterns</p> <p>Likely to destroy, damage or degrade the landscape or its characteristic features</p> <p>Impacts cannot be mitigated</p> <p>Cumulative impacts with other developments or landscape change results in unacceptable loss of detriment of character</p>	<p>Development at variance with landform, scale, patterns</p> <p>Likely to damage or degrade some elements, characteristic features or their setting</p> <p>Not possible to fully mitigate impacts</p> <p>Cumulative impacts with other developments or landscape change results in loss of detriment of character</p>	<p>Development slightly at variance with landform, scale, patterns</p> <p>Slight adverse impacts on elements, characteristic features or their settings</p> <p>Not possible to fully mitigate impacts</p> <p>Cumulative impacts with other developments or landscape change results in slight loss of detriment of character</p>	<p>Development fits in with landform, scale, patterns</p> <p>Slight adverse impacts on elements, characteristic features or their settings</p> <p>Possible to fully mitigate impacts</p> <p>Isolated or small area with no or small cumulative impacts</p>	<p>Will fit in well with landform, scale, patterns</p> <p>Landscape character will be enhanced and improved</p> <p>Mitigation/restoration could improve landscape character or restore degraded elements</p> <p>Isolated or small area with no cumulative impacts</p>
Sensitivity of receptors	<p>Residential properties within area, adjacent to, or with direct close-range views of it</p> <p>Countryside users within the area – rights of way users, accessible greenspaces etc.</p>	<p>Residential properties or accessible countryside sites/routes with 'mid views' of area</p> <p>Routes taking people through or past the landscape – e.g. local roads.</p>	<p>Routes taking people through the landscape rapidly, or with 'long views' (e.g. motorways, national railways)</p> <p>Properties with an indirect view or have existing screening</p>	<p>Distant/partial views</p> <p>Area is heavily screened</p>	<p>Mitigation/restoration could result in improved views</p>
Visual Sensitivity	<p>Large scale change (Over 100ha);</p> <p>Likely to introduce highly dischordant or intrusive</p>	<p>Medium scale change (50-100ha)</p> <p>Likely to introduce moderately dischordant/intrusive elements</p>	<p>Small scale change- 20-50ha</p> <p>Likely to introduce slight dischordant/intrusive elements into the landscape</p>	<p>Small-scale - less than 20ha</p> <p>Change unlikely to be</p>	<p>Small-scale</p> <p>Likely to introduce slight positive elements into the landscapes</p>

	<p>elements into the landscape</p> <p>Significant changes in views from recognised important viewpoints, routes or amenity sites</p> <p>Likely to affect a large number of people/receptor sites</p>	<p>into the landscape</p> <p>Will affect a moderate number of people</p>	<p>Will affect small numbers of people</p>	<p>dischordant or intrusive</p>	
Landscape value	<p>Values will be destroyed or substantially degraded or damaged</p>	<p>Values will be moderately degraded or damaged</p>	<p>Values will be slightly degraded or damaged</p>	<p>Will not be damaged, or damage can be mitigated</p>	<p>Values will be slightly improved or enhanced</p>

Section 3: Policy Context

National landscape policy and legislation

European Landscape Convention

3.1 The European Landscape Convention (ELC) is an international convention, signed by the UK government in 2006, and which became binding in 2007. Landscape is defined in the European Landscape Convention as:

"An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors." (Council of Europe 2000)

Specific actions/requirements are that parties should:

- Recognise landscapes in law
- Integrate landscape into plans and policies
- Establish procedures for public and stakeholder participation in the definition and implementation of landscape policies.
- Identify landscapes, analyse their characteristics and the forces and pressures transforming them, take note of changes, and assess the landscapes identified, taking into account particular values assigned to them by local people.

3.2 The Convention acknowledges that all landscapes are an important part of the quality of life for local communities, and supports an assessment based approach to evaluating landscapes and change.

Protected Landscapes - legislation

3.3 Oxfordshire has three protected landscapes, together making up approximately 1/3 of the County:

- Chilterns Area of Outstanding Natural Beauty (AONB)
- North Wessex Downs AONB
- Cotswolds AONB.

3.4 Protected landscapes were originally created under The National Parks and Access to the Countryside Act 1949. Subsequent legislation (e.g. Environment Act 1995, Countryside and Rights of Way Act 2000) and amendments have strengthened the original legislation.

3.5 The primary purpose of AONB designations are to:

Conserve and enhance their natural beauty (which includes landform and geology, plants and animals, landscape features and the rich history of human settlement over the centuries).

AONBs confer a special duty on local authorities to 'have regard' to their purposes in plans, policies and decision-making. Local authorities or the relevant conservation board must prepare and publish a plan which formulates their policy for the management of each AONB and for the carrying out of their functions in relation to it. Relevant policies and guidance outlined in the management plans are set out in Section 4.

National Planning Policy Framework

3.6 A range of Planning Policy Statements and Guidance notes currently form the national policy framework, summarised in Appendix 2. The overarching objectives of the planning system are set out in *PPS1 Delivering Sustainable Development*, with *PPS7 Sustainable Development in Rural Areas*, containing the main policies relating to AONBs. *PPS5 Planning for the Historic Environment* recognises that the 'setting' of heritage assets is

important to conserving their integrity, defining this as “the surroundings in which a heritage asset is experienced”. The setting of AONBs is also identified in policies set out in Sections 3.8 and 4.2. There is reference to the importance of landscape to local communities and sustainable economic growth in *PPS4 Planning for Sustainable Economic Growth*. References to landscape character assessment and landscape sensitivity in *PPS22 Renewable Energy* support the use of assessment-based techniques to plan and manage landscape change.

3.7 The Planning Policy Statements and Guidance notes will shortly be replaced by a new National Planning Policy Framework. A draft was published in July 2011 and the proposed policies are outlined here. This indicates that policies relating to Protected Landscapes including AONBs will be largely retained; the importance of protecting these assets is clear in both the existing and proposed national planning documents.

Draft National Planning Policy Framework - landscape policies

23.	<i>General – sustainable development</i> Local planning authorities should set out the strategic priorities for the area in the Local Plan. This should include strategic policies to deliver.....protection and enhancement of the natural and historic environment, including landscape....
163 & 164	The Government’s objective is that planning should help to deliver a healthy natural environment for the benefit of everyone and safe places which promote wellbeing. To achieve this objective, the planning system should aim to conserve and enhance the natural and local environment by...protecting valued landscapes....
165 & 166	In preparing plans to meet development requirements, the aim should be to minimise adverse effects on the local and natural environmentlocal planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife sites or landscape areas will be judged.
167	<i>Protect valued landscapes</i> Local planning authorities should. <ul style="list-style-type: none"> • Set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure • Give great weight to protecting landscape and scenic beauty in....Areas of Outstanding Natural Beauty....Planning permission should be refused for major developments in designated areas except in exceptional circumstances where it can be demonstrated they are in the public interest. Consideration of such applications should include an assessment of: <ul style="list-style-type: none"> ○ the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy ○ the cost of, and scope for, developing elsewhere outside the designated area, or meeting the need for it in some other way; and ○ Any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.
173	<i>Pollution – noise/tranquillity/dark night skies</i> Planning policies and decisions should aim to..... identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.
175	By encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.
27	<i>Using a proportionate evidence base</i> Each local planning authority should ensure that the Local Plan is based on adequate, up-to-date and relevant evidence about the economic, social and environmental characteristics and prospects of the area

Regional policies

The South East Plan

3.8 Whilst the government's intention to abolish the South East Plan has been set out, until that time it does still constitute current policy, as part of the development plan, with clear policies relating to landscape and AONBs. The protection of AONBs is clear in the South East Plan, as is the need to take the setting of AONBs into account in planning decisions. Policy C3 (Areas of Outstanding Natural Beauty) states:

“High priority will be given to conservation and enhancement of natural beauty in the region's Areas of Outstanding Natural Beauty (AONBs) and planning decisions should have regard to their setting. Proposals for development should be considered in that context. Positive land management policies should be developed to sustain the areas' landscape quality. In drafting local development documents, local planning authorities should have regard to statutory AONB Management Plans”.

3.9 Further policies contained in the South East Plan are detailed in Appendix 2.

Oxfordshire policies

Oxfordshire County Council

3.10 This document is intended to inform preparation of the Minerals and Waste Development Framework, and specifically the Core Strategy; that has not been reviewed here.

3.11 Oxfordshire County Council's corporate plan identifies 4 key priorities:

- World class economy
- Healthy and thriving communities
- Environment and climate change
- Efficient public services.

3.12 Under Environment and Climate Change the Corporate Plan states that: *The quality of Oxfordshire's natural and built environment makes it an attractive place to live and work and is important to Oxfordshire both as an economic activity in its own right and as part of the wider tourism offer, supported by an extensive public rights of way network”.*

South Oxfordshire District Council policies

3.13 South Oxfordshire's Core Strategy is currently at examination. The draft policies contain several references to landscape.

3.14 The strategy recognises (2.44) that a high quality landscape characterises the district, and that (13.4) a key strength of the district's villages is that they have been able to retain their particular character and the quality of their landscape setting. Two key policies relate to landscape:

3.15 Policy CSEN1 Landscape:

The district's distinct landscape character and key features will be protected against inappropriate development and where possible enhanced.

- (i) Where development is acceptable in principle, measures will be sought to integrate it into the landscape character of the area.
- (ii) High priority will be given to conservation and enhancement of the Chilterns and North Wessex Downs Areas of Outstanding Natural Beauty (AONBs) and planning decisions will have regard to their setting. Proposals which support the economies and social well being of the AONBs and their communities, including affordable

housing schemes, will be encouraged provided they do not conflict with the aims of conservation and enhancement.

- (iii) The landscapes and waterscapes of the River Thames corridor will be maintained and where possible enhanced as will the setting and heritage of the river for its overall amenity and recreation use

3.16 Policy CSG1 Green infrastructure:

A net gain in green infrastructure including biodiversity will be sought through developer works, developer contributions and the targeted use of other funding sources.

Proposals for new development must demonstrate that they have taken into account the relationship of the proposed development to existing green infrastructure. Where appropriate, proposals will be required to contribute to the delivery of green infrastructure and/or the improvement of existing assets including Conservation Target Areas in accordance with the standards in the South Oxfordshire Green Infrastructure Strategy and Didcot Natural Greenspaces Study.

A net loss of green infrastructure including biodiversity through development proposals will be avoided.

Section 4: AONB plans and policies

Development affecting the setting of AONBs

4.1 Neither the Cholsey nor Caversham proposed area for mineral working lie within Areas of Outstanding Natural Beauty (AONBs) but both lie close to the boundaries of AONBs. Identifying any impacts on setting and possible mitigation measures helps Oxfordshire County Council to fulfil policies set out in Section 3.

4.2 Both the North Wessex Downs⁵ and Chilterns⁶ drafted Position Statements on setting in 2011, which have been adopted by their respective boards (comprising local authority members). Both consider that the setting of the AONB is the area within which development and land management proposals, by virtue of their nature, size, scale, siting, materials or design could be considered to have an impact, either positive or negative, on the natural beauty and special qualities of that AONB. Both Position Statements share the following paragraph:

Views out of the AONB and into its surrounding areas can be very significant. Development proposals that affect views into and out of the AONB need to be carefully assessed, particularly in line with Planning Policy Statement 7, to ensure that they conserve and enhance the natural beauty and landscape character of the AONB.

4.3 The two statements also give examples of adverse impacts:

- Development which would have a significant visual impact on views in or out of the AONB;
- Breaking the skyline, particularly when this is associated with developments that have a vertical emphasis and/or movement (viaducts, chimneys, plumes or rotors for example)
- Loss of tranquillity through the introduction or increase of lighting, noise, or traffic movement or other environmental impact like dust, vibration, spatial associations and historic relationships
- Introduction of significant or abrupt changes to landscape character particularly where they are originally of a similar character to the AONB
- Change of use of land that is of sufficient scale to cause harm to landscape character.

Chilterns AONB policies and guidance

Chilterns AONB management plan⁷

4.4 Landscape section

Broad Aims

- Conserve and enhance the outstanding qualities of the Area of Outstanding Natural Beauty as part of the national landscape heritage.
- Maintain those features which make a significant contribution to the character and quality of the area and to regional and local distinctiveness.
- Enhance and restore those parts of the landscape which are degraded or in decline.

Landscape Policies

L3 Resist developments which detract from the Chilterns' special character.

L4 Enhance the landscape by restoring degraded landscapes, and encouraging the removal or mitigation of intrusive developments and features.

⁵ [http://www.northwessexdowns.org.uk/wba/nwd-aonb/NWDWebsiteV2.nsf/\\$LUcontent/7.0/\\$FILE/Position-Statement-on-Setting.pdf?OpenElement](http://www.northwessexdowns.org.uk/wba/nwd-aonb/NWDWebsiteV2.nsf/$LUcontent/7.0/$FILE/Position-Statement-on-Setting.pdf?OpenElement)

⁶ http://www.chilternsaonb.org/uploads/files/ConservationBoard/PlanningDevelopment/Setting_position_statement_adopted_June_2011_web.pdf

⁷ <http://www.chilternsaonb.org/uploads/files/ConservationBoard/ManagementPlan/ManagementPlan2008-13.pdf>

L5 Ensure the impact of development adjacent to the AONB is sympathetic to the character of the Chilterns and maintains the quality of views from it and of it.

4.5 Development Section

Broad Aims:

- Ensure that all new development contributes to the special qualities of the built environment of the Chilterns.
- Improve the built and natural environment of the Chilterns, particularly degraded landscapes, to enhance its distinctive character.
- Conserve and enhance the special qualities of the Chilterns in the development and operation of transport networks and services.
- Reduce the negative impacts of transport on the environment of the Chilterns including lighting, noise and emissions of greenhouse gases.
- Reduce any adverse impact of former extraction sites on the character of the AONB.
- Ensure that the policies within local and minerals and waste development frameworks complement the objectives of AONB designation.

Landscape Policies

D7 Pursue opportunities for landscape improvement and creation of green space (green infrastructure) when development is proposed in, or adjacent to, the boundaries of the AONB.

D17 Seek to minimise the environmental impacts on the Chilterns of quarrying and management of landfill sites adjacent to the AONB, including the impacts of through traffic.

4.6 Special qualities of the Chilterns AONB⁶ include

- The steep chalk escarpment
- Open, flower-rich, chalk downland
- Large tracts of beech woodland
- Areas of common land
- Locally distinctive flint and brick architecture
- A rich historic environment with many grand houses, designed landscapes, ancient routes, hill forts and chalk figures
- Extensive public rights of way network, including the Ridgeway and the Thames Path National Trails, and other accessible sites which receive 55 million leisure visits a year
- Natural features such as chalk rivers and streams which are a globally scarce habitat supporting a range of specialised wildlife including the water vole
- Tranquillity
- Arable and livestock farms managed with consideration for biodiversity, particularly farmland birds and other wildlife

Minerals development outside of the AONB may not directly affect some of these qualities, but does have the potential to affect views in and out of the AONB and the settings of other assets listed above (e.g. parks and gardens). Tranquillity could also be directly or indirectly affected, depending on scale, magnitude and visibility, and light/noise pollution levels.

Chilterns Landscape Character Assessment

4.7 The Chilterns Landscape (1992)⁸ is the landscape assessment specifically covering the AONB. It does not give guidelines or strategies for enhancing and conserving the landscape, but sets out a broad picture of the AONB landscape. The AONB landscape is covered in more detail in South Oxfordshire Character Assessment (1998)⁹ and the Oxfordshire Wildlife and Landscape Study (2004)¹⁰, covered further Sections 5 and 6.

⁸ Countryside Commission (1992) The Chilterns Landscape. Prepared by Lands Use Consultants for the Countryside Commission.

⁹ <http://www.southoxon.gov.uk/services-and-advice/planning-and-building/planning-policy/evidence-studies/policy-publications/south>

¹⁰ <http://owls.oxfordshire.gov.uk/wps/wcm/connect/occ/OWLS/Home/>

4.8 The Chilterns landscape to the east of Cholsey comprises three main Landscape Types in the 1992 assessment. Thames Flood Plain describes the river corridor itself, with the landscape rising to Scarp Foothills encompassing villages such as Ipsden and Ewelme, then land rising steeply to form part of the distinctive and visually significant Chilterns Escarpment.

North Wessex Downs AONB policies and guidance

North Wessex Downs AONB Management Plan

4.9 Development Section:

Special qualities:

- The sense of remoteness and tranquillity.
- All landscapes sensitive to change.
- Distinctive and ancient settlement patterns.
- Architectural styles vary throughout the AONB, dependent on availability of building materials.
- The built environment forms an integral part of local character and distinctiveness and adds to the diversity of the AONB landscape as a whole.

Key issues:

- Potential for major development to intrude onto open downland, including masts, pylons, major wind turbine developments, and mineral extraction and waste management, threatening the senses of remoteness and tranquillity.

Objectives:

- 13 To ensure that the formulation and implementation of planning policies across the [AONB] takes full account of the purposes of designation and the character and quality of the AONB and its setting.

North Wessex Downs Landscape Character Assessment

4.10 The landscape around Cholsey is mainly described as “Downs Plain”, characterised by vast arable fields, lack of surface water and a general absence of settlement.

Key issues for this landscape include:

- Impact of development on 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:

The overall management objective is to conserve and enhance the distinctive and contrasting character of the Downs Plain and associated Scarp. 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.

Key management requirements

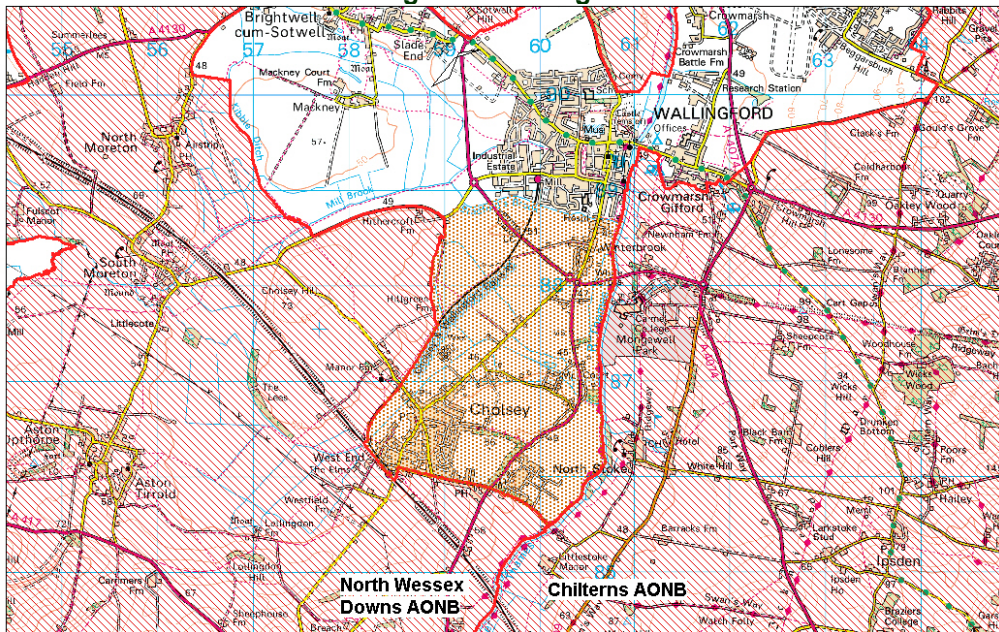
The overall management objective is to conserve and enhance the distinctive rural, agricultural character of the Vales. This includes the pattern of hedgerows, streams and remnant waterside pastures, wet meadows and woodlands and concentration of small compact settlements. There are opportunities for hedgerow restoration and re-creation of pasture and riparian woodlands alongside watercourses. The objective should be to maintain the pattern of discrete villages set within a quiet rural landscape, with opportunities for management of traffic on the rural lanes that connect the settlements. The views to the clear skylines of the surrounding downland slopes should be conserved

Section 5: Cholsey

Site location and context

5.1 The Cholsey proposed area for sand and gravel working lies 1/2km south of Wallingford, bounded by the A4130 to the north, River Thames to the east, and the village of Cholsey to the south. The landscape rises slightly from the River Thames which lies just west of the A329 at 45m AOD to the flat lying gravel river terrace of the area at 45-50m. The underlying bedrock is Grey Chalk, which changes to white chalks to the south and east – land rises to form the chalk escarpment of the Chilterns to the east and Berkshire Downs to the south, with landmarks of over 100m. The landscape to the immediate south and west rises more gently to 74 m at Cholsey Hill and 96m at Lolington Hill.

Figure 1: Location of AONB designations and Cholsey proposed area for sand and gravel working*



* Please note this boundary is a landscape study area based on natural landscape and settlement boundaries, covering the broad areas of search set out within the Core Strategy .

Landscape Character

5.2 The site and adjoining landscapes are described in the following Landscape Character Assessments:

Character Assessment	Relevant Area/types
National Character Area	108- Upper Thames Clay Vale (Vale of the White Horse)
Oxfordshire Wildlife and Landscape Study	Vale of the White Horse Regional Character Area. Four different landscape types are found within the Cholsey area (see 5.3 and Figure 2), with a further two describing Cholsey Hill to the west of the area (within the North Wessex Downs AONB).

South Oxfordshire Character Assessment (1998) ¹¹	Character Area 7: Wessex Downs and Western Vale Character Area 4: River Thames Corridor
Adjoining LCAs	<i>North Wessex Downs LCA</i> Downs – Plains and Scarp: 5D – Moreton Plain Vales: 6D - Thames Valley Floodplain <i>Chilterns Assessment</i> ¹² Thames Floodplain

5.3 Key landscape characteristics:

- A flat low lying landscape comprising part of the River Thames corridor, and gravel river terraces to the west of the river
- Four distinct landscape types identified by OWLS within the search area, which have been split up into local subtypes
 - Terraced Farmland subtype L - Medium-large scale rectangular fields, semi-enclosed with old or gappy hedgerows, mainly in intensive arable use with some pasture.
 - Alluvial Lowlands subtype R - Medium-scale rectangular fields enclosed by hedgerows with hedgerow trees, mainly in pasture and rough grazing under sheep and horses
 - Lowland Village Farmlands subtype Q – Large scale open fields, unenclosed.
 - River Meadowlands subtype S – river corridor mainly characterised by small to medium-sized semi-improved grass fields and some arable farming
- Large mature willows, lining ditches and streams across the area
- Trees often border the river and adjoining ditches, mainly willows – some pollarded, poplars, alder and sycamore, with few small mixed plantations and woodlands.
- Hedgerow trees and thicker hedgerows along main roads
- Prominent shelterbelt between fields in Type Q
- Large mature trees associated with housing in Cholsey, around farmhouses, and screening the Sewage works
- Mixed housing within Cholsey – modern estates centred around the village core, with some linear development along Gap Lane, Church Road and Wallingford Road, and commercial use to the east of the A329. Dispersed farmhouses across the area.
- Two main roads cross the area, with noise and visual impacts in places, along with frequent trains along the Oxford-Reading mainline. Some new housing development is also taking place to the east of the A329.

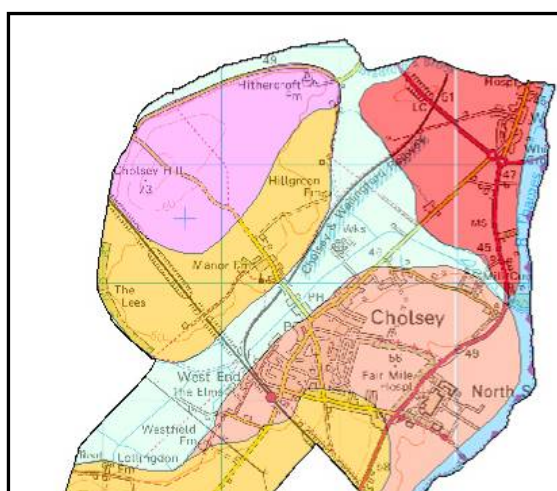


Figure2: Oxfordshire Wildlife and Landscape Study (OWLS) – Cholsey Parish

- Terraced Farmland (L)
- Alluvial Lowlands (R)
- Lowland Village Farmlands (Q)
- River Meadowlands (S)
- Rolling Farmland (K)
- Farmland Hills (F)

¹¹ <http://www.southoxon.gov.uk/services-and-advice/planning-and-building/planning-policy/evidence-studies/policy-publications/south>

¹² <http://www.chilternsaonb.org/uploads/files/ConservationBoard/ManagementPlan/Landscape.pdf>

5.4 Potential visual receptor sites within the area include:

Within the area

- Residential housing in and around Cholsey, particularly those with rural views, and dispersed farmhouses and dwellings e.g –Cox’s Farm, New Barn Farm, Bucklands, The Lodge, Brook House and along Wallingford Road and Gap Lane
- St Mary’s church
- Commercial properties to the east of the A329
- Two minor roads – Gap lane and Wallingford Road
- The Cholsey and Wallingford Railway: runs partly through the northwest of the area
- The Thames Path National Trail along the river
- Two other footpaths to the north, and a Byway Open to All Traffic to the south
- Partial views from A4130 and A329 through gaps in hedgerows and shelterbelts

Within 2km

- Residents of North Stoke – potential views across the river
- Cholsey Hill – partial views into the area from minor road and footpaths (interlinking with those across the area)
- Lollingdon Hill –partial views from minor road and footpaths

Within 10km

- Views to and from higher ground e.g.
 - Wittenham Clumps (NWD AONB)
 - Lough Down/Lardon hill (Goring & Streatley, NWD AONB)
 - Ridgeway at Batchelor’s Hill (Chilterns AONB)

5.5 Landscape Values include

Areas of Outstanding Natural Beauty

- Two AONBs lie within 1/2km of the area – the North Wessex Downs AONB and the Chilterns AONB. The River Thames forms the boundary between these two contiguous designations. The Cholsey area lies in a U-shape of non-designated land between these two designations.

Natural Heritage

- Whilst there are no formal designations within the area, or Priority Biodiversity Action Plan habitats the complex of pasture fields, hedgerows and ditches creates good habitats for farmland biodiversity – there are numerous notable species records held for several species of farmland bird and water voles. Some areas within and adjacent to the area are managed under Environmental Stewardship, so will incorporate specific biodiversity measures.
- The River Thames Wallingford-Goring Conservation Target Area lies within the area to the west. Associated Biodiversity Action Plan Target habitats include Lowland fen, reedbed, Wet woodland and Floodplain grazing marsh.

Built heritage

- Several of the farmhouses within the area are listed buildings
- The centre of Cholsey is a Conservation Area, as is the village of North Stoke – both lie within 0.5km of the area

Access

- The area around Cholsey has a number of walks which are popular with residents, and also visitors from further afield, especially because the village is accessible by train
- The rights of way to the north of Cholsey together with local roads form a popular circular walk - the Agatha Christie Trail between Winterbrook and Cholsey Church, promoted by the parish and Wallingford Partnership.
- Two National Trails – the Thames Path and Ridgeway run to the east of the A329 also forming a series of popular walks.

Cultural heritage

- Cholsey and Wallingford heritage railway runs through the north west side of the area
- The grave of Agatha Christie lies in St Mary’s Church, Cholsey, 0.5km from the Resource Area.

Assessment of potential impacts of minerals development

5.7. The following applies criteria discussed in 2.18

Impacts	Operational phase					Restoration Phase				
	-	-	-	0	+	-	-	-	0	+
Landscape Character										
<i>Landform:</i> Flat to gently undulating										
<i>Landcover, scale & enclosure:</i> Large-medium intensive open arable										
Type R: medium scale pasture with hedgerows enclosed by gappy hedges and hedgerow trees										
Types L&Q: Large open fields, few gappy hedgerows.										
<i>Condition:</i> Intensive arable. Structure of hedgerows and landscape features variable – often gappy and neglected										
Grazed pasture farmland - some horsiculture.										
<i>Tranquility:</i> Parts of the landscape have a peaceful rural setting e.g. to north of Cholsey and along parts of the Thames Path, but the area is crossed by several busy A roads and a mainline railway line. Cholsey a busy modern village.										
<i>Remoteness:</i> Rail and road networks and proximity of large modern commuter village reduce sense of remoteness, and views to Didcot power station.										
Sensitivity of receptors										

<i>Built heritage</i> Dependent on actual proposals - the setting of listed buildings could be impacted			Yellow						Green	
<i>Recreation</i> The amenity value of village circular routes could be impacted by loss of routes, tranquillity, noise and loss of visual amenity		Orange							Green	Dark Green
<i>Cultural heritage</i> Use and views from Cholsey Heritage Railway		Orange							Green	

Overall sensitivity to gravel extraction

5.8 Overall the area is considered to have a slight to moderate sensitivity to gravel extraction during the operational phase. Provided restoration is appropriate to the scale and character of the landscape is possible, the long term impact would be neutral, with possible benefits for recreation and wildlife.

5.9 Impacts on the landscape that are difficult to fully mitigate during the operational phase are mainly localised, and common to river valley sand and gravel extraction. They include:

- **Tranquility:** parts of the area are relatively peaceful and well used by local residents. Light pollution can be controlled through planning conditions, as can noise and movement although these impacts may be difficult to fully mitigate. Tranquility is difficult to fully mitigate in any landscape rather than being specific to this landscape.
- **Intervisibility:** inter-visibility to and from the landscape is relatively low so impacts would be very localised. Minerals workings are unlikely to be visible from key views within either AONB. Score reflects the difficulty of fully screening local views within the landscape. Buildings and machinery may be visible above and through field boundaries, although mitigation measures such as advance planting of natural species can help.
- **Landcover, scale and enclosure:** minerals development likely to be at variance with the medium scale of the landscape in places. Mitigation measures could include retention of field boundaries where possible, and appropriate restoration plans.
- **Number and proximity of receptor sites:** a number of dispersed properties and residential areas which currently have rural views and the landscape is well-used by residents in places due to the rights of way.
- **Loss of recreation/visual amenity:** the rights of way within the area form a popular circular walking route
- **There would also be some loss of farmland biodiversity during operation:** particularly notable/declining farmland birds and wading birds such as lapwing, and possible watervoles and otters in ditches and streams. If extraction is sequential, land around the area being worked can be restored and managed for biodiversity to help to minimise impacts.

5.9 Some parts of the area are more sensitive than others to minerals extraction. The Thames corridor (subtype S), and the Alluvial Lowlands (subtype R), are considered more sensitive than Types Q and L due to:

- R - The proximity of the AONB and open views to and from Cholsey Hill
- R - The numbers of residents with relatively undisturbed rural views from properties
- S - The sub-regional importance of the River Thames corridor (see Appendix 3)
- S&R - The use of rights of way within these areas
- S&R - The scale and form of the landscape, higher quality of landscape condition and tranquillity and intervisibility.

Impacts on designated landscapes

5.10 Mineral extraction in the area could have a slight impact on the views to and from the Chilterns AONB if extraction was to take place directly along the River Thames Corridor, but these impacts could be addressed through mitigation measures. The low-lying nature of both the Thames and Ridgeway Paths mean that views are generally short. There are distant views to and from the scarp, but natural vegetation around Cholsey would screen these important views.

5.11 Iconic views from locations within the North Wessex Downs AONB such as the Berkshire Downs and Wittenham Clumps are unlikely to be affected due to distance, visual detractors already present, and the screening effects of natural vegetation. Extraction in the area may have a slight negative impact on the special qualities of the North Wessex Downs in places:

- Views to and from Cholsey Hill could be affected if extraction took place on the western edge of the area, particularly in larger fields which are more difficult to screen in keeping with existing landscape character. Much of the area is however, screened by natural vegetation and advance planting measures could mitigate localised impacts. Intervisibility is not high, but partial in some places.
- Noise pollution may have a slight impact on the tranquility of the AONB from Cholsey Hill, although mitigation measures such as careful siting of any processing plants could help mitigate these impacts.
- Views from Lollington Hill and the Westfield Road are partial and mainly screened by natural vegetation

Recommendations

5.12 Further work on visual, noise and lighting impacts on the AONB would need to be assessed for any site-specific proposals, including any EIA undertaken in conjunction with a planning application, taking into account method of working, the location of temporary infrastructure, traffic flows and restoration proposals. Any such assessment should include further work on specific views and receptors affected, and potential for the mitigation of impacts.

5.13 Mitigation and Landscape opportunities include

- Work with landowners to improve hedgerow structure, and number of hedgerow/boundary trees in advance of minerals development, using appropriate native species to improve natural screening, especially from key views to and from the AONB and for affected residents.
- Retain existing field structures where possible, prominent landscape features such as mature willows, and biodiversity features such as ditches and streams.
- Undertake hydrological assessments to minimise impact of minerals development on flow function and biodiversity of ditches and streams.
- Improve land management for farmland biodiversity across the whole development site to help mitigate operational impacts of extraction.
- Careful siting of access tracks and roads and processing plants to minimise impact on landscape features, rights of way, local roads and visual amenity/tranquillity.
- Appropriate screening of views into the area from Cholsey Hill and surrounding footpaths, roads and rail links within the area.
- Ensure measures to reduce light pollution are agreed and put into effect.
- Ensure measures to control or reduce noise are agreed and put into effect.
- Consider height restrictions on buildings and associated development.

5.13 Options for restoration after-use include:

Restoration to an appropriate scale and form for the landscape, preferably retaining and using existing field boundaries. Use of inert fill a priority in medium-scale landscapes to help ensure restoration is appropriate and avoid creating new large-scale landscape features out of keeping with original landscape.

Restoring all or parts of mineral workings to Oxfordshire Biodiversity Action Plan Targets associated with the Thames Wallingford-Goring CTA. These include:

1. Lowland fen, reedbed, and swamp
2. Wet woodland
3. Floodplain grazing marsh.

Small-scale patches of woodland closer to housing may also enhance the landscape, and small-scale pond/wetland complexes, alongside the implementation of an appropriate management plan, to be agreed prior to use.

Improve rights of way network and opportunities for amenity use in line with Oxfordshire Rights of Way Improvement Plan and South Oxfordshire's Green Infrastructure policies and strategy documents.

Site Photographs

1. Landscape Type R – looking east into area from Cholsey Heritage Railway.



2. View from Cholsey Heritage Railway Line looking West to Hillgreen Farm.

Cholsey Hill presents a very slight rise in skyline. Inter-visibility with this landmark is not high.



3. Near distance views across Landscape Type R. Long-distance views to Chilterns escarpment which forms the skyline.



4. Landscape Type Q - large open field to north-east of Cholsey village.



5. Mid-distance views down into Cholsey and the area from the top of Cholsey Hill

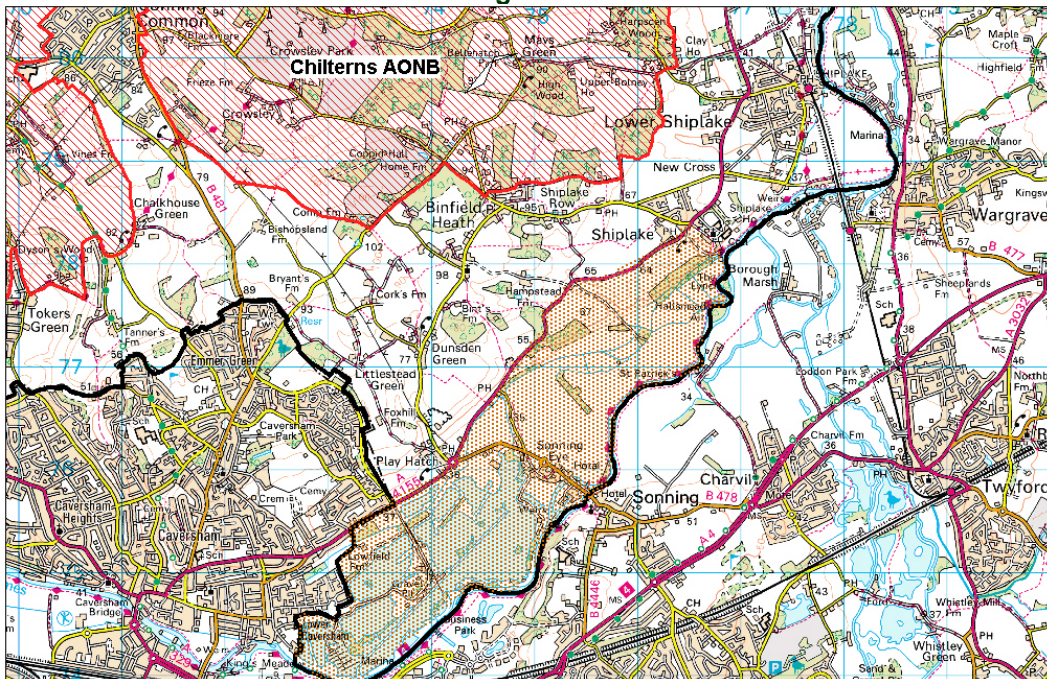


Section 6: Caversham

Site location and context

6.1 The area lies to the north east of the small hamlet of Sonning Eye. The larger village of Sonning lies immediately to the east, and Shiplake to the northeast. Whilst Sonning has a distinct character and village feel the settlements are on the edge of the Reading conurbation - roads are well-used and busy. Caversham Park, a large suburban area lies to the west. Land south west of Sonning Eye and Playhatch Road has already been subject to minerals development, and forms a large lake complex and sailing club. Land between Playhatch Road and Spring Lane is currently being worked, using a processing plant south of Playhatch Road. Land rises gently to the North towards the Chilterns Area of Outstanding Natural Beauty.

Figure 3: Caversham proposed area for sand and gravel working and Location of AONB designations*



* Please note this boundary is a landscape study area based on natural landscape and settlement boundaries, covering the broad areas of search set out within the Core Strategy.

Landscape character

6.2 The area and adjoining landscapes are described in the following Landscape Character Assessments:

Character Assessment	Relevant Area/types
National Character Area	110- Chilterns
Oxfordshire Wildlife and Landscape Study	Chilterns Regional Character Area. Landscape Type - Alluvial Lowland
South Oxfordshire LCA	11. Thames Valley and Fringes
Adjoining character areas	South Oxfordshire LCA 10. Chilterns Plateau with Valleys

(to north)
Chilterns LCA
 (to north)
Berkshire LCA¹³
 (South of River)
 B4 – Lower Valley Floor - Hurley
 Thames

6.3 Key Landscape Characteristics include

- A flat low lying landscape, part of the River Thames floodplain
- Medium-large scale regular fields
- Mixed farming pattern – mainly arable with some smaller pasture fields, semi-enclosed by hedgerows with mature trees to the north of the area; more open in nature towards the Thames.
- Hedgerows tall in the north of the area, hawthorn with mature trees of ash, sycamore and willow. Patches of scrub/copses lining fields or in field corners.
- The large mature trees are distinctive in places – part of field boundaries, in small copses, and a distinctive line of poplar lining a stream to the north
- The south western part of the area comprises extensive open water features – flooded gravel pits from previous minerals extraction, now used for water-based recreation
- Prominent ridge, marking the transition to the Chilterns natural area, forms skyline to the north
- River Thames corridor to south a focal point for visitors, residents and local businesses. The river itself is not a prominent visual feature from much of the flat area as it is often below the line of sight, but there are rural, tranquil views from the Thames Path across the area.
- Small hamlet of Sonning Eye comprises several historic buildings, a popular restaurant overlooking the Thames and large detached properties; Sonning has a defined village character despite proximity to Reading; some linear development along Spring Lane.
- Local roads busy due to proximity to Reading; other landscape ‘detractors’ include a minerals processing plant in the Play Hatch area which is slightly audible from the River Thames Path.

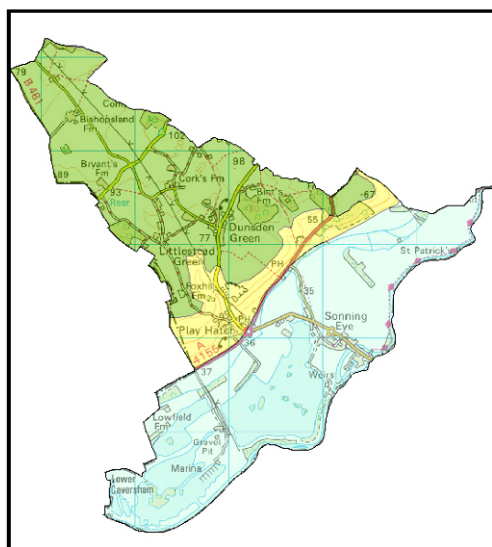


Figure 4: Oxfordshire Wildlife and Landscape Study (OWLS) – ‘Eye and Dunsden’

- Alluvial Lowlands (S)
- Farmland Slopes and Valley Sides (O)
- Wooded Farmland (E)

¹³ http://www.berks-jspu.gov.uk/downloads/general/Environment_Berks_Landscape_Character_Assessment.pdf

6.4 Potential visual receptor sites include:

Within the area

- Properties within Sonning Eye and Spring Lane; pub/restaurant/hotel businesses – The French Horn on the Thames at Sonning Eye; the Flowing Spring on corner of Spring lane and the A4155
- Minor road (well used) - B478 and Spring Lane
- Allotments and one footpath following Spring Lane; The Thames Path National Trail to the south

Within 2km

- A4155
- Viewpoints from footpaths climbing scarp to north of A4155.
- Residents of Play Hatch and Shiplake

Within 10km

- N/A – although key viewpoints should be checked for specific development proposals.

6.5 Landscape Values include

Areas of Outstanding Natural Beauty

- The Chilterns AONB boundary lies within 2km of the area. The landscape immediately north of the area is however, part of the Chilterns Natural Area, so has similar landscape characteristics and sensitivities as the Chilterns AONB.

Natural Heritage

- Three Local Wildlife Sites lie within the area:
 - Sonning Eye Gravel Pits- of value for its range of habitats (including open water, and supporting diverse invertebrate and wildfowl populations.
 - Shiplake Marsh Complex - Water shrew, water vole and plant species water violet fen bedstraw and opposite-leaved duckweed found.
 - Shiplake Warren Complex – considerable invertebrate interest including damselflies.
- Several woodland blocks, including one classified as Ancient Woodland
- Much of the farmland is managed under the Higher Level Stewardship Scheme, and is likely to be of value for farmland biodiversity. Locally important habitats include the hedgerows and scrub areas, patches of semi-improved grassland and marshy grassland and tree-lined watercourses. The flooded gravel pits attract a variety of bird species, particularly wintering wildfowl

Cultural and built heritage

- Sonning Eye is a Conservation Area, and several of the buildings within it are listed.
- Listed buildings in Play Hatch
- Several Historic Sites and Monuments records.

Access

- The Thames Path is a National Trail, popular with walkers, and the Thames is well used for leisure boating.
- The right of way along Spring Lane is well used by local residents, and there are further footpaths up the scarp area.

Assessment of potential impacts of minerals development

6.6 The following applies criteria discussed in 2.18

- A flat low lying landscape, part of the River Thames floodplain, with a steeper scarp along the north-western edge, forming a transition between the river floodplain and the start of the Chilterns landscape to the north.
- Medium-large scale regular fields
- Mixed farming pattern – mainly arable with some smaller pasture fields, semi-enclosed by hedgerows with mature trees to the north of the area; more open in nature towards the Thames; some woodland blocks, especially along the scarp.
- Hedgerows tall in the north of the area, hawthorn with mature trees of ash, sycamore and willow. Patches of scrub/copses lining fields or in field corners.
- The large mature trees are distinctive in places – part of field boundaries, in small copses, and a distinctive line of poplar lining a stream to the north
- The south western part of the area comprises extensive open water features – flooded gravel pits from previous minerals extraction, now used for water-based recreation, and an active processing plant near Play Hatch
- Prominent ridge, marking the transition to the Chilterns natural area, forms skyline to the north
- River Thames corridor to south a focal point for visitors, residents and local businesses. The river itself is not a prominent visual feature from much of the flat Resource Area as it is often below the line of sight, but there are rural, tranquil views from the Thames Path across the Resource Area.
- Small hamlet of Sonning Eye comprises several historic buildings, a popular restaurant overlooking the Thames and large detached properties; Sonning has a defined village character despite proximity to Reading; some linear development along Spring Lane.
- Local roads busy due to proximity to Reading; other landscape ‘detractors’ include current minerals workings to the west of Spring Lane which are not visible from many places but a processing plant is audible from the River Thames Path.

Impacts	Operational phase					Restoration phase				
	-	-	-	0	+	-	-	-	0	+
<i>Landscape Character</i>										
<i>Landform:</i> Flat										
<i>Landcover, scale & enclosure:</i> Medium-scale fields										

Tall hedgerows, scrub/copses, mature trees and tree-lined streams			Yellow						Green
<i>Condition:</i> Well-managed intensive arable with wildlife features. Structure of hedgerows and landscape features variable			Yellow						Green
<i>Tranquility:</i> Urban Fringe feel, with noise from busy roads, but tranquil areas and views along the Thames Path. Noise from existing plant faintly audible throughout the Area.		Orange							Green
<i>Remoteness:</i> Views across fields give relative feeling of remoteness with a rural feel in places, reduced by noise from busy roads and close proximity to Reading, plus existing minerals developments.			Yellow						Green
Sensitivity of receptors									
<i>Within site</i> Residential properties – few with direct views over undeveloped northern part of the area – some properties in Spring Lane may overlook fields from top windows			Yellow						Green
Local roads – hedgerows screen views of fields in most places. Screening could be improved in other areas. Views likely from A4155			Yellow						Green
Footpaths within or with direct views into site; screening may help retain visual amenity, but tranquillity would be more difficult to mitigate		Orange							Green
<i>Within 2km</i> Residential properties within Caversham with partial views or close enough to hear the development			Yellow						Green
Full or partial views from A4155 and footpaths on the ridge			Yellow						Green
Visual Sensitivity									
<i>Skylines:</i> Low skyline formed by trees		Orange							Green
Mid-view skyline to north formed by slight escarpment - A4155 visible in places.			Yellow						Green
<i>Views and landmarks</i> The area is not a prominent landmark or part of an iconic view				Green					Green



<i>Intervisibility</i> Views across fields within the area from Spring Lane path and Thames Path can be partially screened, but would lose existing views and landscape character during operational phase										
Landscape value										
<i>Designations</i> AONBs – Not visible										
<i>Natural heritage</i> Farmland biodiversity along Thames corridor										
<i>Cultural and built heritage</i> Dependent on actual proposals - the setting of listed buildings could be impacted										
<i>Recreation</i> The amenity value of the Thames Path and Spring Lane path could be impacted by loss of routes, tranquillity, noise and loss of visual amenity										

Overall sensitivity to gravel extraction

6.7 Overall the area is considered to have slight sensitivity to gravel extraction. Provided restoration is appropriate to the scale and character of the landscape is possible, the long term impact would be neutral, with possible benefits for recreation and wildlife. Impacts on the landscape that are difficult to fully mitigate during the operational phase are mainly localised, and common to river valley sand and gravel extraction. Key factors that are difficult to fully mitigate during the operational phase include:

- **Tranquility:** Impacts on the tranquillity of landscape experienced from the Thames Path would be difficult to fully mitigate due to noise, movement and visibility in places.
- **Intervisibility:** minerals development may be difficult to screen naturally in some parts of the area due to the flat landscape and open views, although retention of existing vegetation, sequential extraction methods, and advance planting of natural vegetation can help, as well as bunds.
- **Receptor sites:** the Thames Path is a national recreational asset with views into the area; the landscape is well-used by residents in places on the rights of way.
- **Loss of biodiversity:** particularly the local wildlife sites, localised habitat features, farmland birds and wildfowl. Mitigation measures include retention of wildlife sites, and other existing habitat features. Restoration schemes designed to maximise biodiversity may be able to mitigate impacts in the long term.

Impacts on designated landscapes

6.8 Mineral extraction in the area is unlikely to have an impact on the special qualities of the Chilterns AONB. The area is not visible from receptor sites such as Binfield Heath. Minerals extraction could potentially be seen from places within the Play Hatch to Shiplake scarp, but this is not within the AONB, and impacts would be localised.

6.9 Further work on any specific proposal in a planning application would however still be required to look more closely at the visual, noise and lighting impacts on the AONB, and a greater range of viewpoints.

Recommendations

6.10 Mitigation and Landscape opportunities include

- Work with landowners in advance of minerals development to improve hedgerow structure, and number of hedgerow/boundary trees, using appropriate native species to improve natural screening. Particular focus on screening from Thames Path, Spring Lane, occasional views from A4155 and B478.
- Retain existing field structures, prominent landscape features such as poplar shelterbelt, and biodiversity features such as ditches, streams and copses where possible.
- Undertake hydrological assessments to minimise impact of minerals development on flow function and water quality for biodiversity of ditches and streams and on River Thames
- Improve land management for farmland biodiversity within whole area during the operational phase to help mitigate impacts from sequential minerals extraction
- Seek to improve rights of way/amenity use within wider area during operational phase to mitigate loss/diversion of footpaths
- Careful siting of access tracks and roads to minimise impact on landscape features, rights of way, local roads and visual amenity/tranquillity
- Ensure measures to reduce light pollution are agreed and put into effect.
- Ensure measures to control or reduce noise are agreed and put into effect.
- Consider height restrictions.

6.11 Options for restoration after-use include:

Restoring all or parts of mineral workings to species rich lowland meadow or wet grassland, linking into other restoration schemes and habitats along the Thames Corridor. Improve network

of rights of way, particularly off-road circular routes and strategic links to the Thames Path. Restoration schemes should be in keeping with the scale of the landscape.

Photographs

1. Views from Spring Lane looking north towards A4155. Skyline comprises line of distinctive poplars. Prominent ridge marking the start of the Chilterns Natural Area not visible from photo.



2. Berry Brook in north of area – localised biodiversity features.



3. Views from Thames Path looking west across area from S756765.

Flat open medium-sized fields increase visibility into the area here.



4. Looking southwest along the Thames from Sonning Bridge.

The Thames is an important landscape feature well used for amenity.



7. Overall recommendations

- 7.1 The results of this study indicate that Mineral working and restoration in the Cholsey and Caversham areas would be unlikely to have significant impacts on the special qualities and landscapes of the Chilterns and North Wessex Downs AONBs or their settings. Any localised impacts (including tranquillity, partial views to and from AONBs, noise and traffic movements) could be addressed through site specific assessments and mitigation measures.
- 7.2 The Minerals and Waste Core Strategy should make reference to both the setting of Designated Landscapes and features within them, in line with local and regional policy documents, and make reference to landscape capacity and sensitivity, to encourage EIA assessments to fully take landscape impacts into consideration.
- 7.3 The main landscape impacts identified within this study are largely localised issues which could be addressed via individual site applications. These particularly relate to impacts of the operational phase of any minerals development and not the restoration phase, and are not long-term. They include loss of visual amenity; loss or diversion of recreational assets such as footpaths; impacts on specific features, assets or receptors; and localised tranquillity issues. These impacts are common to river valley sand and gravel working and restoration and are therefore likely to apply in the other potential working areas in the county rather than being specific to Cholsey or Caversham.
- 7.4 Area specific recommendations are listed in Sections 5 and 6 above.
- 7.5 Oxfordshire County Council could review the planning conditions relating to landscape that are applied to minerals applications to ensure they meet localised issues highlighted by this study.
- 7.6 This study is strategic in nature, looking at potential broad areas for mineral working. A full landscape assessment, where necessary through an EIA, would still need to be undertaken and submitted for any development application, relating to the site-specific detail of phasing, extraction methods, location of any temporary buildings and conveyors, traffic movements etc, which could still have impacts on the area or on the AONB(s).

Appendix 1: GIS datasets

The following have been scanned to draw out information on landscape character, and to help evaluate the sensitivity of specific elements or features in the landscape to minerals development

GIS datasets available		
Physical		
Topography	OS Map & contours	OCC
Geology	1:625k map Geological Designations	British Geological Survey see SSSIs and LWS
Hydrology	Main River lines	EA
	Flood Risk Zones	EA
Biodiversity		
Designated site	European Sites	Natural England: Special Protection areas & Special Areas of Conservation
	National Sites	Natural England: Sites of Special Scientific Interest; National Nature Reserves
	County Sites	TVERC: Local Wildlife Sites, Local Geological Sites
Species Ecology/Landuse	Protected Species Records	TVERC
	BAP Priority Habitats	TVERC
	Ancient Woodland	Forestry Commission: Inventory of Ancient and Semi-natural Woodlands
	Farms under agri-environment schemes	Natural England
Experiential and 'value'		
Designations	AONBs	Natural England
	Kew viewpoints	OSBasemaps
	Rights of way	OCC & Basemaps
	Tranquility	CPRE
	Dark Night Skies	CPRE
	Recreational sites/greenspaces	National datasets backed up with field visit.
Historic Environment and settlements		
Settlements	Size & form	OS Basemaps
	Conservation Areas	District records
Historic Environment	SMR & SAMS	OCC Archaeology
	Listed Buildings	District records
	National Register of Parks and Gardens	Heritage Gateway

Appendix 2: National planning policy framework relating to landscape

PPS1: Delivering Sustainable Development

PPS1 sets out the Government's overarching planning policies on the delivery of sustainable development through the planning system:

"Planning should facilitate and promote sustainable and inclusive patterns of urban and rural development by.....protecting and enhancing the natural and historic environment and the quality and character of the countryside, and existing communities"

In relation to landscape it recommends:

- "Design which fails to take the opportunities for improving the character and quality of an area should not be accepted" Para 13.iv
- "Planning policies should seek to protect and enhance the quality, character and amenity value of the countryside and urban areas as a whole. A high level of protection should be given to most valued townscapes and landscapes, wildlife habitats and natural resources. Those with national and international designations should receive the highest level of protection" (para17).
- When preparing development plans, "planning authorities should seek to enhance as well as protect biodiversity, natural habitats, the historic environment and landscape and townscape character" (Para 27ix).
- Plan policies and planning decisions should be based on "up-to-date information on the environmental characteristics of the area" (Para 19).

PPS7: Sustainable Development in Rural Areas

The protection of nationally designated areas such as AONBs are set out clearly in PPS7, paragraphs 21-23:

21. Nationally designated areas comprising National Parks....and Areas of Outstanding Natural Beauty (AONB), have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. The conservation of the natural beauty of the landscape and countryside should therefore be given great weight in planning policies and development control decisions in these areas.
22. Major developments should not take place in these designated areas, except in exceptional circumstances. This policy includes major development proposals that raise issues of national significance. Because of the serious impact that major developments may have on these areas of natural beauty....applications for all such developments should be subject to the most rigorous examination. Major development proposals should be demonstrated to be in the public interest before being allowed to proceed. Consideration of such applications should therefore include an assessment of:
 - (iii) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.
23. Planning authorities should ensure that any planning permission granted for major developments in these designated areas should be carried out to high environmental standards through the application of appropriate conditions where necessary.

The use of assessment based tools such as Landscape Character Assessment are also endorsed – for example to assist Local Authorities in the preparation of policies and guidance that encourage good quality design throughout rural areas (Para 13), and also as a tool for creating carefully drafted, criteria-based policies in Local Development Documents to protect valued landscapes outside nationally designated areas without the need for local designations (Paras 24 and 25).

PPS5: Planning for the Historic Environment

Parts of PPS5 relate to historic landscape character, but it also recognises the concept of ‘setting’ in relation to heritage assets, defining this as “the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.” It also recommends that

- Plans and policies should set out a strategy for the conservation and enjoyment of the historic environment taking into account the contribution of the historic environment to “the character of the environment and an area’s sense of place” and also to “its mixed and flexible patterns of land use” (HE3.1.).
- At a regional level, the character and significance of the historic environment should inform the RSS with particular attention paid to the landscapes and groupings or types of heritage assets that give distinctive identity to the region or areas within it (HE3.3.).
- At a local level, plans should consider the qualities and local distinctiveness of the historic environment and how these can contribute to the development of the spatial vision in the local development framework core strategy (HE3.4)
- Local planning authorities should take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment (HE7.5)

PPS4 Planning for sustainable economic growth

The character of both our towns and the countryside is noted as important in PPS4, for example making sure that development plans “have regard to the character of the area and the need for a high quality environment” (EC2.1), that local planning authorities should take measures to conserve/enhance the “established character and diversity of their town centres” (EC4.1), and also ensure that “the countryside is protected for the sake of its intrinsic character and beauty, the diversity of its landscapes, heritage and wildlife, the wealth of its natural resources and to ensure it may be enjoyed by all” (EC6.1).

PPS12 Local Spatial Planning

2.6 Spatial planning provides a means of safeguarding the area’s environmental assets, both for their intrinsic value and for their contribution to social and economic well being by:

- protecting and enhancing designated sites, landscapes, habitats and protected species
- creating a positive framework for environmental enhancement more generally.

4.2 The vision should be informed by an analysis of the characteristics of the area and its constituent parts and the key issues and challenges facing them

PPS22: Renewable Energy

The Companion Guide to PPS22 is relevant to the approach and methodology set out in this paper. It endorses landscape character assessment as a useful tool in strategic planning when evaluating developments with potential landscape impacts, and recognises the concept of landscape sensitivity. It states that the “intrinsic qualities of each landscape character area” should be considered when addressing broader landscape issues (Para 3.29). It also states that regional planning authorities should identify the sensitivity of any landscape character areas referred to in plans for renewable energy development to particular types of change/development at a broad scale (Para 3.29). It goes on to state that “applying LCA at the regional level is recommended to inform strategic planning for renewables” (Para 3.33).

Appendix 3: Regional planning policies relating to landscape

The South East Plan contains policies relating to both landscape and the use and extraction of minerals resources. This appendix summarises policies specifically relating to landscape.

AONBs

The protection of AONBs is clear in the South East Plan, as is the need to take the setting of AONBs into account in planning decisions:

POLICY C3: AREAS OF OUTSTANDING NATURAL BEAUTY

High priority will be given to conservation and enhancement of natural beauty in the region's Areas of Outstanding Natural Beauty (AONBs) and planning decisions should have regard to their setting. Proposals for development should be considered in that context. Positive land management policies should be developed to sustain the areas' landscape quality. In drafting local development documents, local planning authorities should have regard to statutory AONB Management Plans. In considering proposals for development, the emphasis should be on small-scale proposals that are sustainably located and designed. Proposals which support the economies and social well being of the AONBs and their communities, including affordable housing schemes, will be encouraged provided that they do not conflict with the aim of conserving and enhancing natural beauty.

Landscape and landscape character assessment

The importance of landscape more generally is highlighted in several places within the South East Plan. The use of assessment-based tools such as Landscape Character Assessment to inform the management of landscapes is also supported within the policies:

Para. 4.23 (supporting text to policies relating to *Supporting and Protecting our Rural Communities*) "Extensive parts of the region are largely undeveloped and offer a high landscape value and agricultural resource. These areas are often punctuated by small towns and villages that contribute to the particular character of the region....".

POLICY CC6: SUSTAINABLE COMMUNITIES AND CHARACTER OF THE ENVIRONMENT

"Actions and decisions associated with the development and use of land will actively promote the creation of sustainable and distinctive communities. This will be achieved by developing and implementing a local shared vision which:

i. respects, and where appropriate enhances, the character and distinctiveness of settlements and landscapes throughout the region".

POLICY C4: LANDSCAPE AND COUNTRYSIDE MANAGEMENT

"Outside nationally designated landscapes, positive and high quality management of the region's open countryside will be encouraged and supported by local authorities and other organisations, agencies, land managers, the private sector and local communities, through a combination of planning policies, grant aid and other measures. In particular, planning authorities and other agencies in their plans and programmes should recognise, and aim to protect and enhance, the diversity and local distinctiveness of the region's landscape, informed by landscape character assessment".

The River Thames Corridor

Both Cholsey and Caversham lie within the River Thames Corridor, specifically covered by Policy C7:

POLICY C7: THE RIVER THAMES CORRIDOR

Riparian local authorities should work together...to establish a coordinated policy framework for the river and its valley corridor through their local development frameworks to reflect their environmental, heritage and recreational value through both rural and urban areas...to:

- i. maintain and enhance the landscapes and waterscapes of the River Thames Corridor, in terms of their scenic and conservation value and their overall amenity
- iv. take account of the setting of the river in exercising their normal development control duties.”

And in urban areas, local authorities should, working together where necessary:

- i. make provision for riverside open spaces and access routes
- ii. protect and improve scenic views of the river and from the river, especially where they contain significant natural or built heritage features
- iii. ensure a high quality of sympathetic design of new developments within sight of the river
- iv. seek the conservation and improvement of the historic built environment that is part of the river's heritage and setting.

Restoration and land management

As well as Policies C4 and C7 above, the following are relevant to restoration of minerals sites, and their subsequent management

POLICY CC8: GREEN INFRASTRUCTURE

“Local authorities and partners will work together to plan, provide and manage connected and substantial networks of accessible multi-functional green space. Networks should be planned to include both existing and new green infrastructure. They need to be planned and managed to deliver the widest range of linked environmental and social benefits including conserving and enhancing biodiversity as well as landscape, recreation, water management, social and cultural benefits to underpin individual and community health and 'well being'. They will be created and managed as a framework of green spaces and other natural features that will boost the sustainable development of settlements and increase the environmental capacity of the locality and region as a whole, helping communities to be more resilient to the effects of climate change”.

POLICY NRM7: WOODLANDS

In the development and implementation of local development documents and other strategies, local authorities and other bodies will support the implementation of the Regional Forestry and Woodland Framework....This will be achieved by:

- ii. promoting the effective management, and where appropriate, extension and creation of new woodland areas including, in association with areas of major development, where this helps to restore and enhance degraded landscapes, screen noise and pollution, provide recreational opportunities, helps mitigate climate change, and contributes to floodplain management
- iii. replacing woodland unavoidably lost through development with new woodland on at least the same scale.