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CLIENT PROJECT REPORT CPR1777

Oxfordshire Minerals and Waste Local Plan: Core Strategy

Sustainability Appraisal of the Consultation Draft: Appendix A

Scoping Report - produced by Oxfordshire County Council

January 2014

Oxfordshire Minerals and Waste Local Plan

SUSTAINABILITY APPRAISAL

(Incorporating the Strategic Environmental Assessment)

SCOPING REPORT

December 2013

1.0 Introduction

1.1 The County Council is responsible for minerals and waste planning in Oxfordshire and is reviewing the current planning policies for mineral working and waste management. The Minerals and Waste Core Strategy submission document October 2012 was withdrawn in July 2013. A new Oxfordshire Minerals and Waste Local Plan is being prepared which will provide the planning strategies and policies for minerals development and provision of waste management facilities in Oxfordshire up to 2030.

1.2 The Planning & Compulsory Purchase Act 2004 requires the County Council to carry out a Sustainability Appraisal (SA) of its Minerals and Waste Local Plan. In addition a Strategic Environmental Assessment (SEA) is required under the European Union Directive 2001/42/EC 'on the assessment of certain plans and programmes on the environment' (the SEA Directive). The requirement to carry out both a Sustainability Appraisal and a Strategic Environmental Assessment are distinct. However, Government guidance advises that it is possible to satisfy both requirements through a single appraisal process.

1.3 The purpose of this report is to present the scoping stage of the SA incorporating SEA (SA/SEA). The report is in two sections:

Part 1: The Background and Context. This describes the Minerals and Waste Local Plan and the SA/SEA process.

Part 2: The Scoping Report. This is the core of the report and it identifies and explains the five steps of creating the Scoping Report.

- Stage A1: Identify and review other relevant policies, plans, programmes and sustainable development objectives;
- Stage A2: Collection of baseline information;
- Stage A3: Identify key sustainability issues;
- Stage A4: Develop the SA/SEA framework including sustainability objectives, indicators and targets;
- Stage A5: Consultation on the scoping report containing above information.

The appendices provide a full context review, and outline the baseline targets and indicators:

- Appendix 1: Long list of plans and policies initially considered;
- Appendix 2: Review of relevant plans and policies;
- Appendix 3: Baseline indicators.

1.4 An earlier Minerals and Waste SA/SEA Scoping Report was prepared in August 2005 and was the subject of consultation in September 2005. A revised and updated report was published in June 2006. The report was reviewed again in 2009, with a further round of consultation in

April/May 2009, and a revised Scoping Report was published in July 2009. Further updating was carried out in 2001 and a further revised Scoping Report was published in May 2011.

1.5 This current scoping report has been produced to scope the SA/SEA of the Minerals and Waste Local Plan which is being produced following the withdrawal of the Minerals and Waste Core Strategy in July 2013. It takes into account consultation responses and other comments previously received.

1.6 This Scoping Report is being published on the County Council's website to inform the Council's consultation with the statutory consultation bodies on the scope and level of detail of the information to be included in the SA/SEA Environmental Report and for wider information and comment.

1.7 If you have any comments or need any further information or advice, please contact us:

- by writing to the following address:

  Minerals & Waste Policy (Sustainability Appraisal)
  Environment & Economy
  Oxfordshire County Council
  Speedwell House
  Oxford
  OX1 1NE

- by email to: minerals.wasteplan@oxfordshire.gov.uk;

- by telephoning the Minerals and Waste Policy Team:

- 01865 815544

2.0 The Background and Context

2.1 Minerals and Waste Local Plan

2.1.1 The **Minerals and Waste Local Plan: Core Strategy** (the plan) will provide a strategic vision and overall spatial strategy for meeting known and anticipated minerals and waste development requirements in Oxfordshire for a period to 2030 (i.e. a period of at least fifteen years from adoption). The minerals and waste policies and development control policies in this plan will replace the policies in the current *Oxfordshire Minerals and Waste Local Plan 1996*. The timetable for the preparation of the plan is set out in the Oxfordshire Minerals and Waste Development Scheme (Fifth Revision) 2013.

2.1.2 The Oxfordshire Minerals and Waste Core Strategy (Submission Document October 2012) was withdrawn in July 2013. This decision followed consideration of issues raised by the Planning Inspector appointed to carry out the independent examination of the plan over the adequacy of the evidence base in relation to the recently published National Planning Policy Framework (NPPF), including the requirement to prepare an annual Local Aggregate Assessment (LAA), and its compliance with the new duty to co-operate[1].

2.1.3 The Plan will identify strategic locations for minerals and waste developments. The locations for mineral working will provide for the requirements for minerals supply to 2030, such that land banks of primary aggregates minerals can be maintained in line with the NPPF and national guidance. It will also set out policies for the control of development of such locations, providing a policy framework for making decisions on planning applications for minerals development. In addition, the Plan will make provision for the supply of secondary and recycled aggregates in line with national policy.

2.1.4 The Plan will identify strategic locations to meet the main requirements for waste management development to 2030 such that future arisings of waste can be managed in accordance with national targets for reducing the amount of waste sent to landfill. It will also set out policies for the control of development of such locations, providing a policy framework for making decisions on planning applications for proposed new waste management facilities.

2.1.5 The **Statement of Community Involvement**, which was adopted by Oxfordshire County Council in November 2006, sets out the County Council's policy, and the standards it will seek to achieve, to ensure meaningful and effective consultation and involvement of stakeholders and the community in the production of all Minerals and Waste Local Plan Documents and in the consideration of planning applications. It identifies the methods the Council will use to enable the public to participate in making plans.

[1] Council Report – 9 July 2013

2.2 Minerals & Waste Local Plan – Objectives

2.2.1 The Plan's objectives provide the basis for the development of the strategy, policies and proposals for minerals supply and waste management. The objectives seek to address the issues already identified as part of the plan making process, taking into account relevant national and local policies – in particular the need to support Oxfordshire's economy, protects its environment and help develop healthy and thriving communities[2].

2.2.2 The overarching aim of **Minerals Development** is to strike an appropriate balance between providing an adequate contribution towards society's needs for minerals and conserving resources and protecting the environment and quality of life in Oxfordshire. The draft minerals objectives are:

i. Facilitate the efficient use of Oxfordshire's mineral resources by encouraging the maximum practical recovery of aggregate from secondary and recycled materials for use in place of primary aggregates.

ii. Make provision for a steady and adequate supply of sand and gravel, soft sand and crushed rock over the plan period to meet the planned economic growth and social needs of Oxfordshire.

iii. Make an appropriate contribution to meeting wider needs for aggregate minerals, having regard to the strategic importance of Oxfordshire's mineral resources, particularly sand and gravel.

iv. Enable a continued local supply of limestone and ironstone for building and walling stone for the maintenance, repair and construction of locally distinctive buildings and structures, and of clay to meet local needs for engineering and restoration material.

v. Provide a framework for investment and development by mineral operators and landowners through a clear and deliverable spatial strategy which is sufficiently flexible to meet future needs and has regard to existing and planned infrastructure.

vi. Minimise the flood risk associated with minerals development and contribute to climate change mitigation and adaptation, including through restoration schemes which provide additional flood storage capacity in the floodplain where possible.

vii. Minimise the transport impact of mineral development on local communities, the environment and climate change by minimising the distance minerals need to be transported by road and encouraging where possible the movement of aggregates by conveyor, pipeline, rail and on Oxfordshire's waterways.

[2] Oxfordshire Sustainable Community Strategy 2030

viii. Protect Oxfordshire's communities and natural and historic environments (including important landscapes and ecological, geological and archaeological and other heritage assets) from the harmful impacts of mineral development (including traffic).

ix. Ensure the high quality restoration and aftercare of mineral extraction sites at the earliest opportunity to ensure the establishment of long term and stable after uses that provide benefit to Oxfordshire's natural environment, local communities and local economy.

x. Safeguard important known resources of sand and gravel, soft sand, crushed rock and Fuller's Earth to ensure that those resources are not needlessly sterilised and remain potentially available for future use and are considered in future development decisions.

xi. Safeguard important facilities for the production of secondary and recycled aggregate, railhead sites for the bulk movement of aggregate into Oxfordshire by rail and facilities for the manufacture of coated materials, concrete and concrete products.

2.2.3 The overarching aim of **Waste Development** is to provide for the efficient and sustainable management of waste produced in Oxfordshire, making the best practical use of waste as a resource and minimising disposal of waste, whilst protecting the environment and quality of life in Oxfordshire. The draft waste objectives are:

i. Make provision for waste management capacity that allows Oxfordshire to be net self-sufficient in meeting its own needs for household waste, commercial and industrial waste and construction, demolition and excavation waste.

ii. Make an appropriate contribution towards provision needed for the management of hazardous and radioactive wastes produced in Oxfordshire and wider needs, recognising that the more specialist facilities required for these waste types often require provision at a sub-national or national level.

iii. Support initiatives that help reduce the amounts of waste produced and provide for the delivery, as soon as is practicable, of waste management facilities that will drive waste away from landfill and as far up the waste hierarchy as possible; in particular facilities that will enable increased re-use, recycling and composting of waste and the recovery of resources from remaining (residual) waste.

iv. Seek to provide for waste to be managed as close as possible to where it arises to:
- minimise the distance waste needs to be transported by road;
- reduce adverse impacts of waste transportation on local communities and the environment; and
- enable communities to take responsibility for their own waste.

v. Provide for a broad distribution of waste management facilities to meet local needs across Oxfordshire and make more specific provision for larger facilities that are not practical below a certain size and that are needed to serve the whole or more substantial parts of the county or a wider area.

vi. Seek to ensure that waste management facilities where possible provide benefits to the communities they serve, including employment and the potential for recovery and local use of energy (heat and power) from waste, and are recognised as an integral part of community infrastructure.

vii. Make provision for waste that cannot be recycled or treated (residual waste) and that will need to be disposed of in landfill.

viii. Provide for an appropriate contribution to meeting the need for disposal of residual waste from other areas which do not have sufficient disposal capacity to be made through Oxfordshire's existing landfill sites.

ix. Seek to avoid the permanent loss of green field land when making provision for sites for waste management facilities.

x. Protect Oxfordshire's communities and natural and historic environments (including important landscapes and ecological, geological and archaeological and other heritage assets) from the harmful impacts of waste management development (including traffic).

xi. Secure the satisfactory restoration of temporary waste management sites, including landfills, where the facility is no longer required or acceptable in that location.

2.3 Sustainable Development

2.3.1 A widely used definition of Sustainable Development was drawn up by the World Commission on Environment and Development in 1987 which states that sustainable development is 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

2.3.2 'Securing the Future: Delivering UK Sustainable Development Strategy March 2005 sets out the principles that have been considered in the preparation of the Plan and the Sustainability Appraisal report:

- 'Living within environmental limits – respecting the limits of the planet's environment, resources and biodiversity to improve our environment and ensure that the natural resources needed for life are unimpaired and remain so for future generations;
- Ensuring a strong, healthy and just economy – meeting the diverse needs of all people in existing and future communities, promoting personal well-being, social cohesion and inclusion and creating equal opportunities for all;
- Achieving a sustainable economy – building an economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose them (polluter pays) and efficient resource use is encouraged.
- Promoting Good Governance – actively promoting effective, participative systems of governance in all levels of society; and
- Using sound science responsibly – ensuring policy is delivered and implemented on the basis of strong scientific evidence, whilst taking into account scientific uncertainty (through the precautionary principle) as well as public attitudes and values'.

2.4 Sustainability Appraisal (SA)

2.4.1 The aim of the SA, is to promote sustainable development through better integration of sustainability considerations into the preparation and adoption of the Plan. It is an interactive process that identifies and reports on the likely significant effects of the plan and the extent to which implementation of the plan will achieve social, economic and environmental sustainable development.

2.5 The Strategic Environment Assessment (SEA) Directive Requirements

2.5.1 The EU Directive 2001/42/EC made the SEA of certain plans and programmes mandatory. The aim of the SEA Directive is 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes, with a view to promoting sustainable development'.

2.5.2 The SEA Directive is transposed into English legislation by the Environmental Assessment of Plan and Programmes Regulation 2004 (the 'SEA Regulations'), which applies to plans and programmes prepared or adopted by a national, regional, or local authority or those prepared by an authority for adoption through a legislative procedure by Parliament or Government.

2.5.3 A key requirement of the SEA process is an Environmental Report which describes the environmental assessment process and the likely significant effects of implementation of the plan and alternative options which were considered while producing the plan. The SEA Environmental Report will be included within the Local Plan SA Report, which will incorporate the social, environmental and economic effects of the plan in one comprehensive document.

Table 2.1: SEA Directive requirements checklist

Environmental Report requirements (Annex 1 SEA Directive)	Covered in this report in:
1. An outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes.	Sections 2.1 and 3.1
2. The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Section 3.2
3. The environmental characteristics of areas likely to be significantly affected.	Section 3.2
4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.	Section 3.3
5. The environmental protection objectives, established at International, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.	Section 3.1 & Appendix 2
6. The likely significant effects[3] on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including archaeological and architectural heritage, landscape and the interrelationship between the above factors.	To be addressed in the SA report.

[3] These effects should include secondary, cumulative, synergistic, short, medium and long term, permanent and temporary positive and negative effects.

2.6 The Sustainability Appraisal Process

2.6.1 The SA process is summarised in Table 2.2. Part 2 of this covers Stage A of the process, which is separated into Tasks 1-5, as shown in the table.

2.6.2 The SA/SEA process will be undertaken by consultants appointed by Oxfordshire County Council officers with input from County Council Members, (through the Cabinet Advisory Group) during the relevant stages of the process. Consultation with the statutory consultees, English Heritage, Environment Agency and Natural England and other stakeholders has already taken place on the scope of the plan in May 2009 and comments incorporated into later versions of the report. This report will be sent to the three statutory consultees and other stakeholders notified of its availability. Relevant comments will be incorporated into the report.

Table 2.2: Incorporating SA into the Local Plan process.

Local Plan Stage	**SA/SEA Stage**	**Actions**
Stage 1: Pre-production	**Stage A; setting the context and objectives, establishing the baseline and deciding on the scope (Scoping report)**	
Preparation and submission of Minerals and Waste Development Scheme (MWDS)	A1) Identify and review other relevant policies, plans programmes, and sustainable development objectives. A2) Collection of baseline information. A3) Identify key sustainability issues. A4) Develop the SA/SEA framework, including sustainability objectives, indicators and targets. A5) Consult on the scoping report containing the above information.	Highlights all the relationships that will influence the plan, such as those laid down in policies and legislation. Provides the basis for predicting and monitoring the effects and will help identify current sustainability issues. Defines key issues for the plan to address from a sustainable view point and will help develop sustainable plan objectives and options. Defines the SA/SEA objectives and with the indicators and targets from the baseline information provides an evidence base for the appraisal. Consults the statutory environmental consultation bodies and other appropriate bodies.
Stage 2: Production	**Stage B: Developing and refining the options and assessing the effects**	
Preparation of Preferred Options	B1) Test the Local Plan objectives against the sustainability objectives. B2) Develop the Local Plan options. B3) Predict the effects of the Local Plan. B4) Evaluating the effects of the Local Plan. B5) Consider ways of mitigating adverse effects and maximising beneficial effects, following consideration of avoidance, cancellation and reduction measures. B6) Proposing measures to monitor the significant effects of implementing the LPs.	

	Stage C: Preparing the Sustainability appraisal report C1) Prepare the final report	
	Stage D: Consulting on the Local Plan and the SA Report D1) Consultation on the Pre-Submission Local Plan and SA report along with preferred options. D2 (i) Appraise any significant changes made as a result of the consultation.	
Stage3: Examination	D2 (ii) Appraising significant changes resulting from representations	
	D3) Making decisions and providing information	
Stage 4: Monitoring and implementation of the plan	**Stage E: Monitoring the significant effects of implementing the Local Plan** E1) Finalising aims and methods for monitoring E2) Respond to any adverse effects where necessary	

Source: Adapted from National Planning Practice Guidance

2.6.3 This scoping report will be used for the SA, which will inform the preparation of the Plan. The appraisal process will be reviewed and, if necessary, updated at each key stage of the plan preparation.

3.0 Scoping Report

3.1 Stage A1: Identify and review other relevant policies, plans, programmes and sustainable development objectives.

3.1.1 The SEA Directive requires a review of plans and programmes which are relevant to the Plan:

'an outline of the contents, main objectives of the plan or programmes and relationship with other relevant plans and programmes' (Annex 1(a))

3.1.2 The review has selectively considered guidance at international, national regional, county and local level policies. It has not attempted to provide a detailed review but rather has focussed on strategic environmental, social or economic policies and objectives relevant to the appraisal of the Plan and particular specific environmental protection objectives established at international and national levels. This satisfies the SEA directive which requires that reference must be made to environmental objectives.

3.1.3 The exercise has helped to shape the objectives against which plan policies can be appraised, as well as identifying particular issues which need to be addressed in the Plan

3.1.4 A full list of plans and programmes which were initially considered is at Appendix 1. Many of these plans exist in a hierarchy; from international and European plans, to national policies and regional guidance. This review has sought to avoid duplication by only reviewing the most up to date or relevant plan and to distil the environmental objectives that are most relevant to the Plan. The analysis of relevant plans is at Appendix 2. The key messages from the analysis are in Table 3.1.

3.1.4 The policy framework is dynamic, and new plans may emerge during the Local Plan preparation process. Those that are relevant will be added to the list at Appendix 2 and any relevant message added to Table 3.1 and published as part of the SA.

Table 3.1: Key Messages emerging from Stage A1

- The need to ensure that average distances travelled and traffic congestion are not exacerbated by minerals and waste HGVs, and that these vehicles do not worsen air quality in identified AQMAs, or reduce quality of life for local residents.
- Avoid damage to, and where possible proactively contribute towards the protection and enhancement of international, national and locally designated conservation sites, including SACs, SSSIs, NNRs, Local Wildlife Sites as well as BAP Priority Species and Habitats and nationally and locally important geological features.

- The need to proactively plan for post mineral restoration and for after use of temporary waste sites, to protect, maintain, enhance or restore biodiversity.
- The need to protect the functional floodplain from mineral working and to take into account the hydrological implications of proposed mineral and waste developments, including assessing flood risk, effects of abstraction or de-watering, potential pollution, groundwater changes before identifying sites for minerals and waste development.
- The need to protect and conserve all aspects of the historic environment and particularly internationally and nationally important historic features.
- The need to ensure a steady supply of mineral materials for local markets, to meet the demand generated by planned and existing development identified in each of the District and City Councils' plans, and to contribute to markets identified outside the county.
- The need to maintain a land bank of permitted reserves for aggregate minerals in line with national policy.
- Waste management policies should support sustainable waste management measures to encourage a reduction in the amount of waste arisings going to landfill in Oxfordshire.
- Soils should be used in a sustainable manner and should take account of best and most versatile agricultural land.
- The production and use of secondary and recycled aggregates reduces the amount of land won aggregates that need to be extracted.
- Restoration of mineral workings should not increase the risk of bird strike.
- The need to provide waste management facilities to allow the county to be net self-sufficient in the treatment and/or disposal of its waste arisings and to contribute towards meeting the need for facilities to manage residual waste from London and elsewhere over the plan period.
- Minerals and waste policies should enable minerals extraction and secure the recovery of waste without endangering human health or residential amenity in local communities.

3.2 Stage A2: Collection of baseline information

3.2.1 This section explains the processes undertaken to collect baseline information. The provision of an evidence-base is required by the Strategic Environmental Assessment Directive. The Environmental Report required under the SEA Directive should include:

'the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme'.

3.2.2 The baseline information for Oxfordshire has been provided in a topic based format, and aims to give a broad overview of the county. The following topics have been covered, to meet the requirements of the SEA Directive: population, human health, biodiversity, the built and historic environment, landscape, water quality and resources, climate change and energy, transport, waste, minerals, land use, soils and resources, air quality and the economy. Although the Local Plan has a narrow focus, the effects of mineral extraction and waste management have a potentially wide spatial influence on the county and the population and can result in a wide range of both direct and indirect effects. Therefore, consideration of a broad spectrum of topics is appropriate.

3.2.3 Baseline information may consist of both quantitative and qualitative information. To get the best value from baseline information, it needs to be kept up to date rather than being merely a snapshot of the situation at a particular time. Relevant baseline indicators have been identified and are presented in a spreadsheet in Appendix 3. Some comparators have also been identified to gauge the county's performance, using past data for the same indicator, data for a wider geographical area or meeting agreed targets.

3.2.4 **Population**[4]

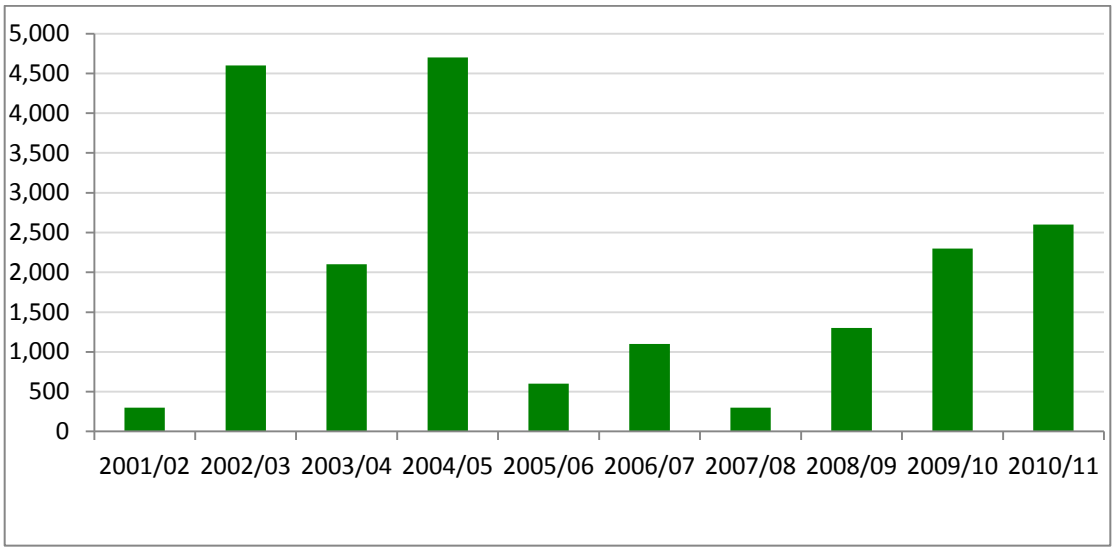
Oxfordshire is predominantly a rural county; it is the second least densely populated county in the South East of England and West Oxfordshire is one of the region's least densely populated districts. As of mid-2011, Oxfordshire was home to around 655,700 people.

Oxfordshire has seen a strong rate of population growth in recent years. Between 2001 and 2011, the population of the county increased by 8%. The rate of change varied across the five districts in Oxfordshire with growth rate above the national average in Oxford and West Oxfordshire. During the same period, the number of residents aged over 65 years increased by 18% and aged over 85 by 1%. The growth in the number of people aged over 65 years has occurred across the county except in Oxford where numbers declined slightly (800 fewer).

[4] Source ONS & Oxfordshire Small Area Forecasts

Over the past 10 years, natural change (births, deaths) of the population in Oxfordshire has been increasing steadily, whereas net migration and other changes have fluctuated. Significant in migration occurred in 2002/03 and 2004/05, the latter driven largely by migrants from the countries that joined the European Union in 2004 (accession countries).

Figure 3.1: Net migration into and out of Oxfordshire between 2001 and 2011

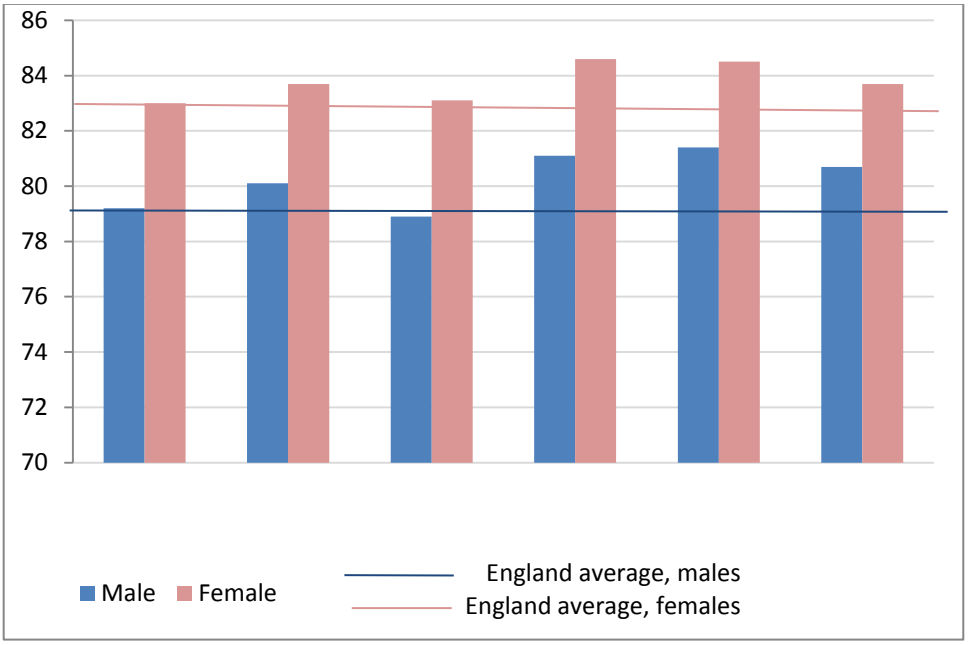


Source: Office for National Statistics, population estimates, components of change

3.2.5 **Human Health**[5]

Overall life expectancy within the county is above the national average, although there are variations between Districts. Figure 3.2 shows the average life expectancy of men and women in each of the districts, compared to the figure for England.

Figure 3.2: Life expectancy at birth in Oxfordshire 2010-2012



Source: Oxfordshire Health Profile, Association of Public Health Observatories

3.2.6 **Deprivation**

Deprivation indices are derived from seven domains, which are income deprivation, employment deprivation, health deprivation and disability, education skills and training deprivation, barriers to housing and services, living environment deprivation and crime.

Oxfordshire has generally low levels of deprivation. South Oxfordshire, Vale of White Horse and West Oxfordshire districts rank in the 10% least deprived local authorities in England. However, there are eighteen small areas within the county which rank in the 20% most deprived nationally, including twelve areas in Oxford, five in Banbury and one in Abingdon. One area, Northfield Brook ward, in Oxford falls with the 10% most deprived wards nationally.

Figures 3.3 & 3.4 shows the index of multiple deprivation, mapped across Oxfordshire (SOAs are Super Output Areas, areas used for statistical analysis) and those areas of deprivation in Oxford, Abingdon and Banbury.

[5] Indices of Deprivation summary: ONS

Figure 3.3: Oxfordshire Super Output Areas (SOAs) ranked across England

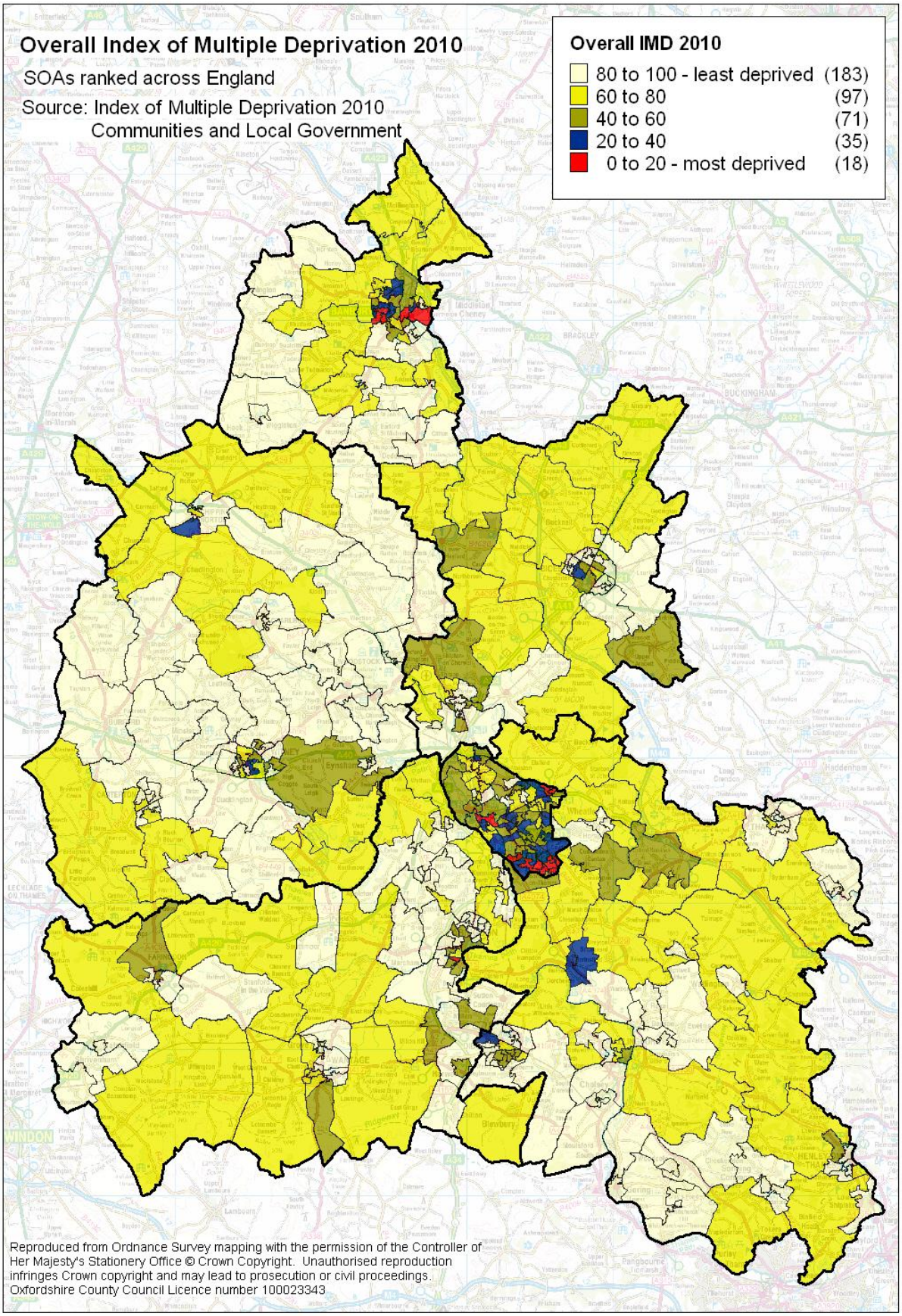
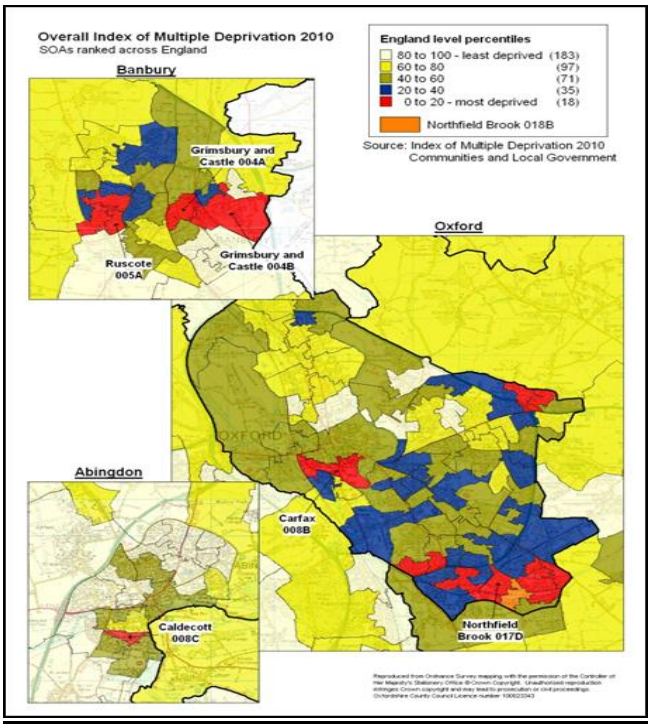


Figure 3.4 Areas of Deprivation Oxford, Abingdon and Banbury



3.2.7 Biodiversity & Geodiversity

The UK's commitment to the conservation of biodiversity is delivered through the UK Biodiversity Action Plan (UK BAP), made up of a series of plans to target action for particular vulnerable habitats and species. 67 of the UK BAP priority species and examples of 16 of the priority habitats identified in the UK BAP as being of international or national importance for biodiversity can be found in Oxfordshire. These habitats cover 6,974 hectares in the county and the majority are associated with designated sites. The Biodiversity Action Plan for Oxfordshire[6] currently contains Action Plans for 20 habitats and 21 species, including for lowland calcareous grassland, acid lowland meadow and reedbeds, which are the habitats most likely to be created through mineral restoration.

Sites of Special Scientific Interest (SSSIs) represent some of the county's very best wildlife and geological sites. They include some of our most spectacular and beautiful habitats. There are 102 SSSIs in Oxfordshire covering an area of 4012ha[7]. The condition of the SSSIs gives just one indication of how activities are impacting on the biodiversity of the county and of how well biodiversity is being protected in our county. Table 3.2 shows the condition of Oxfordshire's SSSIs[8] for the period March 2000-March 2013.

6 Further details can be found on the ONCF website http://www.oncf.org.uk/biodiversity/biod_oxonbap.htm

7 OCC et al Biodiversity and Planning in Oxfordshire (2010)

8 Source:Natural England, data supplied by Thames Valley Environment Records Centre, compiled by Oxfordshire Data Observatory Jan 2008.

Table 3.2: Condition of SSSIs in Oxfordshire based on assessments carried out by Natural England between 2000 and 2013

	Area of SSSI's in favourable or recovering condition (%)	Area of SSSI's in favourable condition (%)	Area of SSSI's in recovering condition (%)
England	96.2	37.4	58.8
South East	97.4	49.4	48.0
Oxfordshire	97.7	44.5	53.2
Cherwell	98.6	54.4	44.2
Oxford	98.4	87.9	10.5
South Oxfordshire	99.5	56.2	43.3
Vale of White Horse	98.5	28.1	70.4
West Oxfordshire	95.3	28.7	66.6

Source: Thames Valley Environmental Records Centre, Natural England

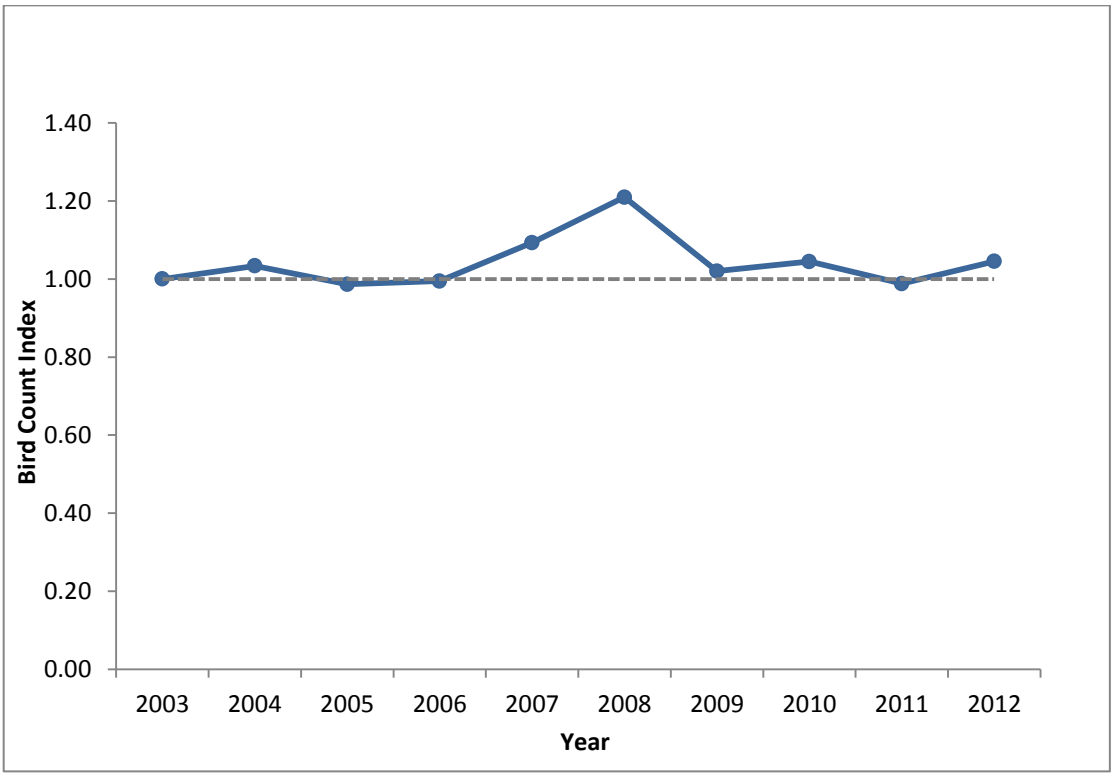
The government's Public Service Agreement target was to have 95% of SSSIs in favourable or recovering condition by 2010. SSSIs in Oxfordshire have all met the PSA target.

There are 46 Local Geology Sites (formerly known as Regionally Important Geological Sites – RIGS) across Oxfordshire. They are designated by the Oxfordshire Geology Trust[9].

The farmland bird population in Oxfordshire has remained similar to the 2003 baseline data and relatively stable, apart from the increase in 2007/2008. This may be explained by an increase in areas surveyed. There was a slight increase in the bird index in 2012 compared to the previous year and some of the farmland bird specialists such as grey partridge, lapwing and yellowhammer have experienced a decline since 2011, but turtle doves and linnets have increased. However, generalist farmland birds such as kestrel, greenfinch and wood pigeon have increased.

[9] http://www.oxfordshiregt.org/information.htm

Figure 3.5: Oxfordshire Farmland Bird Index 2003-2012



Source: Thames Valley Environmental Records Centre, BTO

The bird index uses a baseline from 2003 which is represented by the dashed line.

Six areas are designated as Special Areas of Conservation under the EC Directive 92/43/EEC, the 'Habitats Directive'. These areas are Cothill Fen, Oxford Meadows, Chiltern Beechwoods, Little Wittenham, Hackpen Hill and Hartslock Wood. These areas have been designated because of their quality of natural habitat and the species those habitats support. There are no Ramsar (wetland) sites or sites designated as Special Protection Areas in Oxfordshire. 112 biological and geological SSSIs have been designated in Oxfordshire.

There are four National Nature Reserves (NNR) in Oxfordshire: Aston Rowant, Cothill, Chimney Meadow and Wychwood. NNRs are established to protect the most important areas of wildlife habitat and geological formations in Britain, and as places for scientific research.

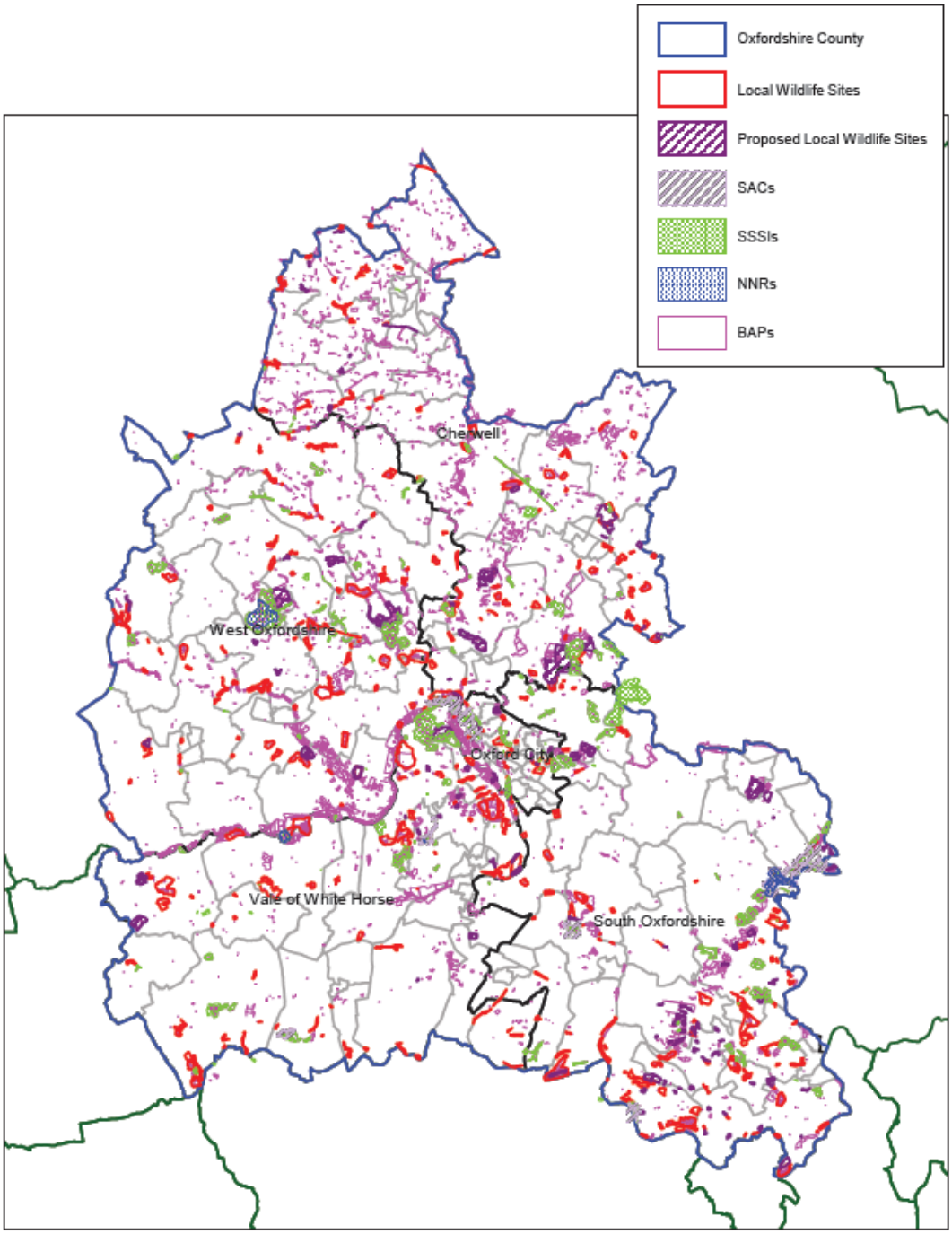
There are 343 Local Wildlife Sites in Oxfordshire, with a further 106 proposed sites. There are 17 Local Nature Reserves in Oxfordshire. Local Nature Reserves are places with wildlife or geological features that are of special interest locally. They offer people special opportunities to study or learn about nature or simply to enjoy it.

Local Wildlife Sites are non-statutory sites of significant value for the conservation of wildlife. They represent local character and distinctiveness and have an important role to play in meeting local and national targets for biodiversity conservation.

Thirty six Conservation Target Areas have been identified in Oxfordshire. The aim of these areas is to ensure that existing habitats are protected and maintained in good condition and at the same time expansion of areas of biodiversity value and linkage between these areas is encouraged, to provide more viable and sustainable biodiversity management units.

The map at Figure 3.6 shows Oxfordshire's international, national and locally designated biodiversity sites. The red areas on the map are Local Nature Reserves.

Figure 3.6: Oxfordshire International, National & Locally Designated Biodiversity Sites



Source: Natural England & TVERC

3.2.8 The Built and Historic Environment

Oxfordshire contains many buildings, areas, designed gardens and designed landscapes which together make up a valuable part of the county's heritage. Registered battlefields and locally important features also need to be taken into account. There are nearly 13,000 listed buildings and structures in Oxfordshire and over 200 conservation areas. Blenheim Palace and Park is designated as a world heritage site, which reflects its outstanding international importance. In Oxford there are buildings spanning every major period of British architectural history dating back to the 11th century.

Table 3.3: Designated historic sites in Oxfordshire[10]

	World Heritage Sites	Conservation Areas	Listed Buildings	Battle-fields	Scheduled Monuments	Parks & Gardens
Cherwell		54	>2250	1	38	6
Oxford		16	>1200		7	11
SODC		71	>3250	1	49	11
VOWHDC		52	>2170		67	8
WODC	1	49	>3180		137	16

Table 3.3 identifies 242 conservation areas in the county. Many of these are villages which lie in close proximity to existing or potential areas of mineral working. They include Eynsham, Ducklington, , Hatford and Shellingford and Stanton Harcourt in existing working areas and Dorchester, Bampton, Benson, Nuneham Courtenay and Sutton in potential new working areas.

Oxfordshire has a rich archaeological resource with approximately 298 Scheduled Ancient Monuments. There are many scheduled and non-scheduled archaeological sites along the Thames valley. Some areas of the county have experienced mineral working in the past which has had significant effects on archaeological sites. Areas where the cumulative impact of development has particularly been felt has been in the Lower Windrush Valley, the Lower Evenlode Valley, the Radley area and Dorchester.

Oxfordshire County Council is responsible for maintaining the Historic Environment Record (HER) which holds information on more than 24,000 monuments, more than 3400 events (such as excavations and geophysical work) and more than 5,800 'finds' or archaeological objects. The HER contains information from Palaeolithic find spots to roman villas, historic parks and World War II defensive sites.

There are 52 registered Parks and Gardens in Oxfordshire, including Sutton Courtenay Manor House, Nuneham Courtenay and Kelmscott Manor. There are two registered battlefields in the county at Chalgrove and Cropredy Bridge.

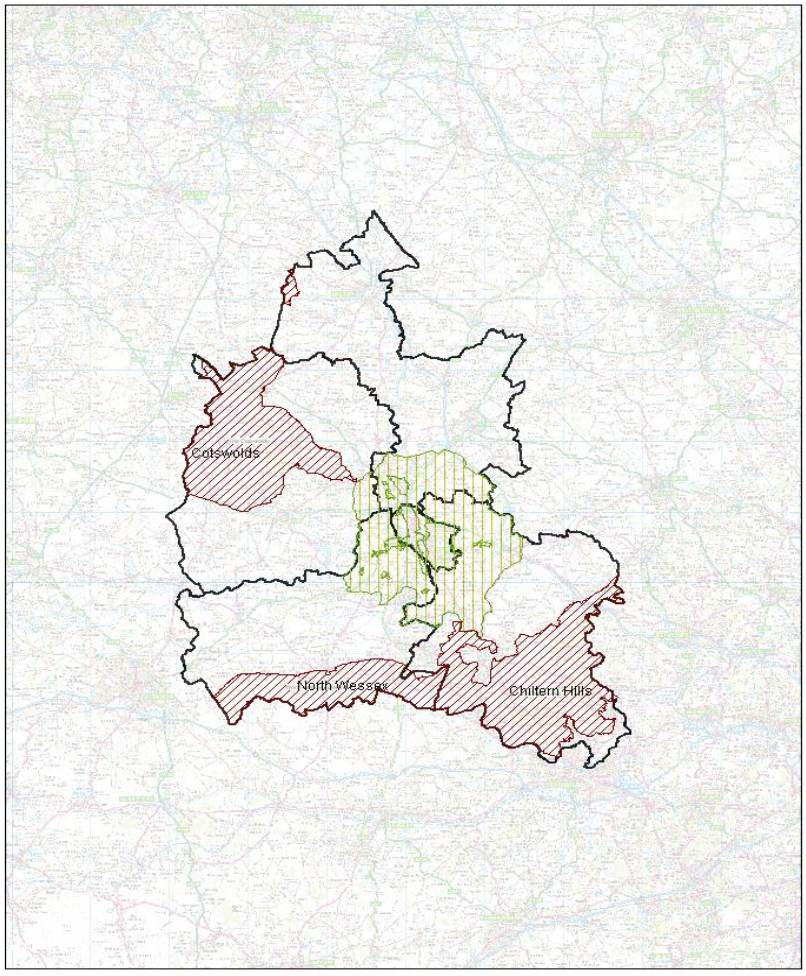
[10] Oxfordshire County Council Archaeologist

An historic landscape characterisation project commenced in March 2012 and is due for completion in March 2015. . This is a joint project between the County Council and English Heritage.

3.2.9 Landscape

Oxfordshire is an attractive county with a variety of different landscapes and habitats. These include the Chiltern Beechwoods, the limestone grasslands of the Cotswolds and the lowland meadows of the Thames valley. The county covers 260,800 hectares with 78% of the land under agricultural management.

Figure 3.7: Areas of Outstanding Natural Beauty (AONB) and Green Belt)



There are no national parks in Oxfordshire, but there are three designated Areas of Outstanding Natural Beauty (AONB); parts of the Chilterns, the Cotswolds and the North Wessex Downs AONBs together cover 24% of Oxfordshire.

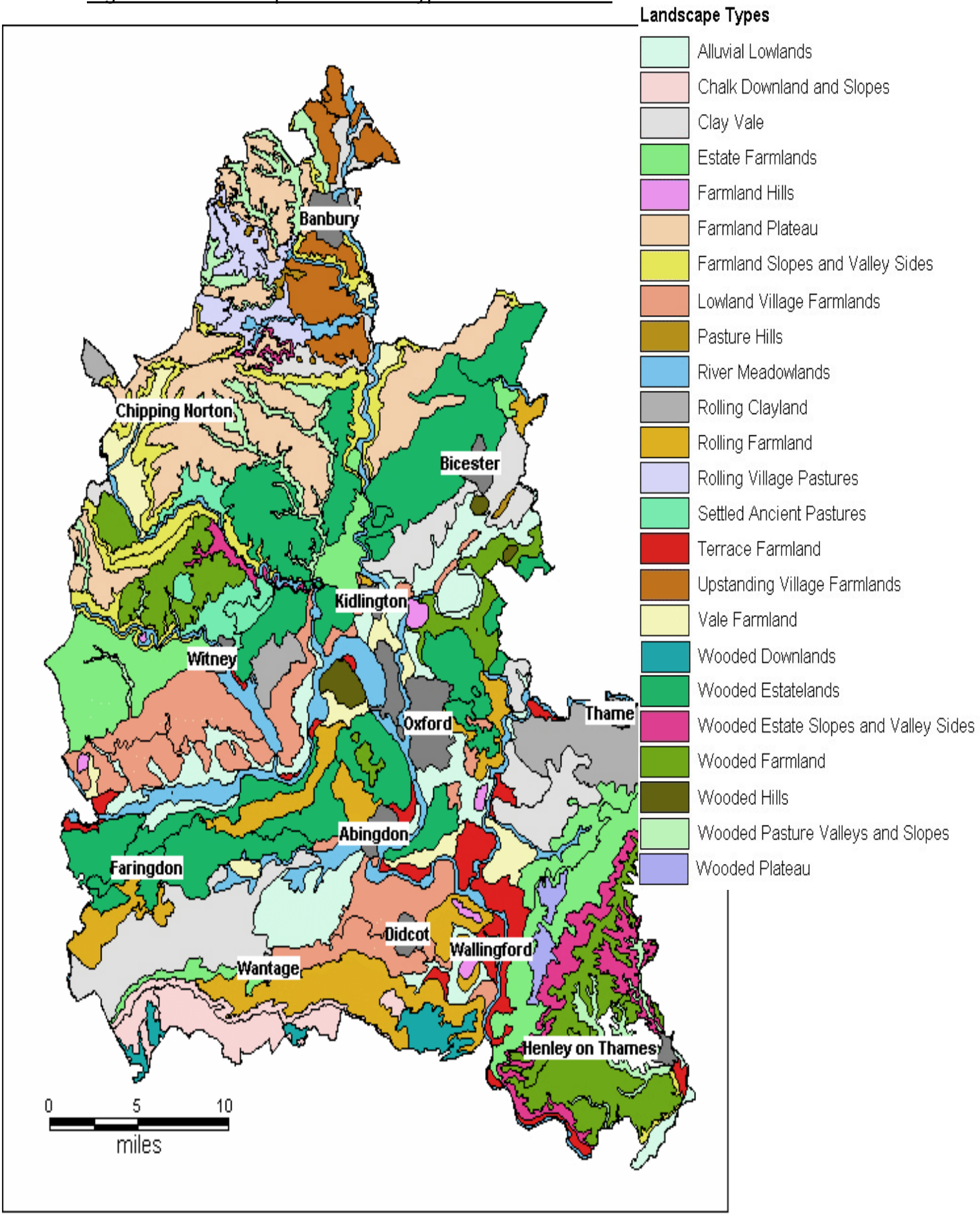
Recreational activities in Oxfordshire reflect the importance of its landscape character, including walking and cycling on several long distance paths such as the Ridgeway, the Thames National Trail, the Oxfordshire Way, or on the dense network of local footpaths and bridleways. Much of the central part of the county around Oxford is designated as Green Belt.

Landscape character areas are distinct types of landscape that are relatively homogenous in character. They are generic in nature in that they may occur in different parts of the country, but they share broadly similar combinations of geology, landform, drainage patterns, vegetation and historical land use and settlement patterns[11]. It can be seen from Figure 3.8 that there is a wide variety of landscape character areas in Oxfordshire.

[11] http://www.waterpark.org/documents/pages/landscape_character_assessment/8b99d_004.pdf, accessed 21 August 2008

Figure 3.7: Areas

Figure 3.8: Landscape Character Types in Oxfordshire[12]



[12] Source: Oxfordshire Wildlife and Landscape Study 2004

3.2.10 Water Quality and Resources

Demand for water and the quality of water resources have become important local, national and international issues. Oxfordshire lies largely within the Thames Water region, which is one of the driest in the country. Water is abstracted from the River Thames, from groundwater, aquifers and there are reservoirs at Farmoor and Grimsbury, Banbury in Oxfordshire.

The River Thames is the second longest river in Great Britain and it provides the backbone of one of the most intensively used water resource systems in the world. This system is sustained by a significant amount of reuse, taking advantage of the use and subsequent return of highly treated wastewater and the natural purification capacity of the river. Water resources of the river, together with associated groundwater, support significant abstractions for public water supply and to a lesser extent for industry and agriculture.

The River Thames is one of the most important environmental features of the county providing a diverse range of habitats, including a vital corridor for the migration of wildlife. These habitats all have their own particular flow and level requirements that need to be protected. The Thames is also highly valued for its navigational and recreational uses, which have their own flow and level requirements. Tributaries of the Thames which flow through Oxfordshire include the Rivers Cherwell, Ock, Thame, Evenlode, Windrush and Ray.

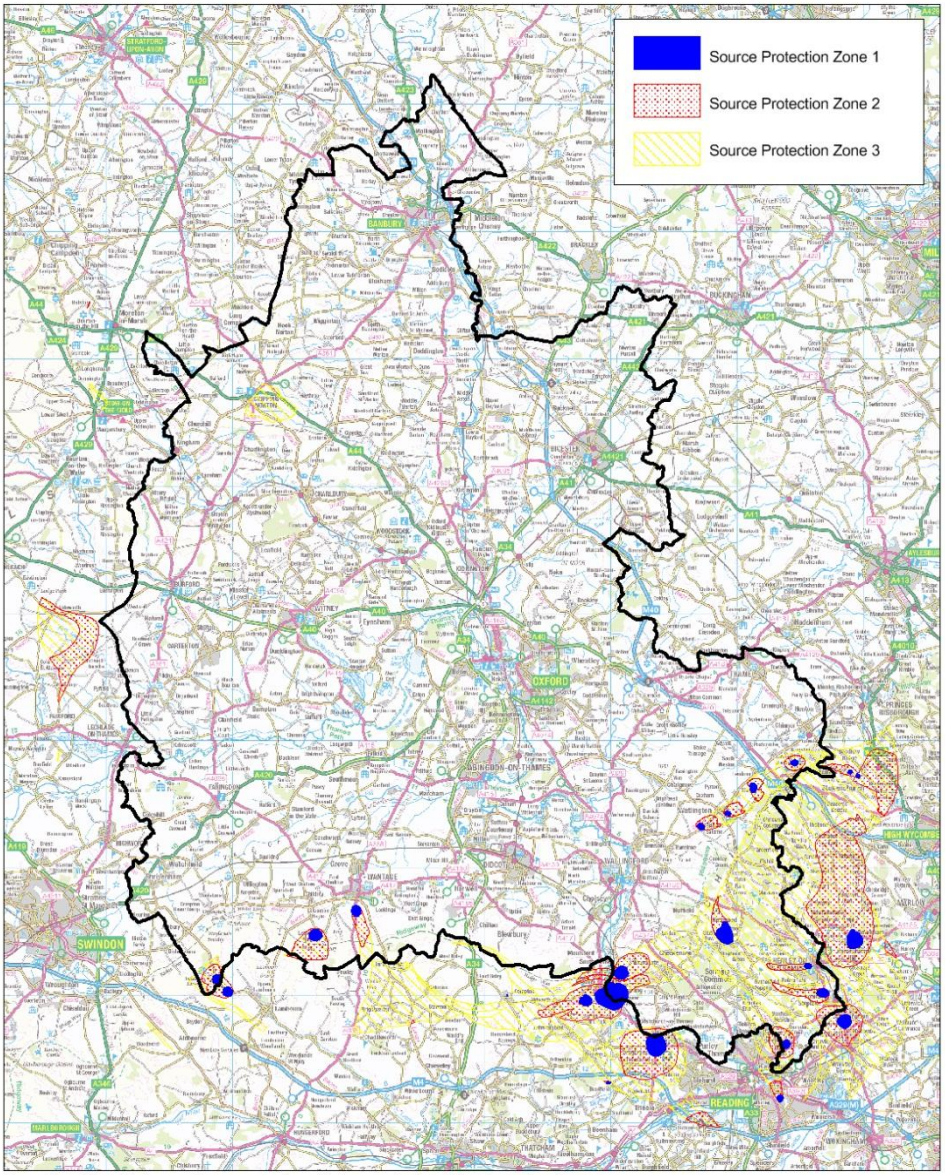
Biological water quality is determined by measurements of the macro-invertebrate communities of rivers and canals. Macro-invertebrates can be affected by pollutants that occur infrequently or in low concentrations which may be missed by chemical sampling.

Chemical water quality describes quality in terms of chemical measurements which detect the most common types of pollution. Grades are defined by standards for biochemical oxygen demand, ammonia and dissolved oxygen. A total of 116 water pollution incidents were reported in Oxfordshire in 2006. Rivers in Oxfordshire have a low to moderate risk of general diffuse pollution but the risk from nitrates is high. The chemical general quality assessment (GQA) has shown an improvement in quality (ammonia and dissolved oxygen levels) in Oxfordshire's rivers; with 194km (56%) achieving grade A in 2007, compared to 22km (6%) in 1990.

The Environment Agency defines a major water pollution incident as one that has persistent and extensive effects on water quality, can cause major damage to the ecosystem, closure of a potable abstraction, may have major impact on amenity value, major damage to agriculture and/or commerce and may have serious impact upon

man[13]. There have been no such recorded incidents in Oxfordshire recorded on the EA's database.

Figure 3.9 Source Protection Zones in Oxfordshire



[13] http://www.environmentagency.gov.uk/yourenv/eff/1190084/pollution/296030/296054/297197/?version=1&lang=_e, accessed 22nd August 2008.

Groundwater provides a third of drinking water in England and Wales, and it also maintains the flow in many of our rivers. In some areas of Southern England, groundwater supplies up to 80% of the drinking water that we get through our taps. It is crucial that these sources are protected to ensure drinking water remains safe to drink. Minerals and waste activities need to be monitored and regulated to ensure that they do not have a detrimental impact upon Source Protection Zones (SPZs). SPZs show the risk of contamination from any activities that might cause pollution in an area. The closer the activity, the greater the risk.

Figure 3.9 shows the location of the three main zones (inner, outer and total catchment) across Oxfordshire. With the exception of the SPZ around Chipping Norton the SPZs all are found in the south of the county. The EA uses the zones in conjunction with its Groundwater Protection Policy to set up pollution prevention measures in areas which are at a higher risk, and to monitor the activities of potential polluters nearby.

The shape and size of a zone depends on the condition of the ground, how the groundwater is removed, and other environmental factors. When the EA defines a zone they find out how the groundwater behaves in that area, what constructions there are to get the water out into the public water supply, and the process for doing this. From this it develops a model of the groundwater environment on which to define the zones.

Public water supply demand is forecast to significantly increase due to expected population growth in the region from 8.5 million in 2006/7 to 9.7 million in 2035, (1 million of which will be in London, 0.2 million in the Thames Valley). Thames Water also expects demand to rise as the number of smaller households increases.

Issues relating to the abstraction of water for this purpose are dealt with by the Environment Agency who issue licences for water abstraction and produce Catchment Abstraction Management Schemes (CAMS) to set out the strategy for achieving the sustainable management of river and groundwater resources for the future. The Environment Agency has prepared a CAMS for the River Thames and for the River Cherwell. According to the CAMS prepared by the Environment Agency, the majority of the water catchment areas within Oxfordshire have been classified as ‘no water available’, ‘over-licensed’ or ‘over-abstracted’.

Sewage works in the county are being upgraded to improve effluent treatment and to provide for the sustainable disposal of sewage sludge. Whilst spreading sludge on land is reducing: this is often due to the reluctance of the food supply chain to accept products grown on land treated with sludge, it is likely that amount of sludge treated by means of thermal destruction will increase from 36 to 56%[14].

[14] Thames Water Sludge Strategy 2011

3.2.11 Climate Change

Records from the Radcliffe Observatory show that temperatures in Oxford in the post-1986 decade are the warmest on record by a considerable margin. This may be indicative of climate change, which could have significant impacts on Oxfordshire's environment, economy, transport, housing and health. Climate change in Oxfordshire is likely to result in warmer, drier summers, with average temperatures predicted to increase by 1.0 °C to 1.5 °C by 2020, rainfall predicted to increase between 1 degree centigrade by 2050, rainfall predicted to decrease by around 18% by 2050 and milder, wetter winters with an increased risk of flooding.

The main indicator of a changing climate is a change in the type and frequency of weather events, such as heavy downpours and heat waves. Whether or not events in the past are a result of climate change, it is clear that if the climate changes as predicted, Oxfordshire will see many more incidents like these. Oxfordshire is particularly vulnerable to flooding along several of its river valleys, including the Thames valley and the Evenlode. Extensive flooding affected parts of Oxfordshire, including Oxford, Abingdon and Witney in July 2007 and again in December 2012.

The Environment Agency has prepared the Thames Region catchment flood management plan, which has information on the recommended approaches and actions needed to deliver the selected flood risk management option in each of the 43 sub-areas that have been identified, including in Oxfordshire.

Oxfordshire has 12% of its land area within the floodplain. Approximately 24,000 hectares is within flood zone 3 (1 in 100 year) and a further 6,000 hectares in flood zone 2 (1 in 100 year). The largest areas of floodplain are predominantly in the centre of Oxfordshire around Witney (from the River Windrush), Oxford (from the River Thames and River Cherwell) and Abingdon (River Ock and River Thames). Other areas include the Langford Brook and River Ray south of Bicester.

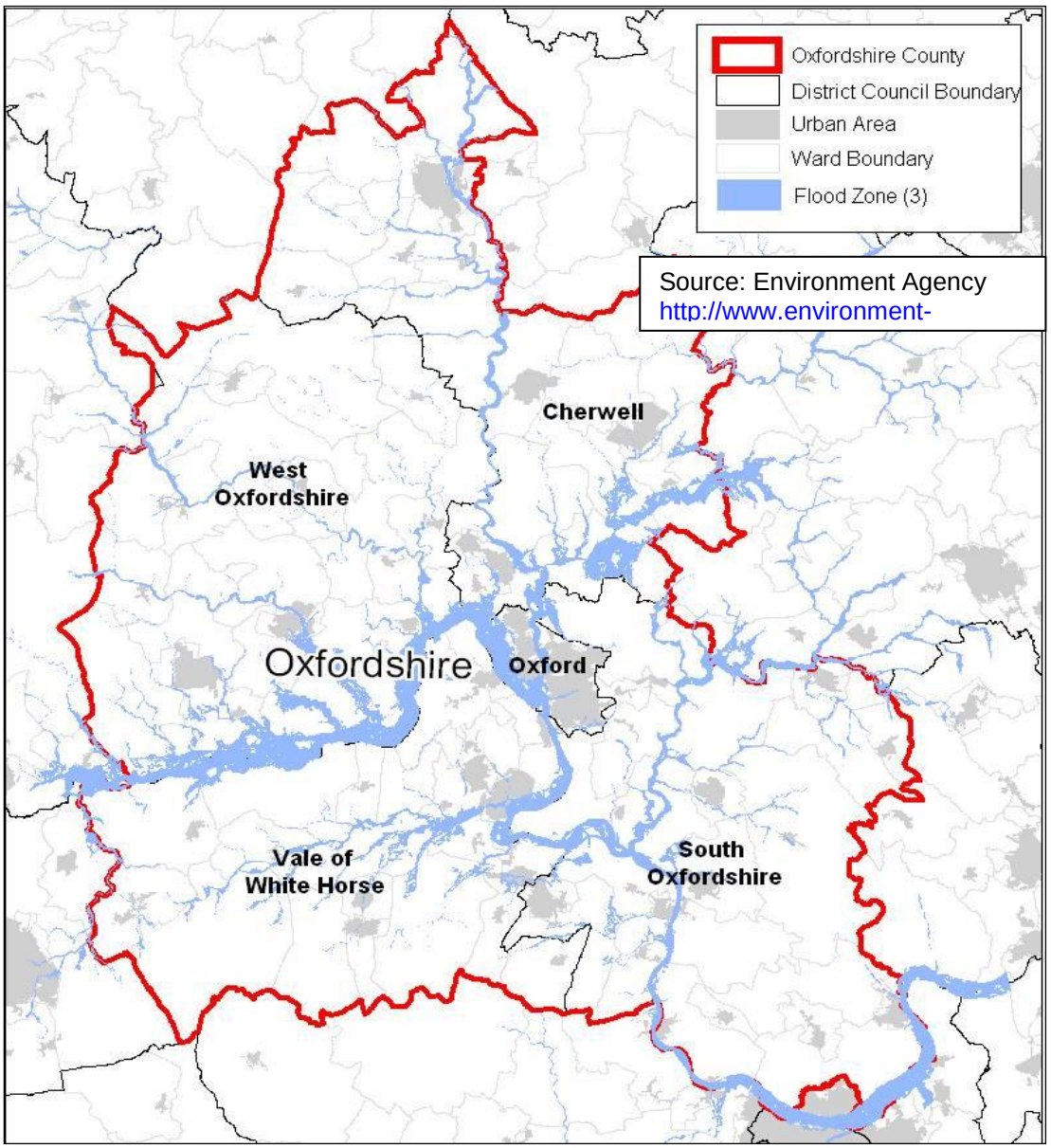
The Environment Agency's Oxfordshire State of the Environment Report (October 2009) indicates:

- that there are approximately 21,000 properties at risk from flooding from rivers in Oxfordshire, representing around 6% of all properties in the county;
- the majority of the properties at risk are residential;
- Of the 21,000 at risk, just over 40% (around 8,500) are at significant risk.

The map below shows the extent of flood zone 3 in Oxfordshire. Flood zone 3a is defined as 'High probability of fluvial flooding. Probability of fluvial flooding is 1% (1 in 100 years) or greater. Flood zone 3b is

defined as 'functional floodplain with a high probability of fluvial flooding. Probability of fluvial flooding is 1 in 20 years'[15].

Figure 3.10: The Extent of Flood Zone 3 in Oxfordshire



Oxfordshire County Council undertook a Preliminary Flood Risk Assessment which was submitted to the EA in June 2011[16].

Increasing summer temperatures and decreasing summer rainfall will have a direct impact on the county's water resources, the use of which is already at or near to capacity. Droughts are likely to be more frequent, and at the same time, demand for water is likely to be greater (the UK Climate Impacts Programme estimates that climate change

[15]Technical Guidance to the NPPF March 2012
[16] Oxfordshire Preliminary Flood Risk Assessment 2011
http://www.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/environmentandplanning/flooding/pfra/PFRApreliminaryreport.pdf

may lead to a 1.5% increase in per capita consumption of water over the next 25 years).

There are a number of existing and emerging international and national targets to reduce emissions of greenhouse gases, including the Kyoto Protocol and domestic targets in the Climate Change Bill.

Households in Oxfordshire emitted between 1.7 and 2.3 tonnes of carbon dioxide (CO_2) per person during 2011. Emissions were above the UK and SE averages for all districts except Oxford City. Total per capita emissions (from all sources) also varied with district, from 7.8 tonnes CO_2 per person in Cherwell to 5.8 tonnes per person in Oxford City.

Domestic sources accounted for 31% of the county's total CO_2 emissions in 2011. A further 30% of CO_2 was emitted from road transport. Road traffic is forecast to increase in the coming years, and will have implications for county emissions of CO_2. A key issue is therefore to reduce greenhouse gas emissions to reduce the extent and severity of future changes to our climate.

More than two thirds of the world's carbon dioxide emissions come from the way energy is produced and used. Total final energy demand per capita in Oxfordshire (2011) varied from 19,570 kWh in Oxford to 34,860 kWh in Cherwell District. Total final energy demand across the South East was 23,170 kWh per capita. The transport sector accounted for 39% of energy demand and the industrial & commercial sector for 32% Domestic energy consumption per capita (for all sources) varied from 6,270 kWh in Oxford to 8,280kWh in South Oxfordshire. The national average for this indicator was 7,360 kWh.

Initiatives are being taken in Oxfordshire to reduce our carbon footprint, though the use of energy efficiency measures in new homes, community initiatives to equip all houses in some villages with low energy light bulbs, and setting renewable energy targets through the use of biomass and wind energy for the county.

3.2.12 Air Quality

Local authorities are required to identify any areas where pollutant levels are likely to exceed National Air Quality Strategy objectives and where necessary, will declare a local Air Quality Management Area (AQMA). Nine Air Quality Management Areas have been designated in Oxfordshire including an area covering key roads in and leading into the centre of Oxford City, central Henley on Thames, Horsefair in Chipping Norton, and the main streets in the centre of Abingdon, Witney, Wattlington, Wallingford and areas in Botley, Oxford and Banbury. All of these areas have been declared AQMAs on the basis of the levels of nitrogen dioxide (NO^2) which have exceeded the annual mean objective of 40ug/m^3. These levels have primarily arisen due to road traffic emissions (details available at: http://aqma.defra.gov.uk/1aqma/aqma_detail.php?aqma_id=558).

Local air quality is monitored across the county by the District Councils. Details can be found on the district council websites.

With the exception of the nine areas of poor air quality, air quality in Oxfordshire is good. Owing to expected climate changes, the frequency of weather conditions leading to poor air quality during the winter in Oxfordshire is likely to decrease; however, weather conditions associated with episodes of poor air quality in summer are likely to become more frequent.

3.2.13 Transport

The County Council is responsible for maintaining over 4000 kilometres of roads and footways in Oxfordshire, an asset worth billions of pounds. There have been some significant additions to the physical, economic and social infrastructure between 1961 and 2001: examples include the building of the M40, the dualling of the A34, the building of numerous by-passes and peripheral roads, the expansion of Oxford's park and ride service. Figure 3.10 shows the highway network in Oxfordshire.

In the ten years from 2001 to 2010, the total number of cars owned by Oxfordshire households increased from 285,500 to 360,000, an increase of 25%. Fewer than one in five households (17.5%) do not own or have access to a car or van compared with 28% nationally, and down slightly from 18.1% in 2001, whilst 41% of households own two or more cars and/or vans. The district with the highest ratio of cars per household is South Oxfordshire with 1.58 and the lowest is Oxford (0.93). This highlights the issue of car dependency for households in rural areas.

Figure 3.11: Highway Network in Oxfordshire

Source Oxfordshire County Council 2013

Figure 3.12: Annual Average Daily Vehicle Traffic (AADT) in Oxfordshire 2012

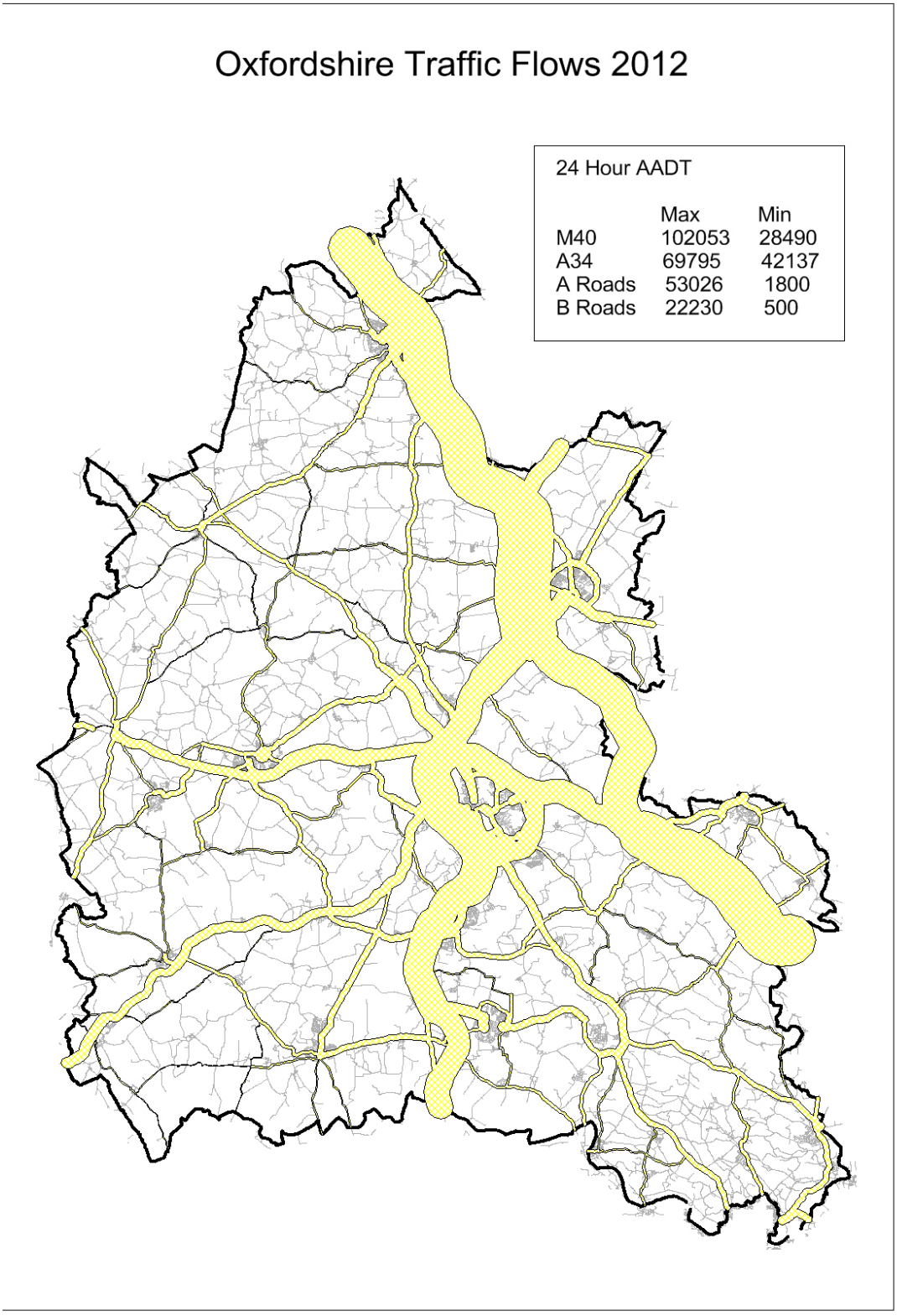


Figure 3.12 gives a good visual impression of traffic flows in Oxfordshire. The width of each road (link) on the classified network (M, A & B roads) is defined by the size of the AADT.

Oxford lies on the inter-city rail network, on the Reading to Birmingham line. Trains also go cross country from London to Worcester, passing

through Oxford. Didcot lies on the inter-city line from London to Bristol and S Wales. East Oxfordshire has good accessibility to the Chiltern line, which passes through Bicester on the Birmingham-London Marylebone line. There is also a single track branch line from Oxford to Bicester. West Oxfordshire has generally poor accessibility to rail travel, apart from the Worcester line which has a few stations in the district. Witney lacks any rail access.

There are a number of rail depots in the county. Three of them currently handle aggregate: Oxford Road, Kidlington; Appleford Sidings, Sutton Courtenay; and Hennef Way, Banbury. Hinksey Sidings, Oxford, which provided rail ballast for the rail network with all movements in and out being by rail, is not currently in use. There is permission for a further aggregate rail depot at Shipton on Cherwell.

To support Oxfordshire's economic growth, there is a need to improve transport links and services within the county and regionally. The County Council is seeking to improve its management of the A34 where it approaches Oxford from the north and from the south.

Accessibility is central to the safeguarding of sustainable communities within the county, in particular people's ability to reach services by available, affordable and accessible public and community transport. The proportion of travel by public transport to the central area of Oxford is high, at 33% of the total; travel by public transport to the rest of Oxford is much lower, at about 11%.

In 2012, there were 1611 road traffic casualties on Oxfordshire's roads. No data is available about whether any of these accidents were related to minerals and waste development.

Transportation of both minerals and waste is an issue for Oxfordshire, given its rural character. The most common means of transportation of aggregate and of bulk movement of waste is by Heavy Goods Vehicle (HGV), which has implications for road safety, air pollution, noise and road congestion. This is an area that requires additional monitoring.

3.2.14 Minerals

Several important aggregate mineral resources are present in Oxfordshire. These minerals can only be worked where they naturally occur and it is therefore important that known resources which are, or may become of economic importance are safeguarded. Sand and gravel is the most extensive aggregate mineral, occurring along the Thames valley and its tributaries and the Cherwell valley. Soft sand is present in south west Oxfordshire, often in conjunction with limestone. In the north of the county, ironstone and limestone are present. In the south west of the county, there is a deposit of Fuller's Earth, but this is not worked at present. Sales of soft sand, sharp sand and gravel in Oxfordshire in 2012 were approximately 700,000 million tonnes, and sales of crushed rock were approximately 322,000 tonnes. Significant quantities of crushed rock from the Mendips are imported by rail for

highway construction. Production of aggregates from recycled construction and demolition waste have increased in the county but, with the closure of Didcot A power station in 2013, a significant source of secondary aggregate from pulverised fuel ash has been lost. The Ardley Energy form waste facility, which is expected to open in 2014, will provide some secondary aggregate from incinerator bottom ash. The maps below show the location in the county of the sand and gravel resources, and the limestone and ironstone resources.

Figure 3.13: Sand and Gravel Resources in Oxfordshire

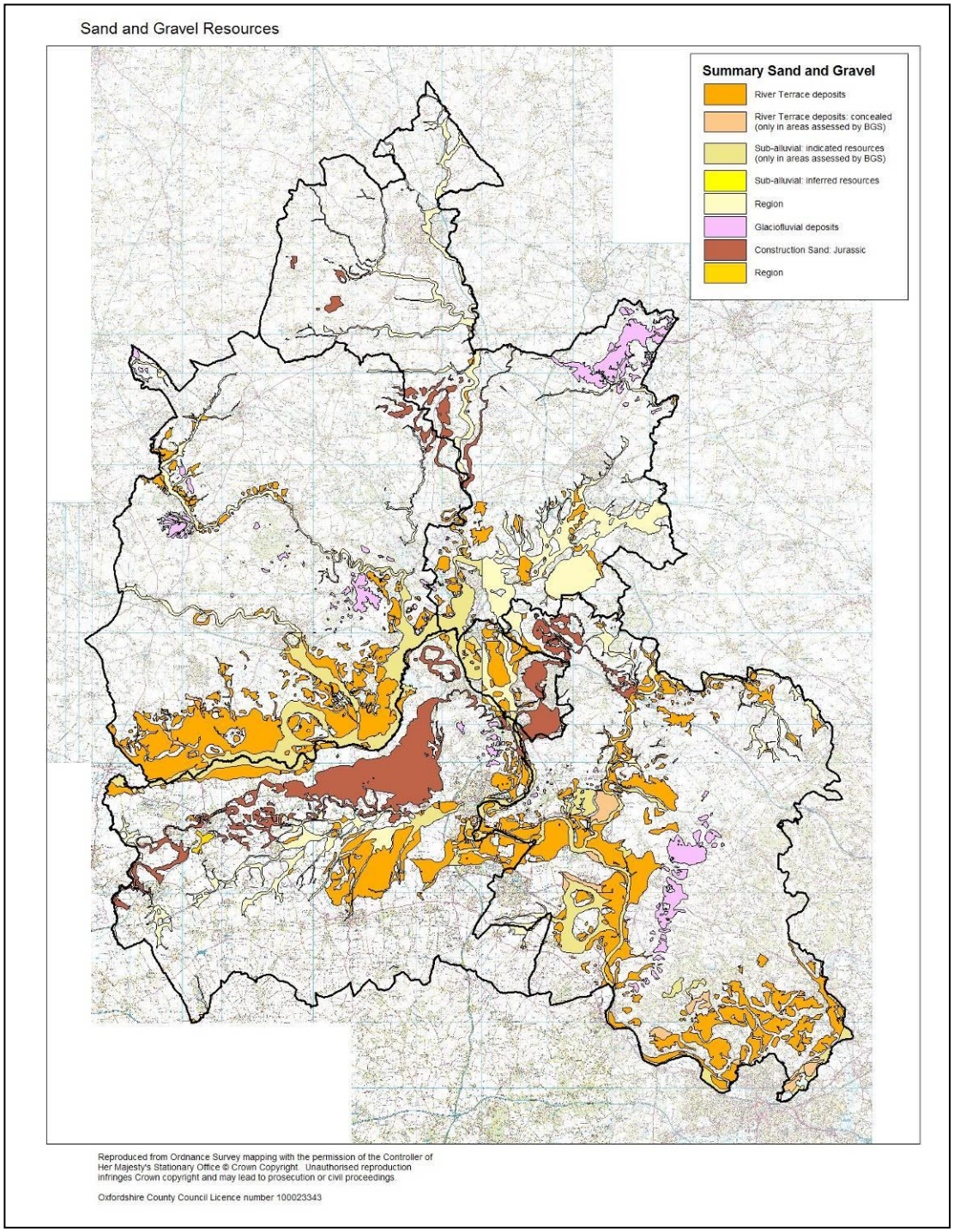
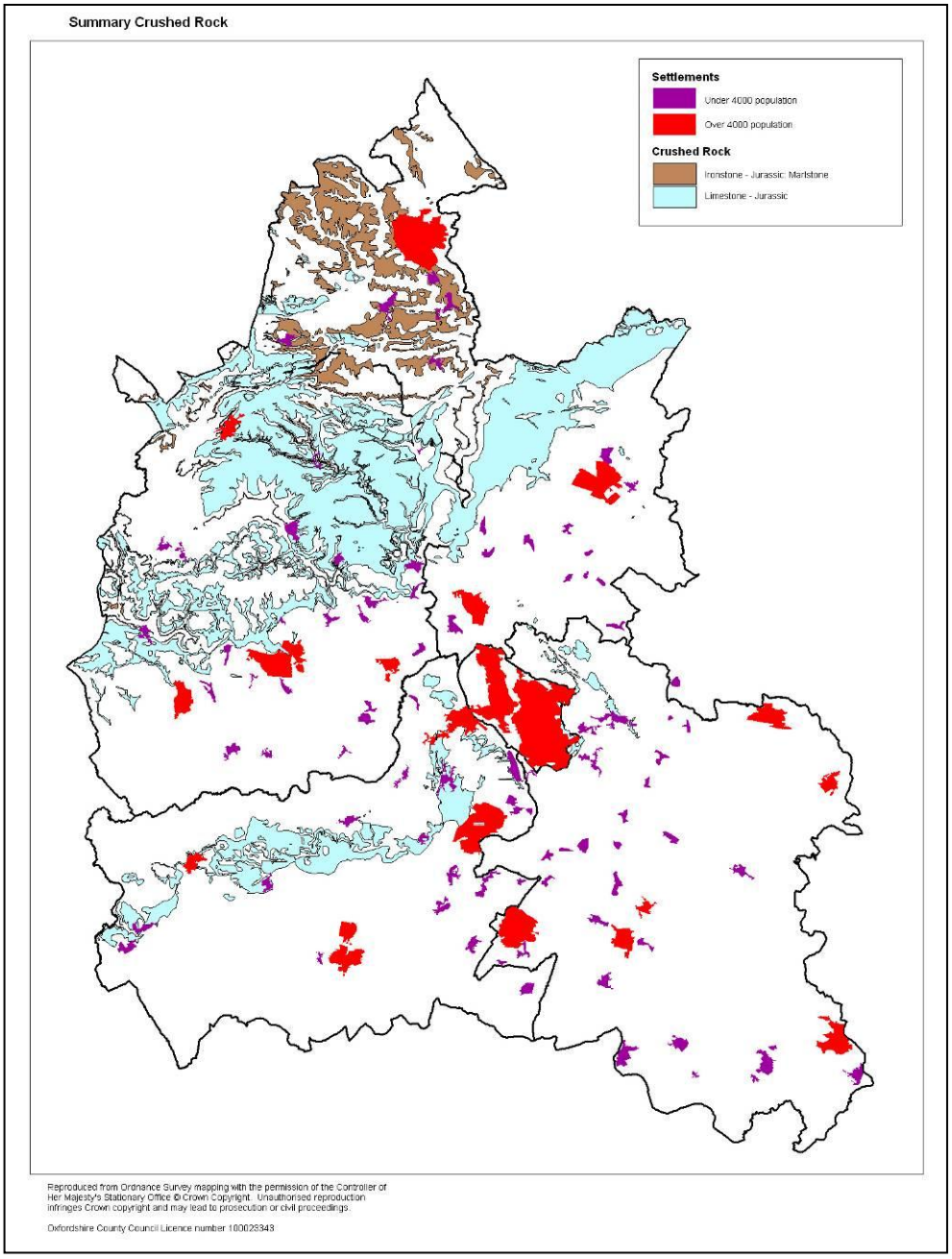


Figure 3.14: Crushed Rock Resources in Oxfordshire



A Local Aggregate Assessment (LAA) has been prepared, based on the 10 year sales average of minerals extracted in the county.

Mineral working can be a highly disruptive activity and could lead to loss of land from agricultural production, potential damage to wildlife habitats and archaeological features as well as lead to disturbances associated with quarrying operations including noise, traffic and dust. However, it also presents opportunities for restoration to create wildlife habitats, increase biodiversity and improve recreational opportunities. Work has been done by OCC officers and biodiversity partners to identify which potential mineral working areas in Oxfordshire could offer opportunities for habitat creation, as part of the RSPB's Nature After Minerals initiative.

Much of the main sand and gravel resource to the north of the River Thames in the west of Oxfordshire underlies on Grade 1 or Grade 2 agricultural land, as can be seen from Figures 3.12, 3.13 and 3.14. Some of the sand and gravel deposit in Southern Oxfordshire also occurs below best and most versatile agricultural land.

Movements of aggregate material from Oxfordshire quarries is by road transport, which generates a large number of HGV movements, concentrated in specific areas of the county such as in the Lower Windrush Valley, around Stanton Harcourt, Standlake, Cassington and in the Sutton Courtenay area. The cumulative impact on these localities is potentially significant and damaging both to the highway network and to residential amenity. Any significant increase in working in these areas is likely to contribute to congestion which is already experienced by drivers on the A40, linking Witney and Oxford, and on the A34.

A survey of construction and demolition waste recycling for production of aggregates facilities in 2012 indicates a total permitted production capacity in Oxfordshire of 1087,000 tonnes per annum. Not all of this capacity is in operation and much of it is in facilities that have planning permission for a temporary period only.

3.2.15 Waste

Of the 1.5 million tonnes of waste managed in Oxfordshire 2011/12, 43% was construction, demolition and excavation waste, 37% was commercial and industrial waste and 20% was municipal waste. Table 3.4 shows the annual arisings of different waste types in Oxfordshire.

Table 3.4: Annual Arisings/Management of Waste in Oxfordshire in 2008 (tonnes)

Waste Type	Total Waste Arising/ Managed	Landfilled	Recycled/ Composted	Recovered	Other Treatment
Construction and Demolition	650,000	91,000	396,500	162,500	-
Commercial and Industrial	566,800	283,400	283,400	-	-
Municipal Total	297,527	123,211	154,367	15,680	4,270
All Waste	1,514,327	497,611	834,267	178,180	4,270

Source: Oxfordshire Minerals & Waste Annual Monitoring Report 2012

Municipal Solid Waste (MSW) is defined as household waste and any other waste collected by Waste Collection Authorities. Household waste includes waste from Household Waste Recycling Centres (HWRCs), kerbside collection rounds, bring schemes, bulky waste collection, hazardous waste collection and street sweepings. Table 3.5 shows MSW arisings for the period 2011/2012 in Oxfordshire. Of the 297,527 tonnes of municipal waste produced in Oxfordshire in 2011/12, 58.6% was diverted from landfill by means of recycling, composting or some other form of treatment. For household waste only, 61.7% was diverted from landfill.

Table 3.5: Municipal Waste Arising & Managed by Management Type in Oxfordshire 2011/12 (tonnes)

	Recycle/ Re-use	Compost	Food Waste	Landfill	Other*	TOTAL
Household	87,409	63,213	15,680	105,954	4,270	276,525
Non-Household	3,745	-	-	17,257	-	21,002
Total (MSW)	91,154	63,213	15,680	123,211	4,270	297,527
Percentage (MSW)	30.6	21.2	5.3	41.4	1.4	100

* includes waste collected by waste collection authorities and at waste recycling centres and clinical waste disposed by specialist thermal treatment
Source: Oxfordshire Minerals And Waste Annual Monitoring Report 2012

In 2011/2012 most of Oxfordshire's construction and demolition waste was recycled as soils or aggregate (61%): some was recovered for use in land and quarry restoration or as engineering material at landfill sites (25%), and the remainder (14%) is disposed of by landfill.

It is estimated that around 50% of commercial and industrial waste is recycled.

The County Council recently carried out a review of waste management capacity in the County. This information is reported in the Oxfordshire Waste Needs Assessment (May 2012 – currently being updated). The review is on-going and in some cases the results are subject to final verification with facility operators. Table 3.6 reports on the position as at January 2012, including facilities that are non-operational and those which had been granted planning permission but were yet to be built ('committed' facilities).

Table 3.6 Capacity of Oxfordshire Waste Management Facilities (January 2012)

Type of Facility	Capacity
Landfill	
Inert Landfill	5,180,000 cubic metres
Non-Hazardous Landfill	10,280,000 cubic metres
Hazardous Landfill	200,000 cubic metres
Total	**15,660,000 cubic metres**
Recycling / Transfer & Composting / Biological Treatment	
MSW and C&I Recycling / Transfer	820,900 tonnes per annum
C&D Recycling / Transfer	956,000 tonnes per annum
Composting / Biological Treatment	280,100 tonnes per annum
Total	**2,057,000 tonnes per annum**
Other	
MSW and C&I Treatment**	402,010 tonnes per annum
Hazardous / Radioactive*	39,804 tonnes per annum
Vehicle Dismantling & Other Metal Recovery	161,200 tonnes per annum
Total	**603,014 tonnes per annum**

*Excludes storage and waste water treatment
** 400,000 tonnes of MSW and C&I treatment is not yet operational
Landfill capacity is shown as estimated remaining void space.
Recycling / transfer capacity is expressed as the amount of waste that is capable of being recycled (not as total throughput).

Source: Oxfordshire County Council, Waste Needs Assessment (May 2012)

In January 2012, permitted inert landfill void was estimated at 5,180,000 cubic metres with the potential to accommodate some 7,770,000 tonnes of inert waste. Much of this capacity is provided by Shellingford Quarry (Vale of White Horse) and Shipton-on-Cherwell Quarry (Cherwell).

In January 2012, non-hazardous landfill void was estimated at 10,280,000 cubic metres.[17] It is assumed that a cubic metre of void space can accommodate about one tonne of non-hazardous waste i.e. there is currently space to dispose of nearly 10.3 million tonnes of waste. This will come from both the municipal and commercial and industrial waste streams.

In January 2012 the total capacity of MSW and C&I recycling / transfer facilities in Oxfordshire was estimated to be in the order of 820,900 tonnes per annum. Much of this capacity is at temporary facilities; and more than 242,000 tonnes of this capacity comprises facilities that have permission but are yet to be built. Any future strategic waste

[17] Based on data from Environment Agency (up to 2009) and OCC records reported in the Waste Needs Assessment (May 2012).

management facilities will be located in a broad area around Bicester, Oxford, Abingdon and Didcot. Smaller recycling facilities will be provided near to Witney/Carterton, Wantage/Grove and Banbury to ensure that people have access to household recycling centres to reduce the miles travelled to such facilities.

In January 2012 the total capacity of CDE Recycling / Transfer facilities in Oxfordshire was estimated to be in the order of 956,000 tonnes per annum, 346,500 tonnes of which comprises facilities that have permission but are yet to be implemented. Of the 28 facilities listed in this category, 12 are temporary facilities which are located in quarries and are associated with the restoration of those sites. These figures do not include recycling facilities that are located on construction sites.

In March 2013 Didcot A power station (which produced 100,000 tonnes of pulverised fuel ash per annum in 2011) was shut down and is now being decommissioned. This closure has significantly reduced secondary aggregate production and capacity in Oxfordshire.

In January 2012 there were nine facilities capable of treating food, green and / or other biological waste with an estimated capacity of 280,100 tonnes per annum. These comprise anaerobic digestion (AD) facilities, in-vessel composting facilities and open windrow composting sites.

Of the remaining or 'other' capacity in Table 3.6 (603,014 tonnes per annum), that which comprises metal recycling is mostly located at scrap yards which provide disposal facilities for end of life vehicles. The hazardous/radioactive waste capacity comprises a small number of specialist facilities that either transfer or recycle hazardous waste. In addition the contaminated ground water treatment plant at Harwell treats a large quantity of hazardous waste but is a specialist facility serving the Harwell site only. There are other facilities that manage hazardous or radioactive wastes that are not quantified in this total, including the strategic sewage treatment works and the former UKAEA laboratories at Harwell where nuclear legacy wastes are stored pending the availability of suitable disposal facilities.

The energy from waste (EFW) facility at Ardley is expected to be constructed and available for use in 2014. Its capacity of 300,000 tonnes per annum and its location in northern Oxfordshire, close to the county boundary, means that it will almost certainly take in some waste from outside Oxfordshire. It is currently estimated that waste from Oxfordshire will take up about 70% of the plant's capacity.

Permission for a gasification plant with a capacity of 100,000 tonnes per annum at Finmere Quarry has been included in the 'MSW and C&I Treatment' figure, but this has yet to be implemented.

3.2.16 Land Use, Soils and Resources

Oxfordshire is the second most rural county in the South East region: over 50% of people in Oxfordshire live in settlements of fewer than 10,000 people. The principal urban area is Oxford, which provides a wide range of employment, shopping, education, financial, health, cultural and administrative services. Oxford is internationally renowned for its universities.

Since the 1970s, the spatial strategy for Oxfordshire has promoted increased development in the "country towns" (Banbury, Bicester, Didcot, Wantage, Grove and Witney) which typically have over 20,000 residents. These larger settlements are considered to be the most sustainable locations for housing and employment growth due to their range of jobs, services and facilities and the opportunities for walking, cycling and public transport.

The location of future housing is to be split approximately 50/50 between the north and west of the county and the south. This distribution of housing means that minerals supply should seek to have a more even supply of resources with sand and gravel coming from both the west and the southern part of the county. Waste facilities need to also reflect this distribution of housing and employment growth to ensure that they are well located to the areas which they serve.

Smaller towns such as Thame, Wallingford, Henley-on-Thames and Chipping Norton provide a range of local shops, education, health and community facilities.

Of the 277 parishes with a population below 10,000 people, almost three quarters (2001) have fewer than 1,000 residents. Oxfordshire's rural areas generally have low levels of deprivation and crime and similar educational achievement and health to the county as a whole. However, secure jobs in traditional rural occupations continue to decline, house prices are out of reach to workers in rural areas and increasing car use affects the safety of local roads and the viability of local services.

After dipping slightly between 2009 and 2011, house prices have risen with , with the average house price in the county being £332, 913[18]. Generally there is a strong housing market in the County, centred on Oxford, with a lesser focus on Banbury. The housing market becomes somewhat less cohesive at key points around the boundary, specifically with the Reading/M4 corridor and the growth areas of Milton Keynes and Northampton exerting influence.

[18] http://rightmove.co.uk/houseprices in Oxfordshire. Department of Communities and Local Government, live housing table 581. Mean house prices based on Land registry data https://www.gov.uk/government/statistical-data-sets/live-tables-on-housing-market-and-house-prices

The need and demand for affordable housing (social rented and intermediate) is high in Oxfordshire as in the rest of the South East region. It is particularly an issue in Oxford City, where demand is permanently high because of the educational and employment opportunities in the city, and in rural areas in Oxfordshire.

Work is currently underway on the Strategic Housing Market Assessment (SHMA) which will underpin the housing provision needed across the County for both market and affordable housing. The completion of this work is anticipated in January 2014.

Tourism and recreation make up an important part of Oxfordshire's economy. Just under 10% of employment in Oxfordshire is supported by the domestic and international visitor economy. This generates benefits to the retail, accommodation, attractions and transport sectors of £1.7 billion p.a. 90% of visitors come to Oxfordshire for the day[19]. Two National trails, the Thames Path and the Ridgeway pass through the county.

The principal recreation sites in Oxfordshire include Blenheim Palace, the Ashmolean Museum, the Oxfordshire museum in Woodstock, Hook Norton Brewery, the Botanic garden in Oxford, theatres in Oxford, river cruises on the Thames and walking along the Thames Path and in the three AONBs.

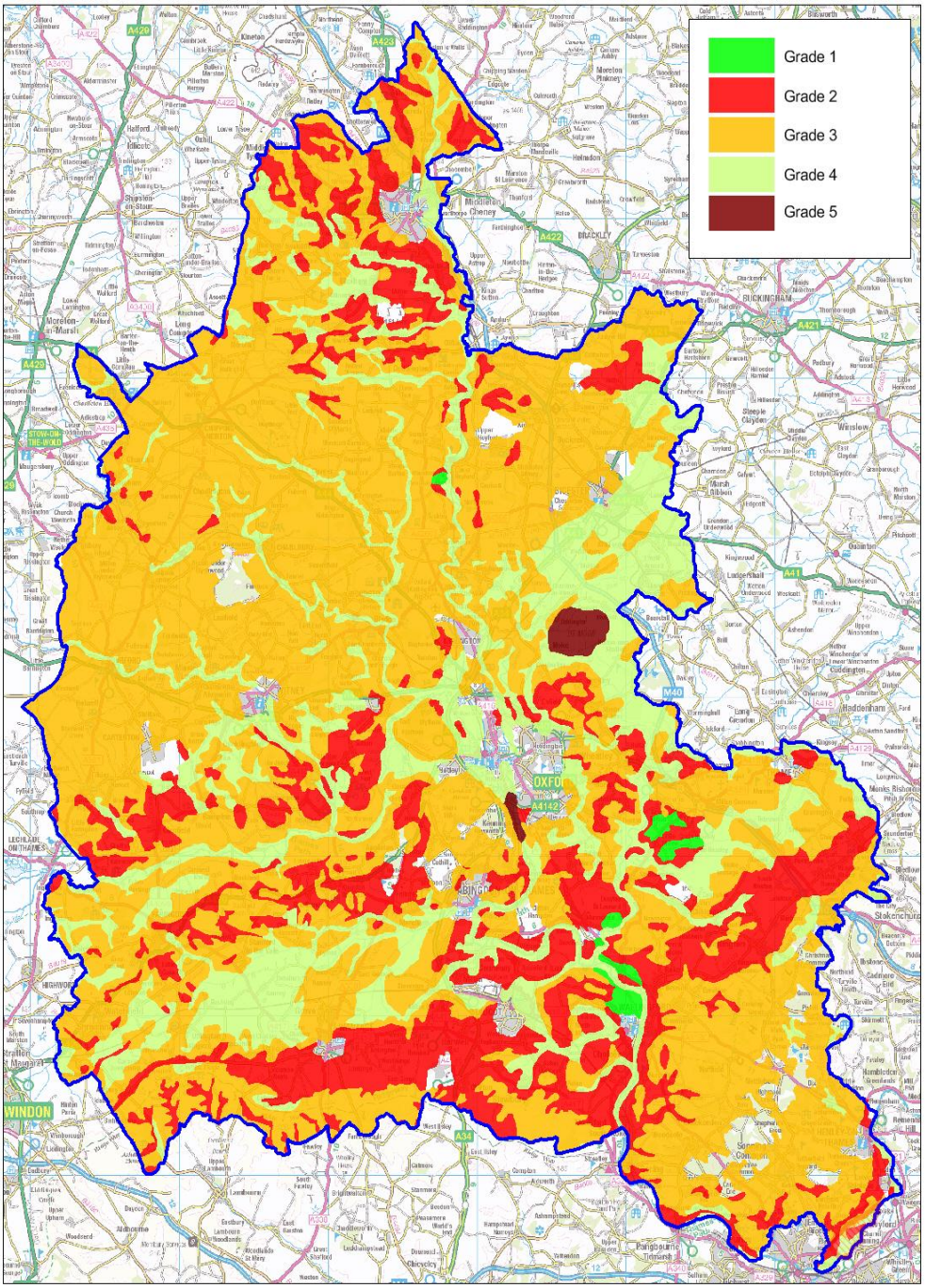
The restoration of former mineral workings provides opportunities to create recreational facilities. One of these is the Lower Windrush Valley Project. This is located to the south east of Witney in West Oxfordshire and is an area that has been extensively modified by mineral extraction over the last 60 years. The project was launched in 2001 and works closely with mineral operators, landowners and the local community to co-ordinate a range of environmental initiatives throughout the valley[20].

More than three quarters of the county's land is under agricultural management. Figure 3.14 shows the classification of agricultural land in Oxfordshire. Grades 1, 2 and 3a land are together classed as 'Best and most versatile'. Soil is a multi-functional resource whose function is not only for agricultural production but also water and carbon storage, nutrient filtration, aquifer recharge, flood recharge, flood control and as a habitat in its own right for biodiversity.

[19] Oxfordshire Economic Assessment, September 2012

[20] http://www.oxfordshire.gov.uk/cms/public-site/lower-windrush-valley-project

Figure 3.15: Agricultural Land Classification in Oxfordshire



3.2.17 Economy

Oxfordshire has one of the strongest economies in the South East, which is itself the powerhouse of the national economy. Latest data suggests that the County (within the Berkshire Buckinghamshire and Oxfordshire region) has the greatest concentration of Hi tech and knowledge intensive businesses in the EU-27[21]. Oxfordshire is globally competitive in areas such as high performance engineering, bioscience, medical instruments and publishing; maintaining that competitiveness is central to the long-term prosperity of the county. At the same time, it is an attractive county, much of it rural, with an outstanding built environment.

Oxfordshire[46] has above average employment in education, professional, scientific and technical activities, manufacturing and accommodation and food servies. Within these broad groups Oxfordshire has particular strengths in key niche clusters, including scientific research and development (eg bio-technology, space and cryogenics), publishing and vehicle manufacture.

Of Oxfordshire's 27000 business units in 2010, 89% were micro firms, employing 9 or fewer people. However, data from 2008 shows that the larger firms, albeit a small proportion of total firms, employ over half the workforce. Businesses employed 3000 fewer people in 2010 than in 2008.

The Oxfordshire economy is relatively self-contained with the majority of its workforce (around 85%) resident in the County. Oxford is the principal employment centre, but there is significant economic activity centred on Banbury, as well as potential to expand the level of economic activity centred on Wantage and Didcot. Economic activity in the County is characterised by micro businesses, and small and medium enterprises. There are relatively few large employers based in Oxfordshire - 95% of Oxfordshire enterprises employ fewer than 20 people.

Of the total workforce of 320,335 people, are employed in urban areas with the most significant concentration being 85,700 in Oxford City. Almost exactly 100,000 people are employed in Oxfordshire's rural areas (i.e. in settlements of less than 10,000 people – this includes Harwell Science and Innovation Campus, Milton Park and other rural business parks). 23% of employees in rural areas are home based compared with 11% in urban areas.

Despite Oxfordshire's overall prosperity and strong economic performance, there are concerns about under performance in a number of areas. The economy in general, and the hi-tech end of it in particular, needs to do more to remain globally competitive. There are variations in performance in different parts of the county, including

[21] Eurostats

46 Oxfordshire Economic Assessment: Part 2 – Update of evidence September 2012

severe pockets of deprivation and under-performance affecting about 15% of people in Oxford and Banbury. Market towns are struggling to maintain their viability as service and retail centres in the face of competition from larger retail centres and the internet.

Workplace-based earnings for full-time workers in Oxfordshire averaged £616.40 per month in 2012, in line with the English average, yet 4% below the South East average (£640.2)[22]. At district level, work place earnings are below the national average in all districts except Vale of White Horse.

Both minerals and waste activities offer employment for local people with a range of skilled and unskilled job available. An AMRI Survey 2011 stated that 367 people were employed by the Mineral Industry in 2011, consisting of 72 in direct employment, 10 contractors and 285 drivers. According to the BRES (Business register and employment survey), in 2011 the number of people employed in the quarrying and mining of stone, sand and clay in Oxfordshire was 160. Both surveys indicate that the industry does not employ a large number of people. The number of people employed in the waste industry has not been made available.

This overview of Oxfordshire's economy is informed by the Oxfordshire Economic Assessment evidence base where more detailed information can be found:
http://www.oxfordshirelep.org.uk/cms/sites/lep/files/folders/documents/About%20Oxfordshire/Oxfordshire_Economic_Assessment_Full_Report.pdf

3.2.18 Future Trends

The Strategic Environmental Assessment Directive requires that the likely evolution of the baseline without the plan needs to be identified. The environment will be affected by many other influences outside the scope of this plan. These include economic, social and environmental influences at international, national, regional and local levels.

From the baseline data set out in this report, it is anticipated that the following trends are likely:

- Population growth in Oxfordshire since 1991 has exceeded national and regional growth rates, placing greater pressure on infrastructure, the environment and the need for housing.
- Oxfordshire has an ageing population, so the proportion of those who are economically active will decline, and more pressure will be placed on health and social services.
- Apart from in Oxford itself and in some other urban areas, Oxfordshire has a low population density, so service provision will need to be spread over the geographical area of the county.

[22] Annual survey of hours and earnings, 2012 (provisional)

- Deprivation in Oxford is confined to certain urban wards and is not widespread. Initiatives to address this deprivation will be likely to reduce it in the medium term.
- Traffic and associated congestion continues to increase in Oxfordshire.
- Oxfordshire has high recycling and composting rates, which are likely to continue to increase, although this may be accompanied by increasing waste arisings overall.
- An increase in heavy rainfall events, attributable to climate change, may increase the vulnerability of the Thames and Cherwell valley to flooding.
- Oxfordshire's carbon emissions are higher than national or regional averages, and need to be reduced to help the UK to contribute to meeting the agreement of the Kyoto protocol.
- A decrease in the number of farmland birds in Oxfordshire continues, indicating a loss of biodiversity and suitable habitat. This loss needs to be stopped and reversed.
- Sand and gravel is the most extensive aggregate in the county.
- Oxfordshire is largely self-sufficient in sand and gravel. The county is likely to continue to import crushed rock aggregates, much of it by rail.
- Water resources in Oxfordshire are likely to continue to be under pressure due to forecast population growth and the fact that the Thames Water area is one of the most water-stressed regions in the UK.

3.3 Stage A3: Identifying key sustainability issue and opportunities

3.3.1 The identification of key sustainability issues for Oxfordshire with regard to minerals and waste planning will inform the preparation of the Plan and is an important stage in the identification of the key issues facing the Plan. The identification of sustainability problems and issues is a requirement of the SEA Directive:

> *'The Environmental Report' under the SEA Directive should include:*
> *'any existing environmental problems which are relevant to the plan or programme including, in particular those relating to any areas of a particular environmental importance, such as areas designated pursuant to directives 79/409/EEC 'the Birds Directive' and 92/43/EEC 'the Habitats Directive".*

3.3.2 Key sustainability issues for Oxfordshire are outlined in Table 3.7. These have been identified from the review of relevant policies and plans (Task A1), the review of baseline data (Task A2), and officer knowledge of the county.

Table 3.7: Key Sustainability Issues and Opportunities in Oxfordshire

Key Sustainability Issues and Opportunities in Oxfordshire
Population growth will lead to increased waste production and demand for waste management facilities and for aggregates for construction, across the whole county.
Economic growth in Oxfordshire, which has slowed down behind neighbouring sub-regions in recent years, should be encouraged. Minerals and waste development could support economic growth through the provision of opportunities for unskilled labour.
Tourism represents an important part of Oxfordshire's economy. Minerals and waste development could detract from initiatives to encourage people to visit the whole county, not just Oxford. However, post mineral restoration could create opportunities for rural development and recreational facilities.
Climate change poses a threat to parts of the county through flooding. Minerals and waste development could meet this challenge not only by managing the positive and negative aspects of development in the floodplain, but also by encouraging working practices that minimise greenhouse gas emissions.
Increased traffic generation on both motorways and major roads in the county leads to congestion and contributes towards a reduction in air quality. Minerals and waste development should balance reducing air pollution by employing the 'proximity principle' with ensuring that minerals and waste transport minimises environmental impacts by using suitable roads.
Nine Air Quality Management Areas have been identified in Oxfordshire, where levels of NO^2 from traffic exceed recommended government levels. Minerals and waste developments need to manage their transport routes in order to reduce the negative impact on air quality, and to avoid exacerbating pollution levels in existing AQMAs.
Oxfordshire has low rainfall levels and the Thames Water area is one of the most water stressed in the country. Population growth will increase demand for water. The review of abstraction licences by the Environment Agency may result in smaller numbers of licences being permitted. Thames Water has proposed that it build a new reservoir in Oxfordshire to meet rising demand; this may result in increased demand for aggregate for a temporary period.
Minerals and waste development could negatively impact on the biodiversity value of certain areas Restoration of minerals sites may be constrained by the designation of airfield safeguarding zones across much of Oxfordshire, which reduce the risk of bird strike to aircraft. It may also be constrained by a lack of available inert fill to restore sites to uses such as reed bed or wet woodland.
Mineral and waste development offers opportunities to improve access to rural areas, create recreational facilities and contribute towards habitat creation in the county and biodiversity gains.
Oxfordshire is a county which has a rich historic built environment. Minerals and waste development could result in the loss or destruction of some of the historic assets of the county such as Scheduled Ancient Monuments, geological SSSIs or Local Geology Sites.
Oxfordshire has plentiful reserves of sand and gravel, having approximately one third of the unconstrained gravel resource in the South East region. Identifying sites for mineral extraction should take into account the cumulative effect of extensive mineral working on local communities and the transport infrastructure.

The extraction of plentiful reserves of sand and gravel in the county must be balanced against the potential loss of best and most versatile agricultural land which could result from extraction.
Water quality in Oxfordshire's rivers could be improved. Minerals and waste development could contribute to the pollution of water courses and groundwater
Significant provision needs to be made for secondary and recycled waste management facilities to continue to increase the amount of secondary and recycled waste which can be managed in the County.

3.4 Stage A4: Development of the SA/SEA framework including sustainability objectives, indicators and targets

3.4.1 The SA process is a method by which the potential social, economic and environmental effects of the plan are assessed. The process requires that sustainability objectives are set to enable the impact of the plan to be assessed. These are set out in the SA framework below. The sustainability objectives are quite distinct from the Local Plan objectives. They focus on outcomes, and define the basis for achieving social, economic and environmental sustainable development in Oxfordshire. They have been compiled using information from tasks A1, A2 and A3 (review of relevant plans and programmes, baseline review and review of key issues).

3.4.2 To complement the strategic objectives that are considered relevant, Table 3.8 shows sub objectives which offer more detailed appraisal criteria, which are more specific to the preparation of the Oxfordshire Minerals and Waste Local Plan.

3.4.3 The final column of Table 3.8 identifies indicators by which to assess the effects of the plan. Assessment of the local plan needs to be undertaken iteratively during its preparation and over the whole plan period. Some of these indicators are currently reported upon in the AMR and others will need collecting during the plan period.

3.4.4 The sustainability objectives have been the subject of consultation with other specialist officers within the Council, Council Members through the Minerals and Waste Cabinet Advisory Group (and its predecessor Working Group); and with the statutory consultees, Natural England, English Heritage and the Environment Agency. They will be revised as appropriate to take any feedback from consultation into account.

Table 3.8: The Sustainability Appraisal Framework

SA Objective	Appraisal Criteria/Sub-objectives	Possible Indicators
1. To protect, maintain, and enhance Oxfordshire's biodiversity and geological diversity including natural habitats, flora and fauna and protected species	Will the Plan protect, maintain and enhance UK BAP Priority Habitats?	Number/percentage of permitted applications for minerals and waste development which include a restoration scheme which contributes to the objectives of Oxfordshire Habitats Plans for the creation of calcareous grasslands, lowland acid grassland and reedbeds
	Will the Plan conserve and enhance internationally, nationally and regionally important sites of nature conservation importance?	Number/percentage of planning applications which have an impact on designated sites or BAP habitats.
	Will the Plan protect, maintain and enhance UK BAP Priority Species?	Number/percentage of permitted applications which result in restoration of favourable recovering condition or buffering of designated areas through appropriate habitat creation. Number/percentage of permitted applications for minerals and waste development which include a restoration scheme which contributes to the objectives of Oxfordshire Species Plans.
	Will the Plan contribute to the aims of the Conservation Target Areas?	Contribution of the Local Plan policies to Conservation Target Areas for restoration of minerals and waste management sites.
	Will the Plan protect and conserve geological SSSIs and RIGs?	Number/percentage of permitted applications which include conditions for the protection or enhancement of RIGS or geological SSSIs.
2. Protect and enhance landscape character, local distinctiveness, conserve and enhance the historic environment, heritage assets and their settings.	Will the Plan conserve and enhance Oxfordshire's AONBs & their settings and take into account guidelines associated with specific landscape types?	Number/percentage of permitted applications for Minerals and Waste development which include conditions for the protection or restoration of statutory or non-statutory landscape designations. Number/percentage of planning applications where archaeological investigations were required prior to approval. Number/percentage of applications where archaeological mitigation strategies were developed and implemented.

	Will the Plan protect and enhance the historic and prehistoric environment of Oxfordshire and provide for the increased access and enjoyment of the historic environment?	Number/percentage of permitted applications for Minerals and Waste development which include conditions for the protection or enhancement of the historic and prehistoric environment in Oxfordshire.
3. To maintain and improve ground and surface water quality	Will the Plan affect groundwater quality? Will the Plan affect surface water quality?	Number of permitted applications affecting source protection zones 2 and 3 Number of permitted applications which assess the risk of contamination of groundwater Number of sites within 50m of a watercourse Number of permitted applications requiring abstraction licences
4. To improve and maintain air quality to levels which do not damage natural systems	Will the Plan lead to increased traffic congestion in built up areas? Will Plan lead to increased dust and/or odours?	Number of permitted applications with routeing agreements which avoid AQMAs Survey of trip generation to civic amenity sites Number of complaints relating to dust/odours
5. To reduce greenhouse gas emissions to reduce the cause of climate change	Will the Plan lead to a decrease in production of greenhouse gases such as CO_2 and methane?	Proportion of waste and aggregates transported by rail or water Quantity of biodegradable wastes landfilled
6. To reduce the risk of flooding	Will the proposal seek to maintain or reduce flood risk?	Number of permitted sites for minerals and waste development within the flood plain (flood zone 3a) Number of sites that are permitted within flood risk zone as identified by the NPPF and Technical Guidance to NPPF Number of proposals approved against the recommendation of EA advice. Number of mineral restoration schemes identified for flood attenuation
7. To minimise the impact of transportation of aggregates and waste products on the local and strategic road network	Will the Plan reduce distances travelled by road?	Distances travelled by road from new applications to settlements (waste) or markets Number of sites with rail/water access

	Are sites in the Plan well located in relation to surrounding settlements for waste, or minerals for markets? Will the waste facilities or mineral operation serve local needs? Does the Plan facilitate HGV routeing agreements and developer contributions for infrastructure improvements?	Number of sites with suitable access to appropriate roads Average distances travelled to waste recycling sites.
8. To minimise negative impacts of waste management facilities and mineral extraction on people and local communities	Will the Plan have impacts which could have a harmful effect on human health? Will the Plan result in loss of amenity through visual impact, noise, dust or vibration for local communities? Will the Plan provide opportunities for enhancement of local amenity and access to the countryside?	Number of permitted applications for mineral or waste development within 250m of sensitive receptors (settlements) Number of sites for mineral or waste development within 250m of sensitive receptors (settlements) Number of noise complaints relating to minerals and waste processing and transportation Number of permitted applications with restoration conditions which enhance local amenity and /or improve access to the countryside.
9. To protect, improve and where necessary restore land and soil quality	Will the Plan affect high grade agricultural land? Will the Plan lead to soil pollution or contamination?	Area of high grade agricultural land lost to minerals and waste development Incidences of land contamination related to minerals and waste development
10. To contribute towards moving up the waste hierarchy in Oxfordshire	Will the Plan policies reduce the amount of waste produced?	Amount of waste arising in Oxfordshire
11. To enable Oxfordshire to be self-sufficient in its waste management and to provide for its local need for aggregates as set out in the LAA		Number of permitted applications for waste management to meet targets to achieve net waste self sufficiency. Number of permitted applications which contribute to meeting apportionment.
12. To support Oxfordshire's economic growth and reduce disparities across	Will the Plan encourage the provision of more locally based skills and facilities?	

the county		
	Will the Plan generate new jobs for the county?	Number of direct jobs created in the waste/mineral sector per year
	Will the Plan support and encourage the growth of small and medium size business?	Number of new mineral and waste permissions

3.4.6 Table 3.9 shows how the requirements of the SEA Directive to consider a number of issues are met through the identification of the SA objectives.

Table 3.9: The Relevance of the SA Objectives to the SEA Directive Issues

SEA Directive Issue	**SA Objectives**
Biodiversity	1
Population	8
Human health	8
Fauna	1
Flora	1
Soil	9
Water	3,6
Air	4,5
Climatic factors	5,6
Material assets	1,2
Cultural heritage inc. archaeological & architectural	2
Landscape	2

3.4.7 Table 3.10 is a compatibility matrix of the SA objectives, which highlights where there may be potential conflict in meeting the objectives.

Table 3.10: Compatibility of SA Objectives

	Biodiversity Conservation	Landscape character, built heritage	Protect and enhance landscape character, local distinctiveness and historic and built heritage	Improve water quality	Improve air quality	Reduce greenhouse gas emissions	Limit vulnerability to flooding	Minimise -ve impacts waste management & minerals transportation on local and strategic road network	To minimise negative impacts of waste management facilities and mineral extraction on people and local communities	Improve & protect soil quality	Contribute to Oxon's economic growth
Biodiversity Conservation											
Landscape character, built heritage											
Improve water quality											
Improve air quality											
Reduce greenhouse gas emissions											
Limit vulnerability to flooding											

Minimise -ve impacts of transportation of waste and aggregates on local and strategic road network										
Minimise -ve impacts waste management and mineral extraction on people and communities										
Improve & protect soil quality										
To contribute towards moving up the waste hierarchy in Oxfordshire.										
To enable Oxfordshire to be self sufficient in its waste management and to make a sustainable contribution to its sub-regional minerals apportionment										
Contribute to Oxon's economic growth										

KEY

Objectives are compatible
Objectives are incompatible
Mitigation measures may need to be taken to satisfactorily achieve both objectives
No relation between objectives

3.5 Stage A5: Consultation on the scope and level of detail of the information to be included in the Environmental Report

3.5.1 The earlier SA/SEA Scoping Report (2005, updated 2006, 2009 and 2011) was the subject of consultation with the three statutory consultation bodies: Environment Agency; English Heritage; and Natural England. Other bodies were notified and also given the opportunity to comment. The formal consultation responses and other comments received have been taken into account.

3.5.2 The County Council is currently (December 2013) carrying out further consultation with the three statutory consultation bodies on the scope and level of detail of the information to be included in the SQ/SEA Environmental Report. This Scoping Report is being published on the Council's website to inform that consultation and for wider information and comment.

3.5.3 The County Council does not intend to carry out any further updating of this Scoping Report. Any further updating of baseline information or policies, plans and programmes; any new issues arising from such updating; and any amendments that need to be made to the SA/SEA methodology and framework in the light of consultation responses or other comments will be made in the SA/SEA Environmental Report.

3.5.4 This Scoping Report will be made available as part of the evidence base for the Minerals and Waste Local Plan: Core Strategy when it is published for consultation (proposed February 2014). All relevant interested organisations will be notified of that consultation, including the following which may have a particular interest in this Scoping Report and the SA/SEA of the Plan.

All District Councils within Oxfordshire;
All adjoining County Councils and Unitary Authorities;
The Chilterns, Cotswolds and North Wessex Downs AONBs
Oxfordshire Local Enterprise Partnership
The Oxfordshire Waste Partnership
The Highways Agency
Thames Water
Mineral and Waste Operators
Country Land and Business Association
Council for the Protection of Rural England
Friends of the Earth
Berks, Bucks & Oxon Wildlife Trust
Royal Society for the Protection of Birds
Oxfordshire Architectural and Historical Society
Local environmental action and campaign groups

This report is also available on the Oxfordshire County Council website: http://www.oxfordshire.gov.uk/cms/public-site/minerals-and-waste-policy

4.0 Next Steps

4.1 Consultation on the Scoping Report for the SA/SEA of the withdrawn Minerals and Waste Core Strategy was undertaken in 2009 in accordance with Article 5(4) of the SEA Directive and the Environmental Assessment of Plans and Programmes Regulations 2004 (Regulation 13).

4.2 To ensure compliance with the Directive, further consultation is now being undertaken on the scope and level of detail to be included in the SA/SEA Report for the Minerals and Waste Local Plan that is currently in preparation, in particular on a revised SA/SEA framework.

4.3 The responses to this consultation and any other relevant comments received will, where appropriate, be used to revise the SA/SEA Environmental Report. The revised sustainability objectives and the accompanying evidence base, made up of the context review, the baseline review and the identification of issues or problems in Oxfordshire, will then provide the evidence base for undertaking the SA/SEA of the Plan.

4.4 Stage B of the SA/SEA process is made up of 5 distinct phases. These are:

Stage B1: Test the Plan objectives against the sustainability objectives.

Stage B2: Develop the Plan Options including reasonable alternatives.

Stage B3: Predict the likely effects of the Plan.

Stage B4: Evaluate the effects of the Plan.

Stage B5: Consider ways of mitigating adverse effects and maximising beneficial effects.

Stage B6: Propose measures to monitor the significant effects of implementing the Plan.

Appendix 1: Long List of Policies, Plans and Programmes

International

- EU Habitats Directive (92/43/EC)
- Kyoto Protocol on Climate Change
- The Convention on Biological Diversity, Rio de Janeiro 1992
- Water Framework Directive (2000/60/EC)
- Ambient Air Quality and Management Directive (66/62/EC)
- The Johannesburg Declaration of Sustainable Development
- Waste Framework Directive (91/156/EEC)
- Aarhus Convention (Decision 2005/370/EC)
- Nitrates Directive (91/676/EEC)
- Waste to Landfill Directive (99/31/EC)
- Urban Waste Water Directive (91/271/EEC)
- Convention for the Protection of the Architectural Heritage of Europe 1985
- European Convention on the Protection of Archaeological Heritage 1992
- European Landscape Convention 2000
- EU Directive relating to the assessment and management of environmental noise (2002/49/EC)
- Environment 2010: Our Future, Our Choice (EU Sixth Environment Action Programme)
- Health Strategy 2000 (EU Commission Communication)
- Management of Waste from Extractive Industries Directive (2006/21/EC)

National

- National Planning Policy Framework 2012
- NPPF Technical Guidance
- National Planning Practice Guidance (draft 2013)
- The Conservation (Natural Habitats & c.) Regulations 1994
- Waste Management Plan for England (December 2013)
- PPS 10 – Planning for Sustainable Waste Management (ODPM, 2005)
- Heritage Protection Bill (Govt White Paper; Heritage for the Twenty First Century)
- National and Regional Guidelines for Aggregates Provision in England, for the period 2005-2020 (DCLG 2009)
- Securing the Future: The Government's Sustainable Development Strategy (DEFRA, 2005)
- Wildlife and Countryside Act 1981 (as amended)
- Countryside and Rights of Way Act 2000 (CROW)
- Natural Environment and Rural Communities Act (NERC) Act 2006
- The Urban Waste Water Treatment (England and Wales) (Amendment) Regulations 2003
- Good Practice Guide on Planning for Tourism (ODPM, 2006)
- UK Biodiversity Action Plan (1992)
- Safeguarding our soils – A strategy for England (DEFRA Sept 09)
- 'Working with the Grain of Nature' A Biodiversity Strategy for England (DEFRA, 2002)
- Climate Change: The UK programme (DEFRA, 2006)
- The Air Quality Strategy for England, Scotland, Wales and N Ireland (DEFRA, 2007)

- Choosing health: making healthier choices easier – Health White Paper (2004)
- The Historic Environment: A Force for our Future (DCMS, 2001)
- Communities Plan (Sustainable Communities; Building for the Future) (ODPM, 2003)
- Government Urban White Paper: Our Cities, the Future. Delivering an Urban Renaissance (ODPM, 2000)
- Government Rural White Paper: Our Countryside, the Future – A Deal for Rural England (DETR, 2000)
- English Heritage Policy Statement: Mineral Extraction and the Historic Environment Consultation (EH, 2007)
- Water Act 2003
- RSPB Nature After Minerals 2006
- Mineral Extraction and Archaeology: A Practice Guide (June 2008)
- Mineral Extraction and the Historic Environment (January 2008)
- www. heritagecounts.org.uk
- www.helm.org.uk
- Heritage at Risk Register 2009 (English Heritage)

Regional

- The South East Biodiversity Strategy
- The State of the Countryside (Countryside Agency 2004)
- Strategy for the Historic Environment: Heritage Counts English Heritage 2009
- Thames Corridor Catchment Abstraction Management Strategy
- Thames Water Plan
- River Basin Management Plan for the Thames River Basin District 2009

Local

- Oxfordshire Minerals and Waste Local Plan 1996 (saved policies)
- Oxfordshire Sustainable Community Strategy 2030
- Cotswolds AONB Management Plan 2013-2018
- Chilterns AONB Management Plan -2014-2019
- North Wessex Downs AONB Management Plan 2014-2019
- Oxfordshire Biodiversity Action Plan (Oxfordshire Nature Conservation Forum, 2001)
- Oxfordshire Local Transport Plan 2011-2030
- Oxfordshire Joint Municipal Waste Strategy (Oxfordshire Waste Partnership, 2013)
- Oxfordshire Level 1 Strategic Flood Risk Assessment (Scott Wilson, 2010)
- Oxfordshire County Council Preliminary Flood Risk Assessment
- Oxfordshire Rights of Way Improvement Plan
- Air Quality Management Areas
- Oxford Core Strategy 2026 Local Plan
- Oxford Strategic Partnership – Vision Statement, Aims, Challenges and Priorities 2013-2018
- West Oxfordshire Local Plan 2011
- West Oxfordshire Draft Local Plan 2029
- Shaping Futures West Oxfordshire Sustainable Community Strategy
- Cherwell Local Plan 2006
- Cherwell Proposed Submission Plan 2006-2031

- Non-statutory Cherwell Local Plan 2011
- Cherwell Sustainable Community Strategy
- South Oxfordshire Core Strategy 2027
- South Oxfordshire Sustainable Community Strategy 2008-2016
- Vale of White Horse Local Plan 2011
- Vale of White Horse Consultation Plan 2029
- Vale Community Strategy 2008-2016
- Thame Neighbourhood Plan 2013

Appendix 2: Review of Relevant Policies, Plans and Programmes

Document Title	Environmental objectives, targets and indicators	Implications for Oxfordshire Minerals and Waste Local Plan
International		
EC Council Directive (92/43/EEC) The Habitats Directive is a major European initiative that aims to contribute towards protecting biodiversity -the variety of life -through the conservation of natural habitats and wild plants and animals. Recognising that wildlife habitats are under pressure from increasing demands made on the environment, the Directive provides for the creation of a network of protected areas across the European Union to be known as 'Natura 2000' sites. This network includes Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), which, on land, are already Sites of Special Scientific Interest (SSSIs).	Take appropriate steps to avoid, in the Special Areas of Conservation, the deterioration of natural habitats and the habitats of the species as well as disturbance of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of this Directive. Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect on, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives.	Avoid development of waste management sites or mineral extraction which could have an impact on internationally or nationally designated sites. Full consultation (as an iterative process throughout the Local Plan preparation) must be undertaken with Natural England to ensure that there will be no significant effects on the integrity of the six Special Areas of Conservation designated under the Habitats Directive, or those within 15km of the county border.
Water Framework Directive (2000/60/EC) The Water Framework Directive seeks to expand the scope of water protection to all waters, surface waters and groundwater and requires that all member states manage their inland and coastal water bodies so that they achieve "good status" for all waters by 2015. It introduces River Basin Management Plans to ensure integrated, sustainable management of water courses.	All river basins should achieve *"good ecological and good chemical status"* by 2015 Limits the quantity of groundwater abstraction to that portion of overall recharge not needed by ecology.	The Plan should ensure that implications of dewatering of minerals sites and of management of waste sites are assessed to ensure that development proposals take into account River Basin Management Plans.
Landfill Directive (1999/31/EC) The Landfill Directive seeks to prevent or reduce as far as possible negative effects on the environment,	By 2015 to reduce biodegradable municipal waste landfilled to 30% of that produced in	The Plan needs to provide the necessary land use policies to encourage operators to establish

in particular the pollution of surface water, groundwater, soil and air, and on the global environment, including the greenhouse effect, as well as any resulting risk to human health, from the landfilling of waste, during the whole lifecycle of the landfill.	1995 By 2020 to reduce biodegradable municipal waste landfilled to 35% of that produced in 1995.	alternative methods to dispose of the county's waste, to reduce the amount of waste going to landfill in Oxfordshire in line with the Directive's objectives.
The RSPB 'Nature After Minerals' initiative (RSPB, 2006) The initiative offers a vision of large-scale habitats being created on mineral sites for people and for wildlife. It provides an opportunity for mineral operators and the planning system to work together with nature conservation organisations to provide habitat creation and biodiversity enhancement.	Habitat creation on mineral sites offers the minerals industry, working together with planners and conservation organisations, an opportunity to contribute to the UK Biodiversity Action Plan (UK BAP) targets. The UK BAP target for the creation of wet reedbeds is 1,715 ha. Mineral restoration has the potential to provide 100% of this reedbed. Regional and Local Planning policies and site allocations should support habitat creation on mineral sites.	The Plan should incorporate policies which provide an expectation that mineral operators will plan restoration schemes for biodiversity enhancement and habitat creation, being mindful of the constraints in Oxfordshire of airfield birdstrike safeguarding areas, and potential limits to the amount of available inert fill for restoration. There is potential for mineral restoration to contribute to all BAP targets such as wet lowland meadow. The Plan should also ensure the sustainable use of soil resources, including 'best and most versatile agricultural lane'
Thames Corridor Catchment Abstraction Management Strategy (Environment Agency, 2004) The Environment Agency is responsible for safeguarding water resources and managing abstraction through Catchment Abstraction Management Strategies (CAMS). Surface and groundwater sources are used for a number of uses which can place significant stress on these systems.	The CAMS implements the Water Act 2003 which includes the requirement for a transfer licence for the dewatering of mines and quarries from October 2008. The CAMS also provides a consistent and structured approach to local water resource management, recognising both abstractors' reasonable needs for water and the needs of the environment.	The Plan preparation process needs to fully consult the Environment Agency to ensure that proposals for mineral extraction and waste management in the Thames catchment are approved as part of the CAMS strategy. Take into account the simple maps in the CAMS which show the 'reliability' of proposals for 'new' water abstraction. The Plan should ensure that potential contaminated runoff from waste management facilities and associated developments are considered, along with the impacts of waste management facilities on groundwater in their vicinity.

Thames Valley Catchment Flood Management Plan (Environment Agency) The EA is preparing CFMPs for the whole of England and Wales. They look at flooding from all sources, except for coastal flooding from the sea, which is covered by Shoreline Management Plans (SMPs). CFMPs identify the main factors influencing flood flows and flood risk, and assess how these may change over time. The CFMP will outline the flood risk management policies that will provide a balance between cost effectiveness, social needs and demands on land use for development and the environment over the next 50-100 years.	To maximize the capacity of the flood plain to retain water in these areas To prevent development that compromises the capacity of the flood plain to retain water To manage flooding of some areas of natural floodplain to reduce the risk to some communities Develop a habitat creation programme to create flood plain BAP habitat Manage water levels to achieve more regular flooding of the floodplain	The Plan should take into account the findings of the CFMP when identifying possible locations for waste management and mineral extraction, being mindful of the need not to increase flood risk for settlements downstream such as Oxford and Abingdon. It should also take the opportunity to proactively create areas for flood alleviation, to prevent potential flooding downstream in worked out sand and gravel pits along the Thames valley.
County		
Oxfordshire Minerals and Waste Local Plan 1996 This Plan sets out detailed policies and guidance on minerals development, in order to provide a framework on which planning decisions can be made on all minerals currently worked within the Plan Area.	Provide planning framework for Mineral Planning Authorities which balances society's needs for minerals and the need to protect the environment. Provide information to the public and minerals industry concerning the location and extent of future minerals development in the Plan Area.	The Plan will need to include policies that require a consideration of detailed matters such as the economic, environmental, nature conservation, agricultural, landscape, traffic, site restoration and other effects of the proposal that are relevant to the planning decision.
Oxfordshire Biodiversity Action Plan (Oxfordshire Nature Conservation Forum, 2001) The UK BAP was published in response to the requirements of the Convention on Biological Diversity (1992). It highlights a number of priority habitats and species with associated action plans.	Action plans have been prepared for a wide variety of priority habitats and species Each priority habitat or species has specific targets.	The Plan should accept the importance of nature conservation objectives and pay particular regard to designated habitats and linear habitat structures. If developments that impact upon protected species or designated sites are necessary, then policies and proposals to avoid adverse effects on the integrity of designated sites should be adopted. Mitigation should be pro-active through site selection, timing, and consideration of alternatives. The restoration of old waste management sites,

		e.g. for landfill, provides an opportunity to create some of the habitats prioritised in local Biodiversity/Habitat Action Plans.
Oxfordshire Transport Plan 2011-2030 The Local Transport Plan is part of a wider strategic framework through which Oxfordshire County Council, working with its partners, is tackling the challenges Oxfordshire faces over the next decades.	Environmental objectives of the transport plan including tackling congestion, creating safer roads, working to improve air quality, and improving the street environment.	The Plan should incorporate policies which aim to minimize the number of waste and minerals related vehicles on the roads, to reduce traffic from minerals and waste sites which is contributing to congestion on Oxford's roads, to minimize the impact on local residents' amenity and to minimize traffic related contribution to air pollution, especially in the five identified Air Quality Management Areas.
Oxfordshire Sustainable Community Strategy *Oxfordshire 2030* The SCS provides a long term vision for Oxfordshire. It provides direction for the Oxfordshire Partnership, which includes local authorities, health services, the police, local community groups, voluntary organizations and business.	The SCS aims to work to maintain and build on Oxfordshire's economic success in a changing global economy, to encourage communities to be healthy and thriving and to protect the environment and be aware of climate change.	The Plan should contribute towards making Oxfordshire an economically thriving place, without detracting from its environment.
Oxfordshire Joint Municipal Waste Strategy (Oxfordshire Waste Partnership, 2013) The strategy sets out how the partnership will work in partnership to improve the way we manage our waste over the next 25 . It will provide all stakeholders with an overview of the way we currently manage waste, identify the future challenges and need for change, and set out our shared vision for the future.	To manage waste through seeing the most appropriate and sustainable solution that protects the environment, including minimizing the transportation of waste. In accordance with regional policy, the Oxfordshire Waste Partnership will seek to reduce the growth of municipal waste across the county to 0% by 2012.	Plan policies need to encourage a reduction in the growth of municipal waste arisings in line with the targets set by the Oxfordshire Waste Partnership.
Oxfordshire SFRA The SFRA aims to identify the areas within a development plan that are at risk of flooding. To identify and detail those factors that are relevant to	The SFRA will provide an analysis of the main sources of flood risk in the county, to inform developers and land owners.	The Plan should be mindful of the findings of the SFRA in its identification of potential locations for minerals and waste development.

current and future flood risk and to outline policies to be applied to such areas to minimise and manage the risk		
Oxfordshire Preliminary Flood Risk Assessment (The scope of the PFRA is to consider flooding from surface runoff, ground water and ordinary watercourses, and any interaction these sources have with main rivers. PFRA)	The Preliminary Flood Risk Assessment (PFRA) provides a high-level summary of significant flood risk, based on available information, describing both the probability and consequences of past and future flooding. The report will help the council to develop a future strategy to manage local flooding in Oxfordshire.	The Plan should be mindful of the findings of the PFRA in its identification of potential locations for minerals and waste development.
District		
Air Quality Management Areas The following areas have been identified which fail the Government's objective for the nitrogen dioxide annual mean concentration: Vale of White Horse District Council: Abingdon and Botley West Oxfordshire District Council: Witney and Chipping Norton. South Oxfordshire District Council: Wallingford, Henley on Thames and Watllington. Oxford City: Oxford City centre and the Green Road Roundabout. Cherwell DC: Banbury Centre	To prepare action plans which aim to address traffic flows which have been identified as the main cause of the air pollution, and measures will be taken to reduce nitrogen dioxide in these areas.	The Plan should include consideration of how site management can positively contribute to air quality especially through HGV management policies. The Local Plan needs to include air quality policies for instance with regard to dust, and emissions from machinery and vehicles. Policies should not exacerbate poor air quality in identified areas.
AONB Management Plans The Cotswolds AONB -2013-2018 Management Plan seeks to ensure that the exploitation of natural resources is managed so as to conserve and enhance the natural beauty of the AONB. The Chiltern AONB Management Plan seeks to reduce any adverse impact of former extraction sites on the character of the AONB and complement the policies of the minerals and waste local plan to	To support the provision of small scale quarries to supply high quality traditional building materials for local use. To support initiatives to increase rates of reuse and recycling of waste, whilst resisting the importation of waste, including green waste, from adjoining urban	The Plan should aim to reduce the impacts on agricultural land of mineral developments and waste management and take into account the objectives of the Chiltern and Cotswold AONB management plans, particularly relating to the conservation and enhancement of the landscape and natural resources.

ensure the objectives of AONB designation are upheld. The North Wessex Downs AONB management plan 2014-19. The management plan is intended to provide a vision for all groups and organisations who seek to contribute to the conservation and enjoyment of the North Wessex Downs AONB including	areas into the AONB. To maintain and enhance the distinctive landscape character of the North Wessex Downs , to encourage initiatives that facilitate sustainable land management that sustains the special qualities and features of the area & to achieve a shared understanding and recognition of the special qualities of the North Wessex Downs, and the benefits of conserving them, with local communities and businesses.	
Oxford Core Strategy 2026 The Local Plan sets out the policies and proposals for future development and land use in Oxford for the period to 2026.	Planning permission will not be granted for development that fails to safeguard, maintain or enhance features of ecological and geological importance, in particular priority habitats/species and species of conservation concern. The plan makes provision for 8000 new dwellings in the period from 2006-2026.	The Plan should identify sufficient deliverable mineral working locations to provide aggregate for the construction of new homes in the Oxford area. The Plan should identify sufficient waste management locations to provide the capacity to manage the increased waste arisings from the new homes.
West Oxfordshire Local Plan 2011 The sets out the District Council's policies and proposals for development and land use in West Oxfordshire, including measures for the improvement of the natural and built environment and management of traffic. Draft Local Plan 2029	The role of the plan is to protect the existing high quality environment, the heritage and natural resources of West Oxfordshire whilst meeting the social and economic needs of the people who live and work in the area as well as the needs of tourists or other visitors. The plan makes provision for approx 6,000 new dwellings, 2,400 of which will be in Witney in the period to 2011. The plan makes provision for 5,500 new homes (figure under review awaiting outcome of the SHMA)	The Plan should identify sufficient deliverable mineral working locations to provide aggregate for the construction of new homes in the West Oxfordshire district. The Local Plan should identify sufficient waste management locations to provide the capacity to manage the increased waste arisings from the new homes.

Non-statutory Cherwell Local Plan 2011 The plan develops the policies and proposals of the approved Structure Plan and seeks to relate them to precise areas of land. Cherwell Proposed Submission Plan 2006-2031	In determining planning applications the Council will take into account the likely impact of a proposal on the natural and built environment and will seek to enhance the environment whenever possible. The plan makes provision for 8,259 dwellings to be built in the District from 2001 to 2011. The plan makes provision for 13852 houses Housing figures for NW Bicester would be delivered beyond 2031	The Plan should identify sufficient deliverable mineral working locations to provide aggregate for the construction of new homes in Cherwell District. The Local Plan should identify sufficient waste management locations to provide the capacity to manage the increased waste arisings from the new homes.
South Oxfordshire Core Strategy 2027 The Core Strategy guides development in the district and sets out the Council's policies for the use of land.	The plan seeks to protect and enhance the natural and built environment. This includes the protection and, where appropriate, the enhancement, of the landscape the Oxford Green Belt, the historic environment, nature conservation and biodiversity, landscape features and agricultural land.	The Plan should identify sufficient deliverable mineral working locations to provide aggregate for the construction of new homes in the District of South Oxfordshire. The Local Plan should identify sufficient waste management locations to provide the capacity to manage the increased waste arisings from the new homes.
Vale of White Horse Local Plan 2011 The Local Plan's role is to coordinate development at the local level and to set out detailed policies and proposals for the use of land, which will guide day-to-day planning decisions. Vale of White Horse Consultation Plan 2029	The plan makes provision for 5750 new dwellings to 2011, of which approx 3,000 have been built. The plan sets out housing figures of 13,294 houses to be delivered between 2006-2029	The Plan should identify sufficient deliverable mineral working locations to provide aggregate for the construction of new homes in the Vale of White Horse District. The Local Plan should identify sufficient waste management locations to provide the capacity to manage the increased waste arisings from the new homes.

Appendix 3: Baseline Data Review

Oxfordshire Minerals and Waste Local Plan – SEA/SA Baseline Data Review								
Indicator	**Oxfordshire**	**South East**	**England**	**UK**	**Target**	**Local trend**	**Commentary**	**Source**
Population								
Population	655,700	8,000,645		63,182,000		8% growth between 2001-2011		Office for National Statistics
Population density(persons/km²)	2.5/ha	4.5/ha	4.1/ha	n/a			Oxon is the second least densely populated county in the SE (after West Berkshire). The MWDF needs to be aware of accessibility to amenities for a low density population.	2011 census table QS102EW - Population density
Index of Multiple Deprivation	18 of the 404 LSOAs in Oxfordshire were ranked in the 20% most deprived nationally in 2010 (4.5%).					Deprivation is localised and relates to some urban areas [care needed in this statement. Our rural community is concerned that the IMD masks pockets of rural deprivation. In addition, many of	There are some areas of deprivation within the county, such as some wards in Oxford city and in Banbury	DCLG (2007) Indices of Deprivation County Council summaries

						our rural areas score badly on the 'barriers to housing and services domain which forms part of the overall index.		
% of the working age pop(16 to 64 years) in employment	77.1% in June 2013	74.70%	71.30%			This has fluctuated around 76-78% since June 2007		Annual population survey
Population change	8% between 2001 to 2011	7.93	7.88			Slightly above the national and regional trend	Potential impact on demand for waste management facilities and aggregates.	2001 Census Table S001 and 2011 Table QS103EW
Life expectancy at birth for men and women	Males:80.3, Females: 84.1	Males:80.0, Female: 83.8	Males: 78.9, Females: 83.89			Improved life expectancy	There are some significant differences between wards, and between Oxford and the rest of the county.	ONS life expectancy data, http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Life+Expectancies#tab-data-tables

Indicator	Oxfordshire	South East	England	UK	Target	Local trend	Commentary	Source
Biodiversity								
% of SSSIs in favourable condition	44.5	49.4	37.4	45	Govt's PSA target to have 95% SSSIs in favourable or recovering condition by 2010	SSSis in Oxfordshire have all met the PSA target		Natural England, http://www.sssi.naturalengland.org.uk/Special/sssi/report.cfm?category=C,CF
Area of SSSIs in recovering condition	53.2	48	58.8	28	Govt's PSA target to have 95% SSSIs in favourable or recovering condition by 2010		SSSIs in Oxford and W Oxfordshire districts already meet govt target - MWDF needs to avoid neagtive impacts on SSSIs in recovering condition	Natural England, http://www.sssi.naturalengland.org.uk/Special/sssi/report.cfm?category=C,CF & TVERC
% change in number of farmland birds in Oxon	-13%	-21%					Used by government as an indicator of trends in biodiversity	TVERC
Extent of priority habitats	6 SACs, 4 NNRs, 17 LNRs							

Indicator	Oxfordshire	South East	England	UK	Target	Local trend	Commentary	Source
Built and historic environment								
Potential loss or destruction of listed buildings, SAMs, registered parks and gardens and battlefields	**69 entries on the at risk register**	**513 entries on the register**						**http://risk.english-heritage.org.uk/register.aspx?rs=1&rt=0&pn=1&st=a&re=South+East&ctype=all&crit=**
Water Quality & Resources								
Rivers of good biological quality	86.5% in S Oxon, 19% in Oxford	78%		70%	National target of 95% rivers to reach good standard			Environment Agency http://www.sustainable-development.gov.uk/regional/se/30.htm
Rivers of good chemical quality	To be updated 90.1% good quality in S Oxon, 54.3% in Cherwell	55%		62%	National target of 95% rivers to reach good standard		River quality varies greatly between districts.	http://www.sustainable-development.gov.uk/regional/se/30.htm

Indicator	Oxfordshire	South East	England	UK	Target	Local trend	Commentary	Source
Climate Change								
Total CO2 emissions per capita in 2011	6.8		5.6	7.1		Higher than national or regional averages		Oxfordshire Data Observatory: CO2 emissions
Properties at risk from flooding	5491 properties in Oxford	310,000		2 million			M & W development must not exacerbate flood risk in Oxon.	www.environment-agency.gov.uk
Air Quality								
Number of designated AQMAs	nine			223 local authorities have declared at least 1 AQMA		Increasing: 2006 there were 4	Each district carries out monitoring and is required to identify an AQMA if air quality falls below a certain level.	www.oxfordshire.gov.uk

Indicator	Oxfordshire	South East	England	UK	Target	Local trend	Commentary	Source
Transport								
Traffic on non-motorway roads	Between 1996 and 2006, traffic increased by 12,5%					Local trends are in line with national trends, showing a steady increase.	Minerals and waste traffic should seek to minimise miles travelled	National statistics transport statistics bulletin, Oxon data Observatory
Minerals								
10 year sales average as set out in the Local Aggregate Assessment	812000 pa sand and gravel							Local Aggregate Assessment 2013
Use of secondary and recycled aggregates						No local data-nationally increasing figures	Data gap: difficulty in obtaining data from operators	
Sharp sand and gravel sales	550,000 in 2012							Annual Monitoring Survey returns
Sharp sand and gravel reserves	5,835,804 in 2012						Plentiful reserves identified	Annual Monitoring Survey returns

Indicator	Oxfordshire	South East	England	UK	Target	Local trend	Commentary	Source
Waste								
Waste produced	1.5 m tonnes produced in 2011/12							AMR 2012
Amount of MSW landfilled (tonnes)	300,000	4.5m tonnes produced: 76% went to landfill			56,700 tonnes by 2019/2020(EU Landfill Directive 1999)		Amount of waste going to landfill needs to decrease significantly to avoid fines under landfill tax. MWDF needs to identify potential for alternative technologies to dispose of waste.	Oxfordshire Waste Partnership. Environment Agency
Recycled, Composted or other treatment	58.6% of MSW waste produced in 2011/12 was recycled, composted or had some other form of treatment other than landfill.				Recycle or compost at least 55% household waste by 2020	Gradual increase of amount of household waste recycled		Oxfordshire Waste Strategy 2013, Oxfordshire Data Observatory

Indicator	Oxfordshire	South East	England	UK	Target	Local trend	Commentary	Source
Land soils and resources								
Loss of Grade I and Grade II agricultural land						Data gap	This needs to be monitored to see how much BMV agricultural land is lost to minerals and waste development	
Average house price	£332,913	comparator data not given		£253,816		Change in last year: +2.4%. Change in last quarter: 3.6%	Affordability a problem for first time buyers.	https://www.gov.uk/government/statistical-data-sets/live-tables-on-housing-market-and-house-prices.
Economy								
Employment	320,000 total Oxfordshire workforce					Increasing but more slowly than adjoining counties		Oxfordshire Economic Assessment Sept 2012
Number employed in minerals and waste operations	160 minerals 1700 waste	1700 minerals 16,500 waste	13,600 Minerals 106,100 Waste					Business Register and Employment