

Oxfordshire County Council

Non-technical summary of the Interim Draft Sustainability Appraisal Report on the Approach to Site Delivery

Oxfordshire Minerals and Waste Local Plan:

Part 2 – Site Allocations

2020-2031

January 2021

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Introduction

The Oxfordshire MWLP: Part 1 – Core Strategy (hereafter called the Core Strategy) provides the planning strategies and policies for the development that will be needed for the supply of minerals and management of waste in Oxfordshire over the period to the end of 2031. It sets out policies to guide minerals and waste development over this plan period and common core policies which address development management issues relevant to both minerals and waste. The Core Strategy was adopted in September 2017 and has a plan period up to 2031.

The Oxfordshire MWLP: Part 2 – Site Allocations Document (hereafter called the Sites Plan) will identify site-specific allocations for minerals and waste development, within the policy parameters, to meet the minerals and waste requirements, established by the Core Strategy for the period to 2031. As well as allocating sites it will also identify the minerals and waste facilities to be safeguarded, review and determine the extent of Mineral Safeguarded Areas and include any further development management policies that are necessary in relation to the allocated sites.

An initial request for site nominations (for minerals and waste development) was undertaken in January 2018. This was followed by a further request for sites during the Sites Plan Issues and Options (I&O) consultation in August 2018. The Sustainability Appraisal (SA) Scoping Report and Proposed Site Assessment Methodology were also published at this time, alongside the I&O consultation document.

The preferred site options were identified in the Draft Sites Plan (Regulation 18) consultation document which was published in January 2020, alongside the Preliminary Draft SA of Sites Report, Initial Sites Assessment, and other supporting evidence. Additional sites that had been identified after the Draft Plan consultation document had been prepared were also consulted upon at this stage within the Additional Site Consultation (Regulation 18) (January 2020) document.

In light of information received in response to the Draft Plan consultation the Council has decided that additional work is required to ensure that the best available information has been utilised to inform the plan-making process in order to provide robust and sound evidence. This includes reconfirmation with site nominators that their site is available and considered deliverable, reviewing the site assessments, as well as further work on the SA, Habitats Regulation Assessment (HRA), and the Strategic Flood Risk Assessment (SFRA).

It is intended to consult on the Revised Draft Plan (including site assessments) and the Draft SA Report of the Revised Draft Plan and other supporting documents in August 2021. Prior to this occurring it is necessary to appraise the sustainability effects of the approach to site delivery.

This Interim Draft SA Report has been developed to appraise the approach to site delivery and its contributions towards sustainable development, this in turn will act to inform preparation of the Revised Draft Plan, site assessments, and the Draft SA Report of the Revised Draft Plan.

Consultation on the Interim Draft SA Report

Consultation on the Interim Draft SA Report is currently being undertaken (alongside consultation on the Updated Site Assessment Methodology) and has been focused on the required Strategic Environmental Assessment (SEA) Consultation Bodies and other appropriate parties. Consultation commences on 20 January 2021 for a period of eight weeks. The closing date for feedback is 17 March 2021, all responses must be received before 5:00pm on this date. Other stakeholders and the public can also make comments during this time. Responses received will be given due consideration in preparing the Draft SA Report of the Revised Draft Plan.

Sustainability Appraisal

Under the Planning and Compulsory Purchase Act 2004 (the Act), SA is mandatory for Local Development Documents as part of the plan making process. The process of undertaking SA assists planning authorities to fulfil the objective of integrating sustainable development principles into the plan making process. The purpose of the Interim Draft SA Report is to detail the appraisal process and the likely significant sustainability effects of implementation of the Plan and reasonable strategic options. This Interim Draft SA Report was developed to appraise the contribution of this spatial plan towards sustainable development. The approach adopted for this Interim Draft SA Report is largely dictated by Government guidance.

This Interim Draft SA Report was prepared for Oxfordshire County Council (OCC, or the County Council) by Northamptonshire County Council (NCC) alongside the emerging Sites Plan.

The Interim Draft SA Report aims to fulfil requirements of the Act, its Regulations and the SEA Directive, and was produced in accordance with government guidance, including A Practical Guide to Strategic Environmental Assessment (SEA) Directive (2005).

The SA Scoping Report for the Sites Plan was published initially in January 2018, and then in August 2018 with consultation of the Preliminary Draft SA of Sites Report undertaken during January – March 2020. Consultation responses were given due consideration.

The SA process involves five stages, summarised below, including work undertaken so far at each stage.

Stage A: Setting the context and scope

The SA Scoping Report (January 2018 and August 2018) set the context and scope for the Plan, provided a sound base for both the Plan and the Draft SA Report, and sought to satisfy legislative and SEA Directive requirements. This stage also involved Council renewing a request to the minerals and waste industry operators and/or their agents and landholders to put forward site nominations, allowing Council to gauge industry interest in investing in minerals and waste development within the County to identify potential sites.

Stage B: Developing and refining options, and assessing effects

The appraisal of the sustainability effects of the MWLPs key principles (or objectives) and core policies, was assessed through the SA process for the Core Strategy (February 2017).

Local issues and the policy context of the emerging Sites Plan were explored through the (I&O) consultation document August 2018. Following on from the request for site nominations, the identified site-specific options were then appraised through the preliminary SA process. Sites were subject to assessment as per the Proposed Site Assessment Methodology (August 2018).

The preferred site options were identified in the Draft Plan (Regulation 18) consultation document (January 2020). The assessments for all sites, including those not taken forward, were also published within the Minerals and Waste Sites Assessment Report (January 2020). Additional sites that were identified after the site assessment work had been undertaken, and the Draft Plan consultation document prepared, were identified in the Additional Site Consultation (Regulation 18) (January 2020) document.

Public consultation on the Draft Plan and Preliminary SA Report of the preferred site options occurred January – March 2020 and included the required SEA Consultation Bodies and other appropriate parties. Representations received were given due consideration. The scope of the Preliminary SA Report was limited to the appraisal of the site-specific options.

In light of information received to the consultation, particularly in relation to the evidence base, the Council have decided that to ensure a robust and sound evidence base, additional work is required. This includes further work on assessing the sustainability effects of the Plan, including appraisal of the approach to site delivery, which is the main matter addressed through this Interim Draft SA Report.

Stage C: Preparing the SA Report

The appraisal of the sustainability effects of the Plan and its elements were assessed against the SA framework objectives identified through the SA Scoping Report (Amended August 2018).

The purpose of this Interim Draft SA Report is to appraise the sustainability effects of the approach to site delivery. Site-specific elements and any other policies to be set out through the Revised Draft Plan will be assessed through the Draft SA Report of the Revised Draft Plan to be consulted on in August 2021.

Stage D: Consulting on the Plan and the SA Report

Preparation of the Plan and the SA process will be undertaken concurrently.

Following the consultation on the Draft Sites Plan, Draft SA Report and other supporting documents, a Revised Draft Plan and Draft SA Report of the Revised Draft Plan are to be produced, to be consulted on in August 2021. This will then be subject to further consultation (Regulation 19) anticipated March 2022, before submission to the Secretary of State in November 2022.

Stage E: Monitoring implementation of the Plan

Following adoption, monitoring of implementation of the Local Plan (Core Strategy and Site Allocations Plan) will be undertaken by the County Council according to proposals for monitoring set out in the Core Strategy, the SA Report and in accordance with national guidance.

Site Assessment Methodology

The identification of site-specific allocations and designations for minerals and waste development should be based upon a robust and credible assessment of site suitability, environmental capacity, and potential contribution towards sustainable development.

The SA process considers the sustainability effects of implementing a land-use plan at a strategic level. In order to ascertain what potential impacts could arise as a result of minerals and waste development a more focused site assessment method is needed. The site assessment process forms part of both the SA and plan-making process. The SA objectives form the foundation of the Site Assessment Methodology, with the criterion refined to: capture site-specific effects; take account of the policy framework set out through the adopted Core Strategy and other relevant policies; and ensure that the assessment requirements set out through the methodology are appropriate, practicable, and at a level that is proportionate to the plan-making process.

All of the site options will be assessed against the updated Site Assessment Methodology with the results fed back into the SA and decision-making process.

The updated Site Assessment Methodology is being consulted on with the SEA Consultation bodies alongside this Interim Draft SA Report. Comments received will be given due consideration in finalising the methodology.

Oxfordshire's baseline characteristics and key sustainability issues

Oxfordshire covers an area of around 260,800 hectares (ha) and a population of around 692,000 (mid-2019). Although close to London the majority of the county is rural in nature, with around 78% classified as land under agricultural use. The population spread fairly evenly across the five districts of Cherwell, Oxford, South Oxfordshire, Vale of White Horse, and West Oxfordshire. The county features the Chiltern Beechwoods, the limestone grasslands of the Cotswolds, and the lowland meadows of the Thames Valley. There are no National Parks in Oxfordshire or its vicinity, however, there are three Areas of Outstanding Natural Beauty (AONBs) that extend into Oxfordshire, covering around a quarter of the county; including parts of the Chilterns, parts of the Cotswold, and part of the North Wessex Downs AONBs.

Environmental resources and assets

Air quality

Air quality in Oxfordshire is generally good, however there are a number of areas within the county where elevated levels of pollutants have been detected, problems can result from a variety of sources, including traffic and industrial activity. Air Quality Management Areas (AQMAs) have been identified in each of the five districts. There may be potential for air quality impacts from minerals and waste associated

transportation. Dust and odour are of particular relevance to minerals and waste facilities, no widespread issues have been identified, but localised problems can arise. Emissions from waste management facilities are regulated as part of the licensing process by the Environment Agency (EA).

Key issues regarding air quality can be summarised as follows: reducing vehicle movements and potential impacts of emissions associated with road transport; maintaining a good level of air quality in Oxfordshire and meeting air quality targets; avoiding and/or minimising potentially adverse impacts (including dust, odours, and other air emissions) on human health and the environment.

Water resources

Oxfordshire has major rivers the Leach, Windrush, Evenlode, Glyme, Cherwell, Ray, Ock, and Thame and many smaller tributaries that flow through the county and into the Thames, the majority of the county is covered by the Thames Catchment Area. The county has approximately 2,434 kilometres (km) of rivers and streams of which 1,880 km are classified as main river. The Grand Union Canal connects into Aylesbury and Wendover with a disused arm to Buckingham. The quality of both ground and surface water varies across the county, with the county achieving a slightly higher percentage of waterbodies in good status and fewer that are 'poor' or 'bad' when compared to the national figures. Water is becoming an increasingly scarce resource, from both groundwater and river sources, with additional future threats from climate change being predicted. Minerals and waste operations use water as part of their processes and so have the potential to impact on and pollute water resources and disrupt flow through abstraction, runoff or leachate.

Key issues regarding water resources can be summarised as follows: continued improvements to water quality in watercourses; conserving water resources, and prudent use of water, to ensure continued availability; and protecting water resources from adverse effects from minerals and waste development.

Flood risk and climate change

The county faces risks from flooding from a number of sources including surface water, fluvial, and groundwater. Although flooding is not a substantial problem for most parts of the County, there are localised problems of flood risk, and areas where flooding has caused major incidents. There is the risk that future climate change will increase the occurrence of extreme weather events in the county, with increases in mean summer and winter temperatures, increases in mean precipitation in winter and decreases in mean precipitation in summer. Climate change may increase the frequency and severity of flooding in future years.

Oxfordshire's total per capita CO₂ emissions are higher than regional and national averages but is showing a generally decreasing trend between 2005 and 2018 in line with regional and national figures. This is likely to continue as energy efficiency measures, renewable energy production and new technologies become more widely adopted. Transport sources accounted for approximately 45% of the county's CO₂ emissions, although the transport emission figure has fluctuated there has been little change in the amount of emissions, this limited change seems to match a number of authorities who have seen much bigger reductions in emission from industrial and commercial and domestic than has been from transport.

Potential impacts from and on climate change in relation to minerals and waste activities need to be considered, such as the potential for increased vehicle movements from minerals and waste operations contributing to CO₂ emissions levels. Diversion of waste from landfill will assist in reducing methane emissions. Utilisation of heat and energy generated from waste recovery processes should be encouraged.

Key issues regarding flood risk and climate change can be summarised as follows: avoid increasing and, where possible, seek to reduce flood risk (including surface-water run-off rates); reducing greenhouse gas emissions; encouraging sustainable transport movements; and minimising vulnerability and providing resilience to the impacts of climate change in new developments. The following key opportunities were also identified: the restoration of mineral and waste sites could help to alleviate this challenge by increasing water storage in the floodplain. The Oxford Flood Alleviation Scheme will also help to alleviate the risk of flooding around Oxford, and also contribute to the production of sand and gravel in its construction.

Biodiversity and geodiversity

Oxfordshire has a relatively rich biodiversity and geodiversity framework, with numerous sites of biodiversity value in the County, with designations ranging from the international to the local level.

Areas of outstanding natural beauty make up approximately 26% of Oxfordshire's land area. There is also seven Special Areas of Conservation (SAC), 111 biological and geological Site of Special Scientific Interest (SSSIs), and 4 National Nature Reserve (NNR). The condition of the County's SSSIs is: Favourable 45%, Unfavourable - Recovering 53%, Unfavourable - No Change 1%, and Unfavourable - Declining 2% (2017).

Oxfordshire currently has 362 Local Wildlife Sites (5,648 ha) with a further 101 proposed new or proposed extensions to LWS (1,880 ha in total) under assessment, 45 Local Geological Sites (LGS), 20 Biodiversity Action Plan (BAP) habitats of principal importance (as well as BAP species), 15 Local Nature Reserves (LNRs) and ancient woodland and veteran trees. Thirty-six Conservation Targets Areas covering 20% of Oxfordshire have been identified, 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. In addition, the county has approximately 150 legally protected species records and around 260 species recognised as being a priority for conservation.

Ecosystem services provided by ecological networks contribute towards sustainable economic growth and our quality of life, as such it is important to recognise these wider benefits. The protection and enhancement of natural resources and assets is key to retaining these services and benefits into the future. There is an increasing need to balance economic growth and development with the effective protection of the environment.

The key issues regarding biodiversity and geodiversity can be summarised as follows: the need to balance the need for economic growth and development whilst protecting environmental assets (including protected species); potential impacts on

biodiversity value; and the need to ensure high quality restoration and aftercare – options may be constrained by designation of airfield safeguarding zones across much of Oxfordshire, which reduce the risk of bird strike to aircraft, and a lack of available inert fill to restore sites to uses such as reed bed or wet woodland. The following key opportunities were also identified: the restoration of mineral and waste sites offers opportunities for habitat creation and biodiversity gains.

Historic environment

The historic environment contributes towards Oxfordshire's distinct identity and character. Oxfordshire contains many historic buildings, conservation areas, designated parks and gardens, and landscapes, which together make up a valuable part of the county's heritage. The county features nearly 13,000 listed buildings, 2 registered battle fields, nearly 300 scheduled monuments, 56 registered historic parks and gardens, 200 conservation areas, and a World Heritage Site at Blenheim Palace and Park. In addition to these there are numerous archaeological sites and features, many of which are undesignated.

Minerals and waste operations can have significant impacts on heritage assets (and their setting) through visual intrusion/impact and extractive operations affecting archaeological assets.

The key issues regarding the historic environment can be summarised as follows: preventing loss of historic assets or adverse impacts on setting; and delivering growth whilst also protecting and enhancing heritage assets (and their setting). The following key opportunities were also identified: potential to enhance heritage assets through restoration and creating access and interpretation for archaeological assets.

Landscape character

Local landscape character has helped Oxfordshire to maintain a distinct identity and landscape character, which has gradually been formed by people over thousands of years. Landscape Character Assessments have been undertaken across the county and recognise the individual character of particular Landscape Character Areas. Landscape designations include the Chilterns, North Wessex Downs and Cotswold AONBs which cover around a quarter of the County.

Over 13% of Oxfordshire is included in the Oxford Green Belt. Although not a landscape or townscape designation, the Green Belt can have an indirect impact on landscape and townscape by maintaining openness, preventing urban sprawl, and preserving the character of towns. However, it can also result in negative impacts, such as increasing urban development outside of the Green Belt and preserving poor quality landscapes that may benefit from a degree of sensitive development.

The key issues regarding the landscape character can be summarised as follows: preventing loss of landscape features and visual impact; and delivering growth whilst also protecting and enhancing valued landscape – presence of AONBs (3) constrains development options. The following key opportunities were also identified: potential to enhance landscape character and connectivity through restoration.

Land and soil resources

Most of Oxfordshire falls within grade 3 of the Agricultural Land Classification (ALC) Best and Most Versatile (BMV) agricultural land with a higher percentage of the higher quality grade 1 (excellent) and 2 (very good) in the southern half of the

County. Increased growth and development pressures are likely to intensify both landtake and competition for land use. Minerals and waste development have the potential to adversely affect soil resources, including through disturbance and pollution.

The key issues regarding land and soil resources can be summarised as follows: safeguarding the long-term potential of best and most versatile agricultural land and conserving soil resources (including through restoration); and preventing soil contamination.

Communities, health, and well-being

Oxfordshire has a population of around 692,000 (mid-2019), which is expected to increase to just under 802,000 by 2028. The County is made up of the five districts of Cherwell, Oxford City, South Oxfordshire, Vale of White Horse, and West Oxfordshire. The county's main towns are Abingdon, Banbury, Bicester, Carterton, Didcot, Kidlington, Thame, Wantage and Grove, and Witney, along with the city of Oxford. As previously noted the population totals are fairly evenly spread across all five districts, but it is Oxford City that is the most densely populated especially when compared to West Oxfordshire which is one of the least densely populated districts in the South East.

Key locations for growth in existing and emerging local plans are: Science Vale UK at Didcot Garden Town, Wantage, Grove, Culham and Harwell. This area also includes the Enterprise Zones at Milton Park, Harwell Science and Innovation Campus, and Culham Science Centre. Science Vale UK is planned to deliver around 15,000 new homes by 2031 and 20,000 new jobs. Bicester, where further major housing and employment growth is planned, includes the North west Bicester Eco-town planned to deliver up to 6,000 new homes, and for which a masterplan will provide a long-term vision and framework for integrating growth of the town. Oxford, which remains a world class centre of education, research and innovation. Large housing developments (1000+ homes) are also proposed at sites including Banbury, Upper Heyford, A44 corridor at Begbroke-Yarnton, Witney, Eynsham, Carterton, Chipping Norton, Chalgrove, Berinsfield, and Dalton Barracks near Abingdon

This growth will ultimately result in both housing and employment growth, all of which needs to be underpinned by the appropriate infrastructure networks. Minerals will be required to support this growth. This growth will also result in a likely increase in waste arisings that will need to be managed appropriately.

The distribution of age groups within the county is relatively even. Oxfordshire's residents have a higher life expectancy than the national average. General health is predominantly favourable with the proportion of those reporting 'very good' health higher than both South East and nationally averages, and only 1% reporting 'very bad'.

Oxfordshire has generally low levels of deprivation. It is the 10th least deprived of 151 upper tier local authorities in England (up from 11th in 2014) which puts the county well within the top 10% least deprived. However, there is considerable variation across the county, with areas in Oxford City that rank in the 10% most deprived wards nationally with further areas within the county that are among the 10-20% most deprived nationally.

The key issues regarding communities, health, and well-being can be summarised as follows: ensuring appropriate infrastructure, facilities, and services are available to support existing communities and planned growth; providing adequate opportunities and facilities to enable communities and businesses to engage with and take more responsibility for their waste; and ensuring that operational impacts (including transport movements) arising from minerals and waste development does not have unacceptable adverse impacts on communities. The following key opportunities were also identified: minerals and waste development may help to increase access to rural areas, create recreational opportunities, and biodiversity gains; and the Circular Economy and education may help to reduce waste generation.

Economic development

Oxfordshire is linked with strong economic areas (such as London) and is one of the strongest economies in the south east and so is a relatively affluent county that benefits from low unemployment and an average household income higher than the UK average. In general, the workforce is highly skilled, and has higher levels of employment than the national average. The most significant employment sectors in Oxfordshire include education (15.7% of those in employment), retail (14.6%), health (12%), and professional, scientific and technical (11.8%) (2018).

Employment within the minerals and waste industry is amongst the lowest in the county (0.06% employed in the mineral industry). Nevertheless, these industries are considered to be important contributors to Oxfordshire's local economy. Minerals and waste facilities will be required to support development (e.g. through the supply of building materials and handling of waste from construction) and throughout the community's life (e.g. provision of waste management facilities).

The key issues regarding economic development can be summarised as follows: balancing growth, communities, and the environment with economic development and the need for minerals and waste development to support this; increased pressures on natural resources from population growth; the need to and the availability of sufficient land to accommodate economic growth (employment use) whilst also providing for residential, commercial, and industrial needs as well as infrastructure requirements. The following key opportunities were also identified: minerals and waste development could support economic growth through job creation; increasing the amount of recycled and secondary aggregates and waste may help to reduce consumption of primary aggregates and resources; the Circular Economy and education may help to reduce waste generation; and restoration of minerals sites creating recreational and tourism opportunities.

Minerals

Minerals present in Oxfordshire include sharp sand and gravel, soft sand, limestone, ironstone, and Fullers Earth. With the most significant sand and gravels in the Thames Valley and its tributaries Evenlode, Windrush, and Thame. The LAA 2019 identifies an annual provision rate of 0.243million tonnes for soft sand, 1.105 million tonnes for sharp sand and gravel and 0.788 million tonnes for crushed rock.

Soft sand is present in south west Oxfordshire, often in conjunction with limestone. The resources include extensive areas of ironstone that received planning permission for mineral extraction in the 1950s. Such permissions are subject to environmental (Review of Mineral Permissions (ROMP)) legislation that prevents

further working until planning conditions, which accord with up-to-date environmental standards, have been agreed with the Mineral Planning Authority (MPA). Ironstone and limestone are present in the north and west of the county, with a deposit of Fuller's Earth (not currently worked) present in the south-west.

Alternative aggregates (secondary and recycled materials) are also produced within the county. National estimates indicate that around 25% of the overall need for aggregates is met by secondary and recycled materials.

Minerals are essential to support sustainable economic growth and our quality of life. It is important that there is a sufficient supply of material to support growth. As minerals are a finite resource, it is important that they are used prudently and efficiently to ensure that they are not wasted, with mineral resources of local and national importance safeguarded so that they are not needlessly sterilised by other forms of development through. This is particularly of importance in areas experiencing growth and development pressures.

The key issues regarding mineral resources can be summarised as follows: minerals are a finite resource and can only be worked where they are found; predicted growth in the economy and population in the county will increase pressure on natural resources; minerals are essential to support growth however it is necessary to ensure that development does not have unacceptable adverse impacts on the built and natural environment and communities; ensuring prudent use of mineral resources; securing long-term conservation of mineral resources through safeguarding to avoid sterilisation; and ensuring high quality restoration and aftercare. The following key opportunities were also identified: potential to realise benefits to green infrastructure, biodiversity, landscape and environmental enhancements, recreation opportunities, and flood water storage through restoration.

Waste management

It is estimated that in 2018 Oxfordshire produced around 2.1 Mt of waste, made up of municipal (13%), commercial and industrial (C&I) (26%), construction, demolition and excavation (CD&E) (61%). Waste is now increasingly being diverted from landfill (14%) by recycling and treatment (86%). By the end of the plan period (2031) it is estimated that just over 2Mt of waste will be produced within the county.

Oxfordshire is committed to net self-sufficiency but recognises there are imports of waste from other areas. Oxfordshire also exports a small amount of waste for disposal and management elsewhere. Cross-boundary waste movements mostly occur as a result of contractual and operational (network) arrangements.

Waste management (including disposal) is required to support the development of sustainable communities. Population expansion and economic growth in the county will increase waste arisings, this coupled with waste targets will equate to a need for additional waste management capacity.

The key issues regarding waste management can be summarised as follows: reducing waste disposed of to landfill and associated greenhouse gas emissions; predicted growth in the economy and population in the county will increase waste arisings; waste management (including disposal) is required to support growth however it is necessary to ensure that development does not have unacceptable adverse impacts on the built and natural environment and communities; ensuring

prudent use, and recovery of, resources. The following key opportunities were also identified: potential to realise benefits to green infrastructure, biodiversity, landscape and environmental enhancements, recreation opportunities, and flood water storage through restoration.

An updated Waste Needs Assessment is currently being prepared and is expected to be published alongside the Preferred Options consultation in August 2021 and will help to inform the plan-making process.

Transport and land use

There are good road and rail links between Oxfordshire and London, the West Midlands (via the M40), Heathrow Airport, and the south coast ports. However, despite spatial and economic relationships with cities in the east there is a lack of connectivity particularly with the high growth areas of Milton Keynes and Cambridge. However, these links are likely to be strengthened through the east-west rail link and, for road, the Oxford-Cambridge Expressway. The route for the High Speed 2 railway will run through a very small section of Oxfordshire, however, as there will be no passenger stops within the county this is unlikely to directly influence economic patterns. The road network currently experiences congestion in several areas. There are over 4000 km of public rights of way that enable access to the countryside and historic landscapes.

The number and timing of minerals and waste vehicles using particular routes has potential for adverse impacts. Rail is currently used to bring London's waste to be disposed of to landfill at Sutton Courtney landfill. The ability to use the canal for minerals and waste transportation is highly limited by its location.

The key issues regarding transport and land use can be summarised as follows: potential for adverse impact from transport on communities, environment, and the local and strategic road network; minimising road-based movements and encouraging alternative and/or sustainable transport options; constraints on transport movements/routes presented by lack of suitable crossings over the river Thames; and challenges for development options - reflecting the presence of AONBs (3) across the county.

Main strategic options

In conducting SA and SEA, the likely significant effects of implementing the plan and any reasonable alternatives must be appraised. It is normal practice when developing a plan to propose different ways of fulfilling the objectives. The strategic issues explored through the plan-making process include the:

- approach to be taken to delivering sites for minerals and waste development in the county; and
- locations for site-specific allocations.

This Interim Draft SA Report focusses on the approach to be taken in delivering sites and/or broad locations for minerals and waste development in the county. The outcome of this SA process will inform the assessment of site options.

Sustainability issues will continue to be taken into consideration in identifying the preferred approach and developing the Plan. This will occur through the application of the SA framework in assessing the potential effects of the strategic options. This

allows for specific problems and issues within each option to be highlighted. In addition, the options will be compared with each other and with the current economic, social, and environmental characteristics of the area. Through this process, this Report identifies which option is the most appropriate to achieve sustainable development given local circumstances.

Predicting significant effects from implementation of the Plan

The SA framework forms the basis for appraising sustainability effects, and represents relevant sustainability issues including environmental, social, economic, and spatial issues.

Consideration of sustainability issues throughout the development of the approach to site selection to be applied through the plan-making process for the Sites Plan are summarised below.

The main strategic issues and options were identified from the I&O consultation. Following further analysis many of these were pre-determined by the Core Strategy and/or wider policy context and were subsequently screened out from further assessment through the SA process. An additional strategic issue (and options) relating to how the allocation of mineral extraction sites should be distributed within the County was identified through the plan-making process. The strategy derived from this issue would then inform assessment and selection of site(s) to be taken forward through the plan-making process. Options that were screened in included:

- I&O Question 4 - Level of mineral working site provision;
- I&O Questions 7 & 12 - Size of sites for mineral working / recycled and secondary aggregates and waste management facilities;
- I&O Question 14 - Allocations for waste management sites; and
- Additional Question 20 - Distribution of mineral extraction sites.

The strategic options for the above issues were tested against the SA objectives to determine the capacity of the options to contribution towards the SA objectives and sustainable development. This also informed the identification of the preferred approach to be taken forward through the Sites Plan.

The preferred approach identified for the above strategic issues are summarised below:

- I&O Question 4 - Level of mineral working site provision: Consideration of the contribution of site(s) annual production towards the annual provision rates and seeking to make up any shortfall identified through projections of annual sales for permitted sites and potential allocations - even where this would mean allocating more than the total plan requirement (Option b).
- I&O Questions 7 & 12 - Size of sites for mineral working / recycled and secondary aggregates and waste management facilities: Not applying an operational threshold.
- I&O Question 14 – Allocations for waste management sites: Although the identification of a combination of sites and broad industrial and employment land (Option c) was considered to provide the highest capacity for contributing towards the SA objectives. However, when viewed against the backdrop of environmental designations and land use constraints present within the County, the adopted Core Strategy, and growth pressures the options available for identification of

broad industrial and employment land locations does not achieved a significantly distinct outcome than that produced through the combined effect of the adopted Core Strategy (and wider planning framework) and site-specific allocations. This effectively means that the identification of site-specific allocations (Option a) forms the preferred approach to be taken forward.

- Additional Question 20 - Distribution of mineral extraction sites: Allocating one large site coupled with one or two smaller supplementary sites - i.e. apply a hybrid strategy (Option c).

It is believed that the proposed approach offers the most significant contribution towards sustainable development and provides a healthy balance of potential sustainability effects.

The preferred approach(es) to site delivery, have yet to be translated into policy or site-specific allocations at this stage of the plan-making process. The next step is to review and update the site assessments for those sites brought forward through the previous consultation stages; the preferred approach to site delivery will help to inform this process. Where the site delivery approach is translated into Plan policy this will be appraised through the SA process (Draft SA Report of the Revised Draft Plan). However, at this stage it was considered to be more appropriate to reflect the preferred approach through an update to the Site Assessment Methodology as this is the mechanism to inform the site selection process.

Significant effects resulting from implementation of the Plans elements were assessed against the SA objectives in order to determine the overall effect of these in relation to sustainability issues. Many of the SA objectives (and issues or problems) are inter-related and can be captured through consideration under their broader subject areas (environmental, social, economic, and spatial). As such it was seen as unnecessary to undertake assessment against individual SA objectives. Specific sustainability issues and problems were identified and investigated through the appraisal.

The assessment of cumulative effects also assists in the identification of the total effect of both direct and indirect impacts on receptors. The SEA Directive requires the assessment of effects including secondary, cumulative, and synergistic effects. Cumulative effects resulting from implementation of the Plans elements were assessed against the individual SA objectives in order to identify the total effect of both direct and indirect effects on receptors.

The appraisal of significant and cumulative effects resulting from implementation of the approach to site selection, to be applied through the plan-making process for the Sites Plan, addresses all of the SA objectives to varying levels.

Environmental resources and assets (Environmental)

Effects on environmental resources and assets, although complex, can be predicted based on available evidence however the level of confidence in predictions and magnitude of effects is dependent on the nature of development and surrounding environment. The appraisal of the significant and cumulative effects resulting from implementation of approach to site selection to be applied through the plan-making process for the Sites Plan addresses the majority of the SA objectives to varying levels. Environmental effects associated with implementation include cumulative, direct, indirect, secondary, and synergistic effects. The appraisal indicated that whilst

overall the effect was positive, operational effects from individual minerals and waste developments may result in localised adverse effects (dependent on the nature of the operations and receiving environment), however this is balanced by Core Strategy policies for the control and management of development and the protection and enhancement of environmental resources and assets, as well as other regulatory controls.

Communities, health, and well-being (Social)

Effects on communities, health, and well-being are difficult to predict as they are most likely to be qualitative and occur through secondary and cumulative effects. The appraisal of the significant and cumulative effects resulting from implementation of the approach to site selection to be applied through the plan-making process for the Sites Plan addresses all of the SA objectives to varying levels but does not adversely affect social issues. Although there are sources of potential conflict regarding potential adverse impacts arising from the operational of individual minerals and waste developments, the Core Strategy includes policies for the control and management of development. In addition, some facets of operations (e.g. emissions from waste management facilities) are governed by regulatory controls.

Economic development (Economic)

Effects on economic development can be predicted based on available evidence however the level of confidence in predictions, and magnitude of effects, is reliant on industry and market response to the policy context surrounding minerals and waste development and environmental management. The appraisal of the significant and cumulative effects resulting from the approach to site selection to be applied through the plan-making process for the Sites Plan addresses all of the SA objectives to varying levels. The identification of sites for mineral and waste development to support Oxfordshire's growth is likely to result in positive cumulative effects on the economy.

Transport and land use (Spatial)

Effects on transport and land use patterns can be predicted based on available evidence however the level of confidence in predictions, and magnitude of effects, is dependent on the nature of development and the broad landscape context. The appraisal of the significant and cumulative effects resulting from the approach to site selection to be applied through the plan-making process for the Sites Plan addresses all of the SA objectives to varying levels. The appraisal indicated that whilst adverse effects may occur from transport movements associated with minerals and waste development this is likely to be balanced with positive effects occurring in relation to the increased support for alternative and sustainable transport options and measures, minerals and waste development supporting the delivery necessary of infrastructure and facilities to support growth and sustainable communities, and potential for restoration outcomes resulting in environmental enhancements, recreation opportunities, and green infrastructure. The Core Strategy includes policies for the control and management of development. In addition, some facets of operations (e.g. emissions from waste management facilities) are governed by regulatory controls.

Mitigation measures

Measures to prevent, reduce or offset significant adverse effects, or 'mitigation measures' of implementing the Plan must be identified through the SA Report. Mitigation measures can include proactive avoidance of adverse effects, actions taken after effects are noticed, and recommendations for improving beneficial effects.

Mitigation measures - Potential adverse effects

There are limited potential adverse effects resulting from the approach to site selection to be applied through the plan-making process for the Sites Plan, this is because the Core Strategy includes policies for the control and management of development. Minerals and waste developments are also subject to other regulatory mechanisms that ensure such impacts are avoided and/or minimised (e.g. species protection, Habitats Regulation Assessment, emissions and pollution control, etc.).

Potential adverse effects identified through the SA process primarily relate to the implementation of individual sites which have yet to be identified. The level of impact is dependent on the nature of operations and receiving environment. The assessment of preferred site options will be set out through the Revised Draft SA. Mitigation measures to address these uncertainties and potential adverse effects are provided through the Core Strategy, in addition it is proposed that consideration of potential adverse impacts and environmental factors be captured through the Site Assessment Methodology.

Mitigation measures - Beneficial effects

The MWLP seeks to facilitate a steady and adequate supply of minerals and development of waste management capacity to support growth and sustainable communities. The most substantial benefits resulting from implementation of the MWLP are likely to occur as cumulative effects resulting from the interaction of related policies. In order to ensure consistent implementation and increase potential benefits the Core Strategy includes a range of measures for the control and management of development.

Mitigation measures that can be applied to the approach to site selection to be applied through the plan-making process for the Sites Plan to maximise beneficial effects relate to: giving consideration of the existing policy context, balancing need with capacity, and environmental feasibility in accordance with Site Assessment Methodology; taking account of the most up-to-date Waste Needs Assessment and Local Aggregates Assessment; and ensuring appropriate levels of community engagement.

Uncertainties and risks

The main uncertainties and risks identified through the SA process are limitations in terms of availability of quantitative information and subsequently confidence of assessment (where based on qualitative judgement). The process of undertaking SA inevitably relies on an element of subjective judgement. Resources utilised to assist in predicting and assessing the sustainability effects of the Plan include: analysis of the baseline including Plan evidence base documents; identification of the Oxfordshire's environmental, social, economic, and spatial characteristics; identification of key sustainability issues; and professional experience and judgement

(including formation of rational assumptions). These resources have been applied where possible to determine potential effects of implementation of the Plan. It is important to recognise that there exists an inherent risk in all prediction techniques, and as such the worst-case scenario has been assumed throughout the SA process where uncertainty exists.

Monitoring framework

The purpose of monitoring is twofold, as it needs to consider both beneficial and adverse effects. Firstly, it should measure the actual significant sustainability effects of implementing the development plan against those predicted in the SA and measure contribution towards achievement of desired objectives. Secondly, it assists in identification of unforeseen adverse effects and the need to undertake appropriate remedial action. The SA monitoring framework for the MWLP was developed through the Core Strategy SA process and the SA Scoping Report (Amended August 2018), and focuses on significant sustainability effects and seeks to measure indicators that may establish a causal link between implementation of the MWLP and the likely significant effects being monitored.

The County Council is responsible for conducting monitoring on implementation of the Plan, with the District Councils playing a role in monitoring at the local scale relating to residential, commercial, or industrial development. Monitoring should be undertaken in line with the Authority Monitoring Report (AMR), with the SA and MWLP monitoring frameworks linked to ensure efficiency and transparency. Gaps in existing information will be identified so that consideration might be given to how these could be addressed in the longer term.

SA process statement

The application of the SA to the Sites Plan was found to have four main beneficial outcomes:

- Identification of the likely significant sustainability effects (and their interactions) resulting from implementation of the plan and its capacity to contribute towards sustainable development.
- Identification of measures to enhance beneficial effects and mitigate potential adverse effects.
- Further investigation of the baseline situation, local characteristics, and sustainability issues assisted in determining the scope and function of the Plan.
- Testing of the different options for the delivery of the Plan with respect to likely significant environmental, social, economic, and spatial effects. The option that contributed towards sustainable development and presented a feasible approach will be carried forward into the Revised Draft Plan and site assessments. Mitigation measures identified to maximise potentially beneficial effects and mitigate potential adverse effects are provided through the Core Strategy policies.

The appraisal of significant effects assisted in: ensuring that the MWLP (as a whole) captures appropriate mitigation and enhancement measures and includes appropriate monitoring arrangements to measure the actual significant sustainability effects of implementation; assessing the contribution towards achievement of objectives; identification of unforeseen adverse effects; and identifying the need to

undertake appropriate remedial action. The identification of such measures has also assisted in forging links with other plans, policies, and strategies.