

Oxfordshire Minerals and Waste Plan Minerals and Waste Core Strategy

Background Paper revised April 2012

Transportation of Minerals

Note: This background paper was largely prepared prior to publication of the government's National Planning Policy Framework on 27 March 2012 and it has only been partially updated to reflect this new national policy document.

1. Introduction

- 1.1 This background paper is one of a series which together form part of the evidence base for the Minerals and Waste Core Strategy. The Core Strategy is part of the Minerals and Waste Plan that will set out a strategy and policies for where minerals should be worked and where waste should be managed in Oxfordshire over the period to 2030. More information about the plan can be found on the Council's website: www.oxfordshire.gov.uk
- 1.2 The background papers have been used to identify baseline data and inform the preparation of policies for inclusion in the Core Strategy. The papers are intended to present evidence as it stands at this stage. They build on work carried out at the previous preferred options stage, incorporating feedback from that consultation and addressing areas that require further discussion. They also provide an opportunity for stakeholders to check the information to ensure the Council's knowledge and understanding is up to date and robust.
- 1.3 The background papers are 'living draft' documents and may continue to be revised throughout the process of preparing the Core Strategy.
- 1.4 This paper sets out the information which has been collected as part of the preparation of the Minerals and Waste Core Strategy in relation to the transportation of minerals in Oxfordshire.
- 1.5 The paper presents:
 - A brief review of national and regional and local policy on the transportation of minerals;
 - A description of the existing transport network;
 - A description of the main movements of minerals within and beyond the Oxfordshire county boundary;
 - A discussion of strategic issues for the transportation of minerals in Oxfordshire.
- 1.6 This paper is part of the evidence base for the County Council's Minerals and Waste Core Strategy proposed submission document, which includes policy C8 on transport.

2. Executive Summary

- 2.1 Section 3 provides a brief description of national policy, regional transport policy, a regional study and local plans and strategies which inform transport planning policy. It includes sections on references to infrastructure investment in the newly approved Local Economic Partnership bid and in the Great Western Route Utilisation Strategy.
- 2.2 Section 4 describes the existing transport network in the county, concentrating particularly on the strategic and local road network and the rail network. The road network includes the A34, the M40 and the A40. There are four active aggregate rail depots in the county and planning permission for one which has yet to be developed.
- 2.3 Section 5 discusses the main flows and destinations of imports and exports of minerals across Oxfordshire's boundaries. With the exception of the imports of crushed rock by rail from the Mendips and from Leicestershire, all movements are by road transport. It is understood that sand and gravel generally does not travel more than about 25 miles, but some specialist sands are transported further than this.
- 2.4 Section 6 lists the consultation responses received to the previous Preferred Options consultation in 2007 and identifies where these are addressed in this paper.
- 2.5 Section 7 identifies a number of issues for discussion on the transportation of minerals in Oxfordshire. Issues include the current reliance on road transportation of aggregates and the associated environmental impacts of these movements, and the need to locate mineral working as far as possible to minimise mineral miles to markets.

3. Policy context

- 3.1 The Government's transport strategy 'Creating growth, cutting carbon; making sustainable local traffic happen' (2011) seeks to encourage freight to shift to lower carbon modes of transport. Although road transport is likely to remain the main mode for many freight movements, land use planning can help to promote sustainable distribution, including where feasible, the movement of freight by rail and water. The overall aim of national planning policy is to minimise the quantity of materials which have to be transported and the distance they have to travel, with a preference for non-road modes of transport.
- 3.2 Paragraph 16 of Mineral Planning Statement 1: Planning and Minerals (November 2006) (MPS1) seeks to:
- promote and enable the bulk movement of minerals by rail, sea or inland waterways to reduce the environmental impact of their transportation;
 - promote facilities at ports and rail links that have good communications inland, so that bulk minerals can be landed by sea and distributed from ports, as far as practicable, by rail or water;
 - safeguard and promote rail links to quarries where there is potential to move minerals by rail.
- 3.3 In relation to the transportation of minerals, Planning Policy Guidance Note 13: Transport (April 2001) (PPG13) states that:
"Local authorities should seek to enable the carrying of material by rail or water wherever possible"
- 3.4 The government's National Planning Policy Framework (NPPF) was published on 27 March 2012 and has replaced MPS1 and PPG13 with immediate effect. The NPPF states that *"plans and decisions should take account of whether the opportunities for sustainable transport modes have been taken up ..."* (para. 32); and *"plans should protect and exploit opportunities for the use of sustainable transport modes ... therefore, developments should be located to ... accommodate the efficient delivery of goods and supplies"* (para 35). Specifically relating to transport of minerals, the NPPF states that: *"local planning authorities should safeguard existing, planned and potential rail heads"* (para 143).
- 3.5 The Government's white paper on transport (January 2011) seeks to create a transport system that is an engine for economic growth but one that is also greener and safer and improves quality of life in our communities.
- 3.6 The Regional Spatial Strategy, the South East Plan¹, adopted in May 2009 is part of the statutory development plan for Oxfordshire. The

¹ Government Office for the South East (2009) The South East Plan: Regional Spatial Strategy for the South East of England

Coalition Government has stated its intention to revoke all regional strategies, and this is provided for in the Localism Act 2011.

- 3.7 Policy T1 of the South East Plan requires local development documents to ensure that their management policies and proposals should support the function of inter-regional movement corridors.
- 3.8 Policy T11 on rail freight notes that priority should be given in local development documents to providing enhanced capacity for the movement of freight from Southampton to the West Midlands and on the Great Western Main Line. Both these routes pass through Oxfordshire.
- 3.9 Policy T12 on freight and safeguarding requires local development documents to include policies and proposals to safeguard rail depots which are critical in developing the capability of the transport system to move freight, particularly by rail or water and to encourage development with a high generation of freight to be located close to rail freight facilities or wharves.
- 3.10 A study by SEERA² found that the existing rail depot capacity in the South East region is sufficient to handle the forecast growth in aggregates demand. It is recommended that sub-regional policy should enable new rail served depots to ensure and enhance the geographic choice across the South East region.
- 3.11 Network Rail is required to produce Route Utilisation Strategies (RUS) which document the rail network and outlines its strategy for meeting the future need for passenger and freight requirements. The Great Western RUS 2010 covers the network in the southern part of Oxfordshire, as far north as Oxford and Bicester Town, for the period to 2019.
- 3.12 The study notes that for the stretch of line between Didcot and Wolvercote junction, the current infrastructure is sufficient to accommodate current and predicted freight growth subject to the existing level of passenger services remaining constant. Should the level of passenger services increase, then a 'dynamic loop' would be required to enable freight to continue to access Appleford sidings.
- 3.13 Aggregates for the construction industry mainly originate in the Mendips, with others originating from outside the RUS area, and account for much of the freight traffic between the West Country, Oxfordshire and London. The aggregate flows between the Mendips and the South East region are the heaviest freight flows nationally and can reach six million tonnes each year. Continued provision for the importation of aggregates by rail should be made at depots in the county.

² Aggregate wharves and rail depots in South East England, MDS Transmodal Ltd (2009)

- 3.14 Three main transport infrastructure projects are identified in the Oxfordshire city region Local Economic Partnership (LEP) document; the East-West rail link, improvements to Oxford railway station to increase capacity and improvements to the A34 corridor through the county. The document notes that:
'Investing in infrastructure is at the heart of ensuring that Oxfordshire realises its full potential....Aligning infrastructure investment with that made in housing and other development will be another priority.'
- 3.15 The Oxfordshire Local Investment Plan (March 2010) has been prepared by the Oxfordshire Spatial Planning and Infrastructure Partnership and sets out a shared vision and priorities for delivering housing growth, economic development, regeneration, and infrastructure; in other words 'sustainable place making'.
- 3.16 The Local Investment Plan outlines and integrates the plans of Cherwell, Oxford, South Oxfordshire, Vale of White Horse and West Oxfordshire District Councils, Oxfordshire County Council, the Highways Agency, Network Rail, and the Environment Agency to deliver housing and economic growth and associated strategic infrastructure to 2030. Collectively, these plans will begin to meet the requirements of the South East Plan, the Regional Economic Strategy, the five Local Development Frameworks, Oxfordshire 2030, and the five District Sustainable Community Strategies.
- 3.17 The short term (2010-2015) development programme focuses planned housing growth on seventeen housing schemes, which together could deliver over 17,000 new homes, in 11 key urban localities and a twelfth locality which includes all rural areas:
- Abingdon and Faringdon
 - Banbury
 - Bicester & Upper Heyford
 - Botley
 - Didcot
 - Oxford
 - Science Vale UK
 - Thame and Chinnor
 - Wallingford & Cholsey
 - Wantage, Grove & Harwell
 - West Oxfordshire strategic sites
 - Rural housing across Cherwell, South Oxfordshire, Vale of White Horse and West Oxfordshire
- 3.18 Of the infrastructure schemes the following strategic transport schemes were identified as being necessary to support development in the short term:
- Access to Oxford
 - Chiltern Railways Evergreen 3 Project East-West Rail (western section)

- Banbury priority north-south vehicular corridor
 - Bicester Park and Ride Facility
 - M40 Junction 9 improvements
 - SW Bicester perimeter road
 - Transport improvements at and around Bicester
 - Didcot northern perimeter road Phase 3
 - Cow Lane Underpass, Didcot
 - Didcot Parkway station interchange
 - Didcot Parkway (Foxhall Car Park and pedestrian improvements)
 - Accessing Science Vale UK transport package
 - Thornhill Park and Ride, Oxford
 - Grove and Wantage Railway Station
 - Cogges Link Road and Witney town centre enhancement, Witney
 - Cotswold Line redoubling
 - Downs Road A40 Junction, Witney
 - Transport schemes identified through LTP3 process 2011 to 2030
- 3.19 The Minerals and Waste Local Plan was adopted in July 1996 and covers the period to 2006. The Secretary of State issued a Direction on 25 September 2007 that 46 policies in the Minerals and Waste Local Plan continue to be 'saved', including policies SD7 and SD9.
- 3.20 Saved policy SD7 states that:
'Rail head development for the import of aggregates will be encouraged at the following locations shown on the inset maps: Sutton Courtenay, Banbury (2 depots), Kidlington.
Saved policy SD9 states that:
'No development will be permitted which would prejudice the establishment and full use of rail depots identified under policy SD7. Where development is proposed near to a proposed or approved rail depot, uses or buildings sensitive to disturbance from activities at the rail depot will not be permitted.'
- 3.21 The County Council's Local Transport Plan has relevant policies.
- 3.22 The Oxfordshire Local Transport Plan 2006-2011 (LTP 2) recognised that the A34 through Oxfordshire is close to capacity and there is a need to improve rail freight alternatives along the international and inter-regional A34 corridor. Links with other regional hubs, for example East-West Rail and the expansion of Oxford station could also improve capacity for the movement of freight by rail.
- 3.23 The Oxfordshire Local Transport Plan 2011-2030 (April 2011) (LTP 3) cover the same time period as the Minerals and Waste Core Strategy. It states in Policy TC5 that:
'Oxfordshire County Council will identify suitable and unsuitable routes for freight movement, balancing the needs of businesses with protection of the local environment and maintaining the highway network.'

- 3.24 And policy RE2 states that:
'Oxfordshire County Council will ensure that the operation of the transport network balances the protection of the local environment with efficient and effective access for freight and distribution.'
- 3.25 In February 2012, The County Council published Oxfordshire Lorry Routes. This is a map of lorry routes, showing strategic and non-strategic roads; through routes; links to larger and smaller towns; and local access routes. The map also advises where there are height, weight and length restrictions on Oxfordshire roads; and where there are environmentally sensitive areas which should be avoided if possible. The Oxfordshire lorry route map is at Appendix 1.
- 3.26 In summary, national, regional and local policies of particular relevance to preparation of the Core Strategy are:
- to promote movement of aggregates by rail and to safeguard rail depots for aggregate use;
 - to explore the possibilities of moving aggregates by river or canal; and
 - to locate mineral working in order to reduce the distances aggregates have to travel by road to minimise impacts on Oxfordshire's roads, road users, communities and environment.

4. Existing transport network

- 4.1 The strategic road network in Oxfordshire includes the A34, which links the Midlands with the south coast and passes from north to south through the county around west Oxford, the A40, linking Gloucester and Oxford to London and a section of the M40, which passes through the north east of the county, linking London and Birmingham. A map showing the road network in Oxfordshire is at Appendix 2.
- 4.2 In 2009, there were 2268 road traffic casualties on Oxfordshire's roads. An objective of the LTP 3 is to *'reduce casualties and the dangers associated with travel'*.
- 4.3 The Highways Agency has noted that congestion occurs on the A34 at peak times and especially around the Peartree, Milton and Marcham junctions on this road. They have recommended that the level of minerals traffic should not be allowed to increase or to further exacerbate traffic congestion on the A40 and the A34. A map showing the forecast congestion on the strategic road network to 2021 is at Appendix 3.
- 4.4 Policy G4 of the LTP 3 states that:
'Oxfordshire County Council will seek, as a priority, external funding to deliver:
- *improvements to the transport network to develop access to Oxford from other towns and regions;*

- *transport improvements within the Science Vale UK area (Didcot - Harwell - Wantage & Grove); and*
- *transport improvements within and around Eco- Bicester.'*

4.5 Specific projects identified in the LTP 3 include:

- M40 Junction 9 improvements;
- Didcot northern perimeter road Phase 3;
- Banbury priority north-south vehicular corridor;
- Science Vale UK;
- Junctions on Oxford ring road south.

4.6 Oxford lies on the Reading to Birmingham rail line. There is a single track branch line from Wolvercote junction, north of Oxford, to Worcester and a single track branch line from Oxford to Bicester. Didcot lies on the inter-city line from London to Bristol and South Wales. The Chiltern line passes through Bicester on the Birmingham-London Marylebone line. One of the County Council's priorities in the LTP 3 (2011-2030) is the implementation of the East-West rail link from Didcot through Oxford and Bicester. Through their Evergreen 3 proposals, Chiltern Railways plan to develop a new Oxford to London Marylebone service via Bicester. This would include a new station at Water Eaton, on the Kidlington aggregates rail depot site, with the depot being re-located nearby.

4.7 There are a number of rail depots in the county, four of which are for the importation of aggregates. At Hinksey Sidings in Oxford the aggregate is imported for Network Rail's own use. Hard limestone and igneous rock are imported from the Mendips and Leicestershire into Kidlington depot, Appleford Sidings at Sutton Courtenay and Hennef Way at Banbury, all for onward sale via road transport. Planning permission has been granted for a further aggregates rail depot at Shipton on Cherwell Quarry but this has yet to be implemented.

5. Movement of minerals within and beyond the county boundary

5.1 Although national, regional and local policy encourages the movement of aggregates by rail, most aggregates in Oxfordshire are moved by road as they generally travel short distances. It is therefore important to mitigate the impacts of road transport of aggregates on Oxfordshire's roads, communities and environment.

5.2 Soft sand is produced in quarries in the south west of the county and at one quarry in North Oxfordshire. In 2009, the majority of soft sand went to markets in Oxfordshire, although some was exported to neighbouring counties, particularly Wiltshire, Northamptonshire, Buckinghamshire and Warwickshire. All movements are by road.

- 5.3 Average road delivery distances for aggregates in 2008 were 22 miles³. The AM 2009 survey found that the majority of land won sand and gravel extracted in Oxfordshire goes to markets within the county. Where quarries are located close to the county boundary, some aggregates are exported to neighbouring counties. There are established exports of sand and gravel from Caversham quarry to Berkshire (Reading area) and movement of sand and gravel, particularly from Finmere, to Buckinghamshire and Northamptonshire.
- 5.4 Imports of sand and gravel are less well documented although there is anecdotal evidence that at present, significant quantities of sand and gravel are being brought into the county from Wiltshire and Gloucestershire. All movements are by road.
- 5.5 The 2009 survey shows that crushed limestone and ironstone worked in Oxfordshire was exported to neighbouring counties including Berkshire, Buckinghamshire, Northamptonshire, Wiltshire, Warwickshire and Gloucestershire. Small quantities of crushed limestone were exported further afield to Essex, Hertfordshire and South Wales. These movements are all by road.
- 5.6 The only source of hard rock in Oxfordshire is a small resource of Type 1 limestone at Hatford and Shellingford. Crushed hard rock is imported into the county to meet the aggregate industry's need for high quality aggregates, in particular for the road construction and maintenance. It is imported from the Mendips in Somerset and from Leicestershire to four rail depots and onwards to markets by road. There is also anecdotal evidence that crushed rock is imported from Gloucestershire by road.

6. Consultation responses to Preferred Option consultation, 2007

- 6.1 The table below shows the responses that were received on the first Preferred Options consultation paper in 2007, and the actions the County Council intended to take.

Consultation responses to Preferred Options consultation, 2007	Action to be taken
More regard should be had to other plans and policies such as County Council policies on transport	All relevant transport plans will be reviewed in this document
There was general support for the strategy and recognition that it made good use of existing infrastructure	This feedback will be taken into account when the revised preferred options are being drafted.
Workings within the Central Oxfordshire sub region should be identified to minimise transportation distances of minerals to markets	The Central Oxfordshire Sub Region was identified in the South East Plan, which is likely to be revoked when the localism bill is passed. However, the principle of proximity of

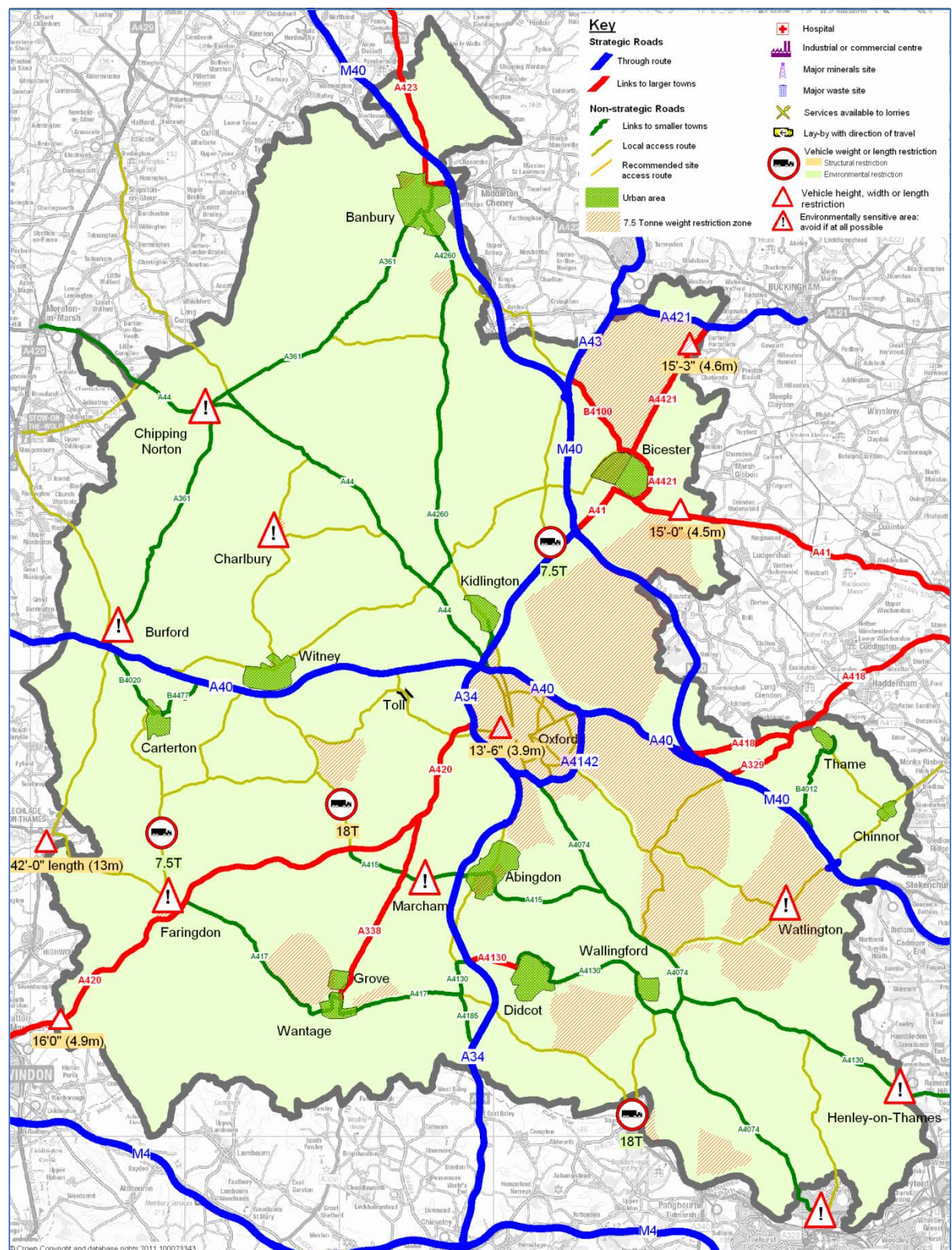
³ MPA (2008) Sustainable Development Update

	mineral workings to markets will be carried forward into the selection of a preferred approach.
Additional rail depots should be identified on the basis of acceptable environmental impact, rather than on the basis of demonstrating that a new facility is needed.	The SEERA document (para 2.9) demonstrates that it is unlikely that further rail depots will need to be identified, unless greater geographic choice is offered by operators.

7. Issues for the transportation of minerals in Oxfordshire

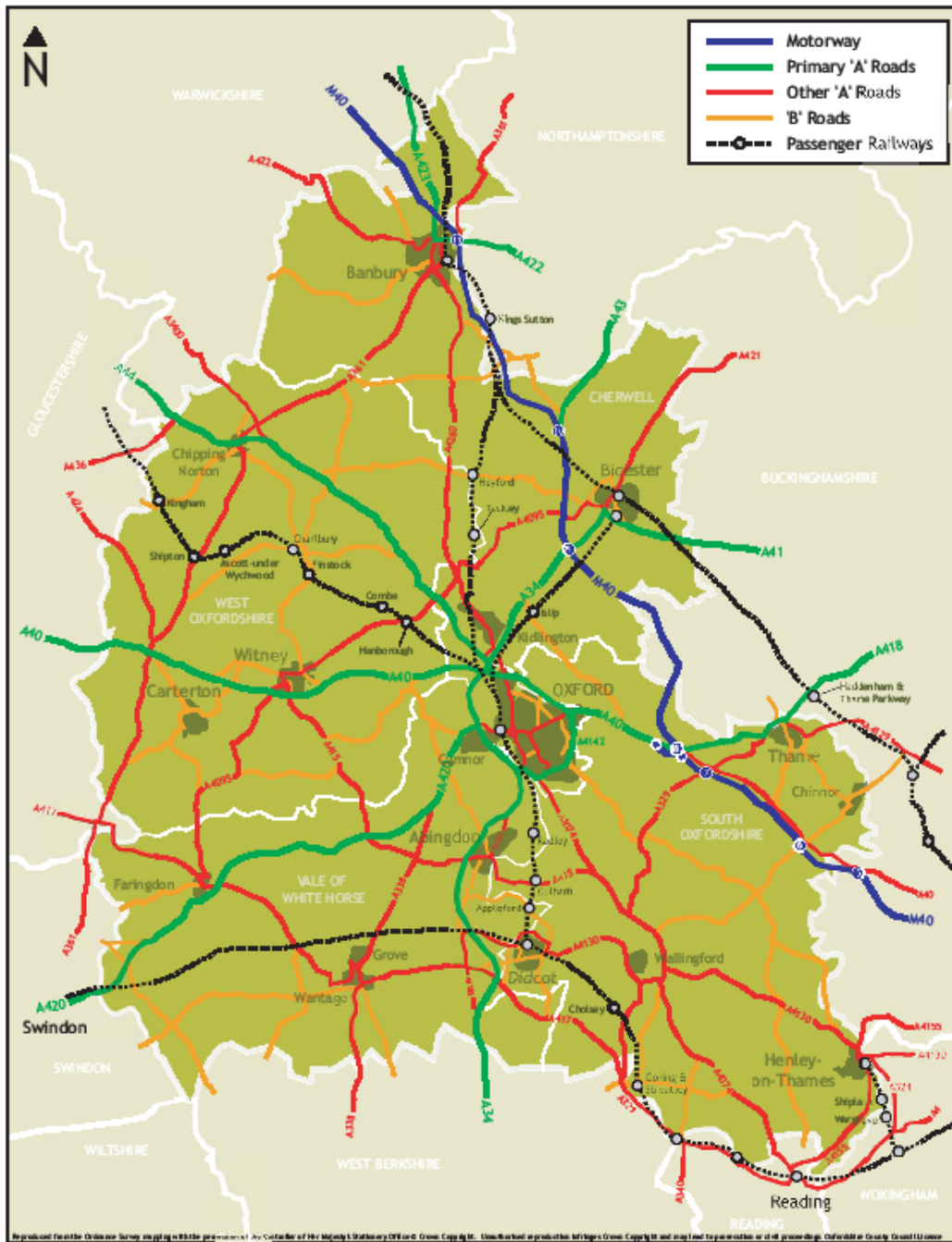
- 7.1 The most common means of transportation of aggregate is by heavy goods vehicles, which has implications for road safety, air pollution, noise, road congestion, road maintenance, the pedestrian environment and carbon emissions.
- 7.2 There are few economically viable alternatives to road transportation. At present no aggregate is moved by barge on the River Thames or the Oxford canal, although this has been suggested in the past.
- 7.3 The majority of aggregate quarries are located in rural areas in the county; transportation of aggregates therefore has the potential to have an impact on rural roads, towns and villages.
- 7.4 Currently, sand and gravel working is focused on west Oxfordshire; there is a need to ensure that mineral working in west Oxfordshire is not increased, to avoid further congestion on the A40, at Wolvercote junction and on the A34. Mineral extraction south and east of Oxford may be necessary to meet the need for aggregates for planned economic and residential development in the Science Vale area.
- 7.5 Access from mineral resource to markets is constrained in some areas of the county by the narrow bridges over the River Thames and weight restriction orders.

Appendix 1: Oxfordshire Lorry Route Map



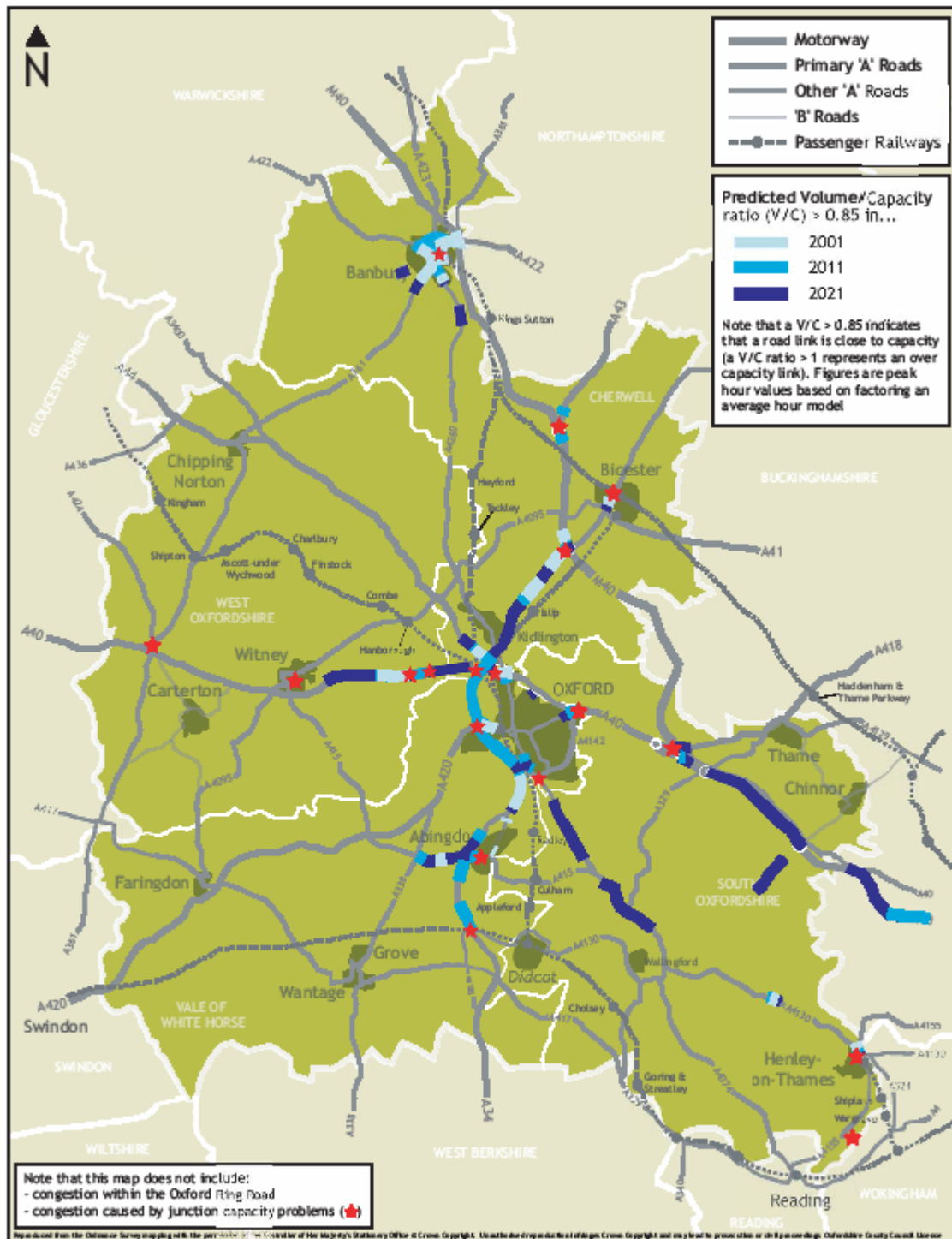
Source: Oxfordshire Lorry Routes (Feb 2012) Oxfordshire County Council

Appendix 1: Oxfordshire Transport Networks



Oxfordshire Transport Networks

Appendix 3: Forecast congestion 2001-2021



Forecast Congestion 2000-2021