Oxfordshire Highways

Cogges Link Road
Environmental Statement

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1 Introduction and Background

1.1 The Environmental Statement

1.1.1 This environmental statement (ES) submitted in conjunction with a planning application (PA) by Oxfordshire Highways contains information on the environmental effects of the proposed Cogges Link Road – see Figures 1 and 2. The environmental statement has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment)(England and Wales) Regulations 1999 (SI No. 293) that came into force on 14 March 1999. The regulations implement the European Directive 85/337/EEC as amended by Directive 97/11/EC, and require that proposals likely to have significant effects on the environment are the subject of an environmental impact assessment (EIA).

1.1.2 Planning applications for proposals that are to be accompanied by an environmental statement may be either listed in Schedule 1 (mandatory) of the Regulations or in Schedule 2 where the competent authority determines that it is necessary to prepare an environmental statement. The Cogges Link Road falls into the latter category as confirmed by the Government Office for the South East (GOSE) in their letter dated 5 February 2003. The letter stated that in the opinion of the Secretary of State having taken into account the selection criteria in Schedule 3 to the 1999 Regulations, the development would be likely to have significant effects on the environment because of its nature and location having regard to the following points:

- **Characteristics of the development:**
  - The use of natural resources;
  - Pollution and nuisances.
- **Location of the development and (environmental sensitivity):**
  - The existing land use;
  - The relative abundance, quality and regeneration capacity of the natural resources of the area;
  - The potential impact on the floodplain;
  - The impact on the amenity value of the site and area;
  - The potential impacts on the archaeology;
  - The potential impacts on the flora and fauna.
- **Characteristics and potential impact:**
  - The extent of impact;
  - The magnitude and the complexity of the impact;
  - The probability of the impact.

1.1.3 The Secretary of State, under Regulation 6(4) of the 1999 regulations directed that the proposed development is 'EIA development' within the meaning of the 1999 Regulations and that any application for planning permission for the development must be accompanied by an environmental statement.

1.1.4 Requirements for the content and coverage of an environmental statement are referred to in Annex 3 of the European Directive 85/337/EEC, in Section 105A of the 1980 Highways Act and in the Environmental Impact Assessment Circular 02/99 published by DETR in March 1999. Further guidance on the

environmental effects that may need to be considered is given in The Department of Transport's Design Manual for Roads and Bridges, Volume 11. This Environmental Statement has been prepared in accordance with these sources of guidance.

1.2 Consultations

1.2.1 Consultations have been carried out with the following organisations during the assessment stages:

- Environment Agency;
- Natural England Thames and Chiltern Team;
- Natural England Peterborough re White Clawed Crayfish;
- West Oxfordshire District Council;
- Witney Town Council.

1.2.2 The following organisations have provided background data and information relating to Cogges Link Road.

- Berks, Bucks & Oxon Wildlife Trust;
- Thames Valley Environmental Records Centre;
- Oxfordshire County Ecologist;
- Oxfordshire County Archaeologist;
- Oxfordshire Badger Group;
- West Oxfordshire District Council (WODC).

1.2.3 The following public utilities have been consulted over the location of their apparatus in the area:

- British Telecommunications;
- Cable & Wireless;
- COLT;
- Environment Agency;
- Fibrenet;
- Fujitsu;
- Gridcom (for Energis);
- National Grid Company;
- NTL;
- Scottish & Southern Electricity;
- Serco Gulf;
- Swedia;
- Thames Water;
- Transco.

1.2.4 The following public utilities from the above are affected by the proposals and have supplied details of the location of their apparatus in the area:

- British Telecommunications;
- Scottish & Southern Electricity;
- Thames Water;
- Transco.

1.3 Structure of the Environmental Statement

1.3.1 The format of this ES is based on the guidance given in the Department of Transport's Advice Note on Environmental Assessment, as amended, which forms Volume 11 of their Design Manual for Roads and Bridges (DMRB).

1.3.2 The ES comprises three elements as follows:

- **Volume 1** describes the existing situation, the published scheme, the environmental effects, the proposed mitigation measures and the alternative schemes considered. Appendix A contains Summary Environmental Impact Tables.
- **Volume 2** contains the reports of specialist surveys and assessments undertaken for the scheme. These surveys have been carried out over a number of years as the scheme has developed. They have all been fully checked to ensure that they remain current and relevant to this ES.
- **Non-Technical Summary** summarises the key points.

1.3.3 Abbreviations used throughout Volume 1 are as follows:

AQMA	Air Quality Management Area
CPRE	Council for the Protection of Rural England
CRTN	'Calculation of Road Traffic Noise' 1988
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
EIP	Examination in Public
ES	Environmental Statement
GOSE	Government Office for the South East
HAP	Habitat Action Plan
OBAP	Oxfordshire Biodiversity Action Plan
OCC	Oxfordshire County Council (NB: OCC is known as Oxfordshire Highways on highway matters)
OXP	Oxfordshire Structure Plan
PA	Planning Application
PPS	Planning Policy Statement
PPG	Planning Policy Guidance
RPG	Regional Planning Guidance
SAP	Species Action Plan
TAG	Transport Analysis Guidance
UKBAP	United Kingdom Biodiversity Action Plan
WCA	Wildlife and Countryside Act 1981
WODC	West Oxfordshire County Council
WOLP	West Oxfordshire Local Plan
ZVI	Zone of Visual Influence

1.4 Availability and Comments

1.4.1 Members of the public or any organisation wishing to formally comment on the ES or to support or object to the planning application are advised to do so in writing, by one of the following methods:

- Letter – Send to Head of Sustainable Development,
  Speedwell House,
  Speedwell Street,
  Oxford, OX1 1NE
- Fax – Send to 01865 810106 marked FAO Head of Sustainable Development
- E-mail – Send to john.hamilton@oxfordshire.gov.uk

1.4.2 In each case communications should be clearly marked **'Cogges Link Road for attention of John Hamilton.'** The date by which comments are required is stated in the Non Technical Summary bound into the front of this ES.

1.4.3 A complete set of planning application documents including the ES may be viewed at the following locations during office hours from the date stated in the Non Technical Summary.

- Oxfordshire County Council,
  County Hall,
  New Road,
  OXFORD
  Tel. 01865 816001

- Oxfordshire County Council,
  Speedwell House,
  Speedwell Street,
  OXFORD
  Tel. 01865 815700

- West Oxfordshire District Council,
  District Council Offices,
  Elmfield,
  New Yatt Road,
  WITNEY,
  Tel. 01993 861000

- Witney Town Council,
  Town Council Offices,
  Market Square,
  WITNEY
  Tel. 01993 704379

1.4.4 They will also be available on the following websites:

- www.oxfordshire.gov.uk
- www.westoxon.gov.uk

1.4.5 A public exhibition will be held in October 2008 in Witney.

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2 History of the Submitted Scheme

2.1 Historical Development

2.1.1 The town of Witney straddles the River Windrush but has only one vehicular crossing of the river, on Bridge Street. The lack of alternatives is a major factor in traffic congestion in the town in particular on Bridge Street, affecting the Conservation Area and Air Quality Management Area (AQMA). The A40 Witney bypass opened in 1977, relieving the problem at the time by removing much of the town's east-west through traffic. However, by the early 1990s traffic flows on Bridge Street exceeded pre-bypass levels and the overall demand on the town's road network continued to increase. This has been exacerbated by recent new developments to the north-east of the town centre.

2.1.2 Cogges Link Road is a proposed town distributor road for Witney, linking Witan Way (via an existing roundabout) to the south of the town centre around the south of Cogges to Oxford Hill on the eastern outskirts of the town. The road has been planned for many years and has been included in OCC's Capital Programme since 1985. The Oxfordshire Structure Plan sets out the framework for provision of motorised travel networks in Policy T6, however no schemes are specifically referenced. It notes that it is the role of the Local Transport Plan to identify network improvement schemes, and that land required for such schemes shall be safeguarded in the relevant Local Plan. In paragraph 4.24 however, the Structure Plan does note the Cogges Link Road as one of two major schemes that are expected to be programmed over the period 2006-2011.

2.1.3 Policy T4 of the West Oxfordshire Local Plan safeguards land for a number of highways schemes, one of which is the Cogges Link Road. It is also noted (Paragraph 9.33) that the Cogges Link Road is one of two road proposals from the 1997 Local Plan which have yet to be built, and comments that without an additional river crossing in Witney there is little opportunity to improve conditions in the Bridge Street area.

2.1.4 In its section on specific strategies for West Oxfordshire, the Oxfordshire Local Transport Plan proposes the Cogges Link Road as a solution to three main problems: congestion, air quality and a poor street environment. It is noted that the new relief road would remove traffic from the town centre and Bridge Street in particular, and should enable traffic management measures to be undertaken which reduce or slow traffic in the historic town centre streets, improving the environmental quality of the central area especially for shoppers and visitors.

2.1.5 Cogges Link Road has been planned, along with other transport infrastructure, to meet the needs of the town arising from development. Specifically, the North East Witney Estate (comprising some 1,200 dwellings) and its associated Distributor Road (Jubilee Way) were both planned in conjunction with Cogges Link Road. The northern end of Cogges Link Road would emerge opposite Jubilee Way at new signal-controlled crossroads. Together with Jubilee Way, the scheme would thus fulfil a "town distributor road" function, taking traffic away from Bridge Street and the town centre / Conservation Area.

2.1.6 The then Witney-Cogges Link Road proposal was presented to the public at an exhibition and public meeting in November and December 1992 respectively. At that time the proposal comprised a new road linking Witan Way to the Stanton

Harcourt Road at Cogges. The consultation process identified considerable public concern about the impact resulting from increased traffic on Cogges Hill Road. This led to the extension of the proposal around the south and to the east of Cogges to join the Cogges Hill Road at the junction with Oxford Hill thereby enabling traffic on the new road to bypass Cogges. Roundabouts were included in the revised scheme to provide a connection to Stanton Harcourt Road for local traffic. The original road alignment was also moved to the south, further away from residential properties and closer to the A40 in order to enable the route to pass beneath the Stanton Harcourt Road immediately to the north of the A40. The OCC Environmental Committee adopted the extended scheme on 3 November 1993. At the time, the western and eastern sections of the scheme were known as Cogges Link Road Stages 1 and 2 respectively.

2.1.7 In September 1994 OCC submitted a planning application with the intention to build in two stages. The accompanying environmental statement considered a number of alternative proposals as follows:

- 'The CPRE Route' - The Witney Branch of the Council for the Protection of Rural England (CPRE) had proposed an alternative to Stage 2 comprising revised access arrangements to Cogges at Stanton Harcourt Road and a revised route to the east of Stanton Harcourt Road running eastwards parallel and close to the A40 before connecting to the B4022 at a new roundabout to the west of the junction with the A40 at Shores Green.
- 'The Newland Link' - The Newland Link alternative would connect Newland to Witan Way at points just to the east of the town centre providing a second river crossing near to the town centre and in close proximity to the Bridge Street river crossing.

2.1.8 Although rejected at the time in preference of Cogges Link Road these alternatives have since been revisited – see below under Chapter 3 - 'Alternative Routes and Selection of Preferred Route.'

2.1.9 During consultation upon the planning application it became apparent that construction in two stages would not be acceptable. In the light of objections to the use of existing roads as an interim route pending completion of Stage 2, it was decided in 1996 to build Stages 1 and 2 in a single phase. Planning consent was granted in January 1997 (OCC Ref. No. W.23/94, WODC Ref. No. AP/SAH/1321/94), however there was insufficient funding available to build the scheme as one contract. The bulk of this shortfall was not secured until contributions towards the scheme had been agreed with the North East Witney development consortium in June 2000. Due to the delay it was not feasible to carry out all the surveys and design work, complete land negotiations and go through a tendering procedure in time to start construction before the expiry of the planning consent in January 2002. OCC considered it an unjustifiable risk to start construction with so many uncertainties outstanding. An application for renewal of planning consent (OCC ref. No. W.21/01) was therefore made in December 2001.

2.1.10 Subsequently the Government Office for the South East (GOSE) issued a Screening Direction requiring an environmental statement to be submitted with the planning application, which in turn required an environmental impact assessment to be undertaken. As a result a start was not made within the timescales set out in the conditions to the consent and the consent lapsed. A Compulsory Purchase Order and Side Roads Order were served for the consented scheme but were subsequently withdrawn.

2.1.11 After this point, OCC carried out a full appraisal of the Cogges Link Road proposal; firstly to consider potential variations to the most recent design (essentially unchanged from the 1997 planning consent) and secondly to consider potential alternatives to Cogges Link Road. This work led to an amended version of the scheme known as Cogges Link Road V3 for assessment against alternatives. Details of this process and of the Cogges Link Road V3 are given below under Chapter 3 'Alternative Routes and Selection of the Preferred Route' and Chapter 5 'The Submitted Scheme' respectively.

2.1.12 A planning application supported by an environmental statement was subsequently made in 2004 for this scheme; however this application was withdrawn pending the outcome of the West Oxfordshire Local Plan Inquiry.

2.1.13 The Local Plan for the period up to 2011 was adopted in June 2006 and safeguards the CLR route. The Structure Plan (to 2016) notes the CLR as one of two major schemes to be programmed in the period 2006-2011, and there are several policies promoting the route in the Local Transport Plan of Oxfordshire County Council (2006-2011).

2.1.14 In recognition of the issues raised in the report of the inspector for the West Oxfordshire Local Plan Inquiry recent work prior to submission of this planning application has comprised:

- Further development of the CLR proposal to reduce environmental impacts, although the route and overall nature of the scheme is unchanged;
- Updating of previous specialist surveys where appropriate for the passage of time;
- Outline design and site surveys for a possible alternative scheme comprising the construction of west facing slip roads at the Shores Green junction of the A40 (this scheme is not identified within the Local Plan) ;
- An updated preliminary environmental impact process identifying benefits and disbenefits of the various alternatives.

2.2 Timeline

2.2.1 The history of the Cogges Link Road can be summarised as follows:

1985	Witney-Cogges Link Road included in OCC Capital Programme.
1987	Witney-Cogges Link Road Stage 1 (Witan Way to Stanton Harcourt Road) included as part of Adopted Local Plan.
1992	Public consultation on Witney-Cogges Link Road Stage 1.
1993	Following public consultation on Stage 1, Stage 2 (Stanton Harcourt Road to Oxford Hill) added as part of OCC's preferred option.
1994	Application for planning consent with intention to build in two phases.
1996	Decision to combine Stages 1 and 2 as a single construction contract.
1997	Planning consent granted.
2000	Negotiations for additional developer contributions concluded. Detailed design commenced.

2001	Application for renewal of planning consent.
2002	Planning consent expired.
2003	Screening Direction from GOSE requiring the preparation of an environmental statement to support a planning application.
2003	Work commenced on assessment of potential variations to Cogges Link Road and potential alternatives.
2004	Environmental impact assessment and submission of planning application accompanied by an ES.
2004	Planning application withdrawn pending the outcome of the WOLP Inquiry.
2006	Updating of previous specialist surveys.
2006	Outline design and surveys for the Shores Green Slip Roads option.
2007-2008	Environmental impact assessment, detailed flood risk assessment (to PPS25) and submission of planning application accompanied by an ES.

3 Alternative Routes and Selection of Preferred Route

3.1 Route Selection Process

3.1.1 The route selection exercise undertaken at the beginning of the environmental assessment process comprised three key stages:

- An initial screening comprising an analysis of Cogges Link Road and its potential alternatives, which met basic design requirements. All schemes were assessed on their performance in reducing traffic passing through the Conservation Area and the Air Quality Management Area (Bridge Street and the town centre). This resulted in a short list of four alternatives, or combinations of alternatives, to be taken forward for further analysis. Further details can be found in the 'Options Report' included in Volume 2A of this ES.
- A full assessment providing a more detailed comparison of the short listed alternatives, identifying a preferred scheme and a next best alternative to be taken forward for full Transport Analysis Guidance (TAG) appraisal. Further details can be found in the 'Options Report' included in Volume 2A of this ES.
- A TAG appraisal of the preferred scheme and the next best alternative. Further details can be found in the 'TAG Analysis Report' included in Volume 2A of this ES.

3.1.2 From the traffic analysis at all stages, Cogges Link performed sufficiently well against the project objectives to be taken forward to the next stage and was eventually selected as the preferred route. Cogges Link Road was the only scheme that catered for all local traffic destined for the commercial area of the town.

3.1.3 The initial screening considered alternatives alone and in combination. The alternatives assessed were as follows:

Stand Alone Alternatives

- Do Minimum (Do nothing base condition);
- Cogges Link Road;
- Shores Green Interchange With Full Access;
- West End Link Phase 2 (N).

Combinations of Alternatives

- Cogges Link Road + Shores Green;
- Shores Green + West End Link Phase 2 (N);
- Cogges Link Road + West End Link Phase 2 (N);
- Cogges Link Road + Shores Green + West End Link Phase 2 (N).

3.1.4 Brief summaries of the alternative schemes are as follows.

3.2 Cogges Link

3.2.1 The Cogges Link V3 as defined in the 2004 planning application. This included the following value engineering changes from the original 1997 scheme: the

deletion of the roundabout and connection to Stanton Harcourt Road; the omission of street lighting except at the junctions at either end. The road would link Witan Way (via an existing roundabout) to the south of the town centre to Oxford Hill on the eastern outskirts of the town ending opposite the southern end of Jubilee Way on Oxford Hill at a new signal-controlled crossroads. The road would cross the two branches of the River Windrush to the east of the town. A footway/cycleway would also be provided between Witan Way and Cogges. (See also Chapter 5 'The Submitted Scheme').

3.2.2 The principle of the scheme is included in the Adopted Structure Plan (to 2016), and the Local Transport Plan 2006-2011, and the route is safeguarded in the West Oxfordshire Local Plan. Cogges Link forms a critical part of the Oxfordshire Development Plan highway network for Witney, in conjunction with other schemes, with the aim of relieving the congested town centre road network. Cogges Link has been planned along with other transport infrastructure to meet the needs of the town arising from development, in particular the North East Witney Estate and Jubilee Way, both of which were planned in conjunction with Cogges Link.

3.3 Shores Green west-facing slip-roads (refer to Figure 3)

3.3.1 The Shores Green alternative comprises the addition of single lane west facing slip roads to supplement the existing east facing ones to provide an all-movements interchange with the A40. Construction could not be contained within the existing highway boundary but there would be no need for bridging structures. There would be no additional footways or cycleways.

3.3.2 Although suggestions for an all movements interchange at Shores Green have been made in the past these were rejected by the Highways Agency who had responsibility for the A40 due to its trunk road status. Improvement to Shores Green interchange does not feature in the Development Plan and has only emerged more recently as a potential scheme following the detrunking of the A40 in 2003.

3.4 West End Link Phase 2 (N)

3.4.1 The proposed route of the link road is a continuation of the southern section (Phase 1). It would run north eastwards from Mill Street (A4095) approximately 400m west of Bridge Street crossing the River Windrush and terminating at West End (B4022). The link road would comprise a single lane two-way carriageway accompanied by a 3m wide cycleway and a 2m wide footway. As no detail design has been carried out, for the purpose of assessment it has been assumed that the junctions at each end of the link would be signal controlled.

3.4.2 West End Link Phase 2 (N) (and Phase 1(S)) forms part of the future transport infrastructure for Witney identified in the Development Plan. That is to say, it is included in the County Structure Plan, West Oxfordshire Local Plan and the Local Transport Plan (where it is identified as a developer funded scheme in the capital programme). West End Link Stage 2(N) is therefore essentially a complementary scheme to Cogges Link, rather than a substitute. However, West End Link Phase 2 (N) has also been included as a potential alternative to Cogges Link (stand alone or in combination with other alternatives) in order to meet environmental impact assessment requirements to consider all possible alternatives.

3.5 Initial Screening

3.5.1 To inform the initial screening (and subsequent stages), detailed traffic analysis was undertaken on the individual schemes and scheme combinations. To ensure this work was as robust as possible, the SATURN traffic model for Witney, which covers the am and pm peak hours, was updated and revalidated to a new base year of 2005 – see 'Traffic Model Forecasting Report' included in Volume 2A of this ES. From this base, forecast models for the build year (2011) and design year (2026) were created for each scheme, incorporating all known developments in the study area.

3.5.2 For the screening analysis, the 2011 traffic impact of each alternative was assessed by comparing traffic flows through two key cordons with those in a Do Minimum scenario. Reference case growth between 2005 and 2011 was derived using the latest TEMPRO dataset available at the time. The cordons assessed were:

- Traffic flows passing through the Air Quality Management Area (AQMA), centred around Bridge Street;
- Traffic movements passing through the Witney Conservation Area, as defined by the Local Plan;

3.5.3 Total flows through these cordons were calculated for each alternative, together with a percentage change from the Do Minimum scenario. The range of impacts identified enabled scores to be derived for the alternatives. These were then ranked to help determine which should be carried through to further assessment. The Cogges Link Road and Shores Green slips were the two best-performing individual schemes, both resulting in a net reduction in traffic movements through the two cordons. The West End Link Stage 2 (N) performed the poorest individually, but when combined with either of the other two schemes, it did show some benefit, particularly in the AQMA.

3.5.4 Following the initial screening, the Cogges Link Road and Shores Green (Figure 3) schemes were taken forward for more detailed analysis, along with a possible scenario in 2026 only in which the West End Link Phase 2 (N) is added to either scheme. Full details are provided in the 'Options Report' included in Volume 2A of this ES.

3.6 Assessment of Alternatives

3.6.1 The four potential alternatives identified via the initial screening were assessed against the following broad criteria in line with central government requirements:

- Environment;
- Safety;
- Economy;
- Accessibility;
- Integration.

3.6.2 The assessment used a framework approach derived from the Transport Analysis Guidance (TAG) recommended by central government for the appraisal of transportation projects. Full details are given in the 'Options Report' in Volume 2A of this ES.

3.6.3 The two individual schemes that scored best overall were Cogges Link Road

and the Shores Green Full Interchange. The West End Link Stage 2 (N) option performed poorest in traffic terms, primarily because of the impact of trips passing through the Conservation Area cordon. Combinations including this link however, demonstrated enough overall improvement to suggest a more detailed analysis with this link added to the 2026 forecasts would be worthy of analysis, particularly given the long-term aspiration to complete the West End Link.

3.6.4 The traffic analysis element of the assessment of alternatives was more comprehensive, allowing comparison of both schemes at different stages as a series of complementary measures was added. These measures are designed to encourage use of the chosen scheme and discourage use of less appropriate routes, such as Bridge Street. In the Do Minimum scenario, no complementary measures are included as there is, by implication, no scheme to be complemented. The analysis built upon that used in the screening of alternatives by identifying “cost flows” and “benefit flows” to show the net impact of each scheme. Benefit flows are those using the scheme links, i.e. Cogges Link Road, Shores Green slips or West End Link Phase 2 (N). Where such flows were identified as being to or from the town centre, they accrued additional benefits. Conversely, cost flows were those using the existing river crossings in Bridge Street and Dry Lane.

3.6.5 Overall, the Cogges Link Road consistently outscored the Shores Green alternative in the analysis of cost and benefit traffic flows. This is detailed in the ‘Traffic Model Forecasting Report’ included in Volume 2A of this ES. One of the key conclusions of this work was that the Cogges Link Road caters for town centre traffic far more than the Shores Green alternative. This pattern continues in 2026, even with the West End Link Phase 2 (N) in place. One of the key intersections in the town is the A415 Ducklington Lane / Station Lane traffic signals. Even with the MOVA (Microprocessor Optimised Vehicle Actuation) system implemented as a complementary measure at this junction, a significant level of traffic using Shores Green would encounter greater delays here in reaching the towns centre than if it had continued to use Bridge Street. Thus, the levels of traffic diverting to use the Shores Green scheme are significantly lower than those using the Cogges Link Road, primarily because of the poorer access to the town centre that it affords, but also because of a low level of through traffic demand.

3.6.6 As a result of the assessment of alternatives, including the initial environmental assessment exercise described in the Options report, and the full traffic modelling exercise detailed in the Traffic Model Forecasting Report, it was recommended that Cogges Link be promoted as the preferred scheme, with Shores Green to be considered as the next best alternative.

3.7 Transport Analysis Guidance (TAG) Appraisal

3.7.1 Cogges Link (Preferred Scheme) and Shores Green Interchange – Full Access (Next best alternative) were taken forward to the final stage of comparative analysis. The TAG approach covers sub-objectives in five categories (paragraph 3.6.1) including, (amongst other factors) – Noise; Local Air Quality; Greenhouse Gases; Landscape; Townscape; Biodiversity; Predicted Changes in Accident levels; Economic Efficiency and Integration with Land Use Policies. Scheme costs were also identified. Full details are given in the ‘TAG Analysis Report’ in Volume 2A of this ES.

3.7.2 The Cogges Link Road and the Shores Green alternatives both have negative environmental impacts. Cogges Link Road has the most significant impact being associated with highway construction across the historic floodplain (which can be mitigated but not avoided due to the extensive presence of floodplain in the area) and potential impact on the habitat of the dormouse, a protected species under European Law, which again can be mitigated. The Shores Green scheme fares slightly better in some other environmental categories (for example in terms of greenhouse gas emissions) but in most cases the impacts are comparable. The TAG methodology assesses alternatives against an Economy objective, relating to costs to Government and benefits to users, the latter being related to traffic benefits. The two alternatives score similarly on user benefits with Cogges Link slightly better, whereas in terms of costs to Government Cogges Link is significantly ahead due to the availability of developer contributions. The appraisal also recognised that the Shores Green alternative does not form part of the Development Plan.

3.7.3 The total scheme cost of Cogges Link is estimated at £16.4 million with the cost of Shores Green being lower at around £7 million (all figures are now at 2007 prices). A significant proportion of the scheme costs for Cogges Link, in the region of £11.8 million, can be funded from existing developer contributions (primarily from the North East Witney housing development in recognition of its clear links to the proposed scheme). The developer contributions available towards the Shores Green alternative are much lower at around £2.2 million, and the deliverability of Shores Green is potentially disadvantaged, given these funding issues. Nevertheless in addition to the contributions held, there may be, as development proposals come forward, opportunities to secure further developer contributions. Due to the relative simplicity of the Shores Green scheme construction might be possible comparatively early but it would achieve little traffic relief on its own.

3.7.4 The assessment of alternatives process concludes that on balance the slightly greater environmental disbenefits of Cogges Link as compared with the Shores Green alternative are outweighed by the benefits Cogges Link would bring in delivering policy aims and wider economic objectives. In particular, the relatively short timescale for completion enables an early solution to town centre traffic problems and the relationship with the Jubilee Way, which in turn would allow traffic to move freely around the eastern side of the town and access to the commercial area south of the town centre.

4 Need for the Submitted Scheme

4.1.1 The lack of alternative river crossings within Witney is a major factor in traffic congestion in the town in particular on Bridge Street (the sole town centre river crossing), at the Staple Hall junction and within the Conservation Area (CA), particularly at peak times. Although the A40 Witney Bypass carries much of the town's through traffic the traffic flows on Bridge Street (currently on average in the region of 30,000 vehicles per day) exceed pre-bypass levels and the overall demand on the town's road network continues to increase. Bridge Street, a narrow single carriageway road in Witney town centre, currently provides the only crossing point over the River Windrush for traffic accessing Witney town centre and for through-traffic moving in a northeast/southwest direction from the A40 through to the A4095. During peak hours this leads to considerable congestion at the junctions of Mill Street and Bridge Street together with Bridge Street and Newland junction, with the stop-start traffic conditions leading to an increase in vehicle exhaust emissions. The roads adjacent to Bridge Street are bounded by properties which are located immediately at the back of the footway. This leads to canyon like conditions which restrict the dispersion of road traffic air pollutants, such that this area was declared an Air Quality Management Area (AQMA) in March 2005.

4.1.2 The slow moving traffic also contributes to increased noise emissions from vehicles, as noise generated by the engine, exhaust system and transmission is the dominant noise source when traffic is not freely flowing. This is particularly apparent for heavy vehicles, when accelerating, braking or changing gears, and this contributes to a significant proportion of low frequency noise and vibration nuisance to adjacent properties. These traffic problems in Witney town centre have been evident for some time and a number of policies in the OCC Structure Plan and the WODC Local Plan are directed towards town centre improvements, in particular relief from road traffic accessing the town centre and sections of the High Street along this route.

4.1.3 The reduction of traffic flows in the town centre is a high priority to reduce the impact of noise and poor air quality and to enable environmental improvement within the CA. It is also a national policy requirement to reduce pollution levels in the AQMA.

4.1.4 Pressure on the town's road network continues to increase. The single river crossing within Witney is a major cause of town centre traffic congestion, particularly on Bridge Street, which is used by around 30,000 vehicles per day. Although alternative modes of transport are encouraged the principal means to significantly reduce traffic flows in the affected areas would be the provision of alternative river crossings. This would reduce the pressure on Bridge Street and provide alternatives for traffic movements within the town, particularly to the commercial areas south of the town centre.

4.1.5 Provision of an additional river crossing would enable traffic management measures to be implemented in Bridge Street and would reduce traffic movements through this sensitive corridor, which is part of the AQMA and within CA.

4.1.6 Cogges Link forms a critical part of the Oxfordshire Development Plan highway network strategy for Witney and has been planned for many years in conjunction with other schemes. The aim of the strategy is to relieve the congested town

centre road network, especially Bridge Street, as well as meeting the needs of the town arising from both recent and planned development. Specifically, the North East Witney Estate (presently under construction and comprising some 1,200 dwellings) and the associated Distributor Road now known as Jubilee Way were both planned in conjunction with Cogges Link. Together with Jubilee Way, the Cogges Link would fulfil a "town distributor road" function, taking traffic away from Bridge Street and the town centre/CA/AQMA.

4.1.7 Table 3.1 presents the current traffic flows across Bridge Street in rush hour (both morning and evening), and how these are predicted to change over time in the absence of the scheme. The flows shown are 'demand flows'. This means that they show the amount of traffic that is using the link, plus any that is queued up elsewhere, intending to use the link (but unable to do so at that time due to the volume of traffic). It can be seen that in the Do Minimum situation, traffic across Bridge Street is expected to increase substantially by 2026, and the average traffic speed is predicted to fall significantly, particularly in the evening rush hour for vehicles travelling southbound.

Table 3.1 Traffic flows in rush hour on Bridge Street: Current and Predicted

		Bridge Street Northbound		Bridge Street Southbound	
		Traffic flow (PCU)*	Speed (kph)	Traffic flow (PCU)*	Speed (kph)
2005	am (0800-0900)	987	23	1580	30
	pm (1700-1800)	1215	24	1185	32
2011	am (0800-0900)	1176	32	1688	25
	pm (1700-1800)	1348	24	1321	6
2026	am (0800-0900)	1288	32	1860	26
	pm (1700-1800)	1538	24	1449	5

** Passenger Car Units (PCU) is a measure of the traffic flow across Bridge Street. A PCU can be regarded as a measure of the relative space requirement of a vehicle compared to that of a passenger car. So, if a vehicle has a PCU value of 3.0, it needs three times more space than a car or every addition of this vehicle type is equivalent to addition of three cars to road. This means that if there are a greater number of buses or lorries travelling, the PCU will increase (rather than just counting the number of vehicles)*

4.1.8 The Traffic Modelling Forecast Report in Volume 2a demonstrates that there would be an associated reduction in motor vehicle accidents attributed to the implementation of the Cogges Link Road when compared to the same period for the Do Minimum approach. The COBA analysis also gives consideration to pedestrian and cycle movements which are also benefited by the scheme. . Figures 4 and 5 show the locations of cycle, pedestrian and car accidents in Witney between January 2003 and December 2007.

4.1.9 The proposed scheme would improve the environment in the town centre by reducing the amount of traffic. It is recognised that in achieving this, the proposed scheme would have environmental effects on the area around it. This Environmental Statement has been produced which identifies what the impacts would be and shows how adverse impacts would be dealt with by means of appropriate mitigation measures. It also shows where it has been possible to provide enhancement as part of the scheme. The scheme is considered to provide significant benefits for Witney and its surrounding area, whilst only giving rise to residual impacts of a local scale, as well as allowing some enhancements in specific areas.

5 Submitted Scheme

5.1 Introduction

5.1.1 The submitted scheme for the Cogges Link Road consists of a new road connecting Witan Way to Oxford Hill around the south of Cogges – see Figures 1 and 2.

5.1.2 The Cogges Link Road would connect to the existing roundabout at Witan Way/Station Lane, creating a new 4 leg roundabout. New traffic signal controlled junctions would be created at Oxford Hill/Jubilee Way and at Cogges Hill Road.

5.1.3 The gross cost of the scheme at autumn 2007 prices is £16.35m, but with held developer contributions totalling £11.8m the net cost of the scheme (from the County Council capital allocation) would be £4.59million.

5.1.4 The submitted scheme is located within the administrative areas of Oxfordshire County Council, -West Oxfordshire District Council and Witney Town Council.

5.2 Main Alignment

5.2.1 The scheme design speed is 70kph (40mph).

5.2.2 The Cogges Link Road would be a 7.3 m wide single carriageway with widening at the junctions with Witan Way, Cogges Hill Road and Oxford Hill.

5.2.3 An unsegregated footway/cycleway 3.0m wide would be provided between Witan Way and Stanton Harcourt Road, elsewhere there would be a 3.5 m wide verge widening to 5.5m on the inside of the curve between Ch 1000 to Ch 1480 for forward visibility.

5.2.4 From Witan Way the Cogges Link Road rises steadily on an embankment to a crest between the two branches of the River Windrush. The road continues on embankment across the historic flood plain falling gradually to the low point by Stanton Harcourt Road. A new under bridge would be provided beneath Stanton Harcourt Road. Cogges Link Road would continue in an easterly direction in cutting to the south of Cogges, parallel to the A40 for approximately 200metres before heading northwards around the southeast of Cogges, where the carriageway would climb continuously in a combination of natural and false cuttings towards the junction at Oxford Hill – see Figure 7.

5.3 Side Roads

5.3.1 The junction of Cogges Hill Road and Wadards Meadow would be reconfigured as part of the traffic signal controlled junction with the Cogges Link Road.

5.3.2 The existing Cogges Hill Road between Wadards Meadow and Oxford Hill would be converted to a shared use footway and cycleway.

5.4 Footways and Cycleways

5.4.1 An unsegregated footway and cycleway would be provided adjacent to the north side of the carriageway between Witan Way and Stanton Harcourt Road. The

route would divert north into Cogges to the west of Stanton Harcourt Road – see Figure 2.

5.5 Public Rights of Way

5.5.1 There are four Public Rights of Way affected by the Cogges Link Road – see Figure 2:

- Footpath No. 7 (Witney);
- Footpath No. 8 (Witney);
- Footpath No. 15 (Witney);
- Footpath No. 41 (Witney).

5.5.2 Related impacts and mitigation are described in more detail in Chapter 16.

5.6 Private Means of Access

5.6.1 The private means of access to the pumping station off Stanton Harcourt Road would be altered to accommodate the proposed cycleway / footway connection to the Cogges Link Road.

5.6.2 The existing access to the country park over part of Footpath No.15 between the main branches of the River Windrush would be retained; however a 200 m length of the footpath would be realigned through the bridge opening.

5.6.3 Access to the pumping station and Country Park would be maintained at all times during the construction of the works.

5.6.4 New private means of access A-F would be provided at the following locations to allow access to parcels of Land isolated by the Cogges Link Road – see drawing B0834600/Dwg/PA/CLR/03:

a) Access to OS parcel No. 0004 south of the Cogges Link Road between the branches of the River Windrush. This would be used for occasional access for management of the country park and maintenance of the bridges over the Windrush;
b) Access to land south of the Cogges Link Road, east of the river Windrush. This would also be used for access for maintenance of the East Windrush Overbridge and would incorporate a small car park to provide access to the Country Park Extension area;
c) An informal access would be provided for maintenance of the Storage Lagoon;
d) Access to agricultural land east of the Cogges and west of the Cogges Link Road;
e) Access to land at Cogges Hill to the east of Cogges immediately to the north of Footpath No. 41 (Witney);
f) Access to land to the east of the Link to land at Cogges Hill immediately to the south of where Footpath No. 8 (Witney) would be diverted. This would provide access for agricultural purposes and new access to the Windrush Cemetery (subject to separate planning permission).

5.7 Drainage

5.7.1 It is proposed to collect surface water runoff from the carriageway using a

positive drainage system of kerbs and trapped gullies. Surface water run off from non-carriageway areas would be collected by ditches or filter drains.

5.7.2 Three separate drainage systems with their own outfalls would be required to drain the new highway – see Figure 6.

5.7.3 The embankments between Ch 20 and Ch 600 would cross the area of the River Windrush historic floodplain.

5.7.4 Related impacts and mitigation are described in more detail in Chapter 10.

5.8 Earthworks

5.8.1 Across the flood plain, embankments have been kept to the lowest height compatible with the requirements of the Environment Agency and bridge design. The highway boundary fence line would be at the bottom of the embankments. The gradients of the embankment would vary between 1:3 and 1:4 to soften the impact on the landscape.

5.8.2 To the east of Cogges the Cogges Link Road would be in cutting to minimise noise and visual impact. The creation of earth bunds on the west of the proposed road with 1:4 side slopes would further screen the road from the residential area and reduce noise generated by traffic. The gradients of the cutting slopes would again be 1:4 to soften visual and landscape impacts.

5.8.3 Typical sections showing these features are included in Figure 8.

5.8.4 There would be a surplus of approximately 1000m^3 of material unsuitable for use anywhere on site that would require disposal off site.

5.9 Structures

5.9.1 Two bridges, see Figures 9 and 10, would be constructed to carry Cogges Link Road over the east and west branches of the River Windrush. The bridge over the east branch would be located over a natural bend of the existing river, whilst the bridge over the west branch would be located over a diversion of the watercourse.

5.9.2 The East and West Bridges would have a single clear span of 26m and a deck width of 14.5m. They would be integral bridge form, comprising a composite steel plate girder and in-situ reinforced concrete deck. The abutments and wing walls would also be made in-situ of reinforced concrete but would have reconstituted stone facings. The foundations would be piled.

5.9.3 Two small culverts would be constructed at the western and eastern extremities of the river flood plain to carry existing ditches beneath Cogges Link Road, (Farm Mill Culvert and Pumping Station Culvert respectively - see Figure 2).

5.9.4 To enable Cogges Link Road to pass beneath the existing Stanton Harcourt Road, the construction of a single underbridge would be required immediately to the north of the existing bridge over the A40 – see Figure 11. The bridge would be an integral bridge form, comprising an in-situ concrete deck slab and a contiguous bored pile retaining wall abutment with reinforced concrete splayed wing walls with reconstituted stone facings. It would be a single span bridge

with a clear span between the support of 14.8m and an overall bridge deck width of 10.5m. The parapet alignment would be continuous over both this bridge and the existing bridge over the A40. The foundations would be contiguous bore piles.

5.9.5 Aluminium parapets a minimum 1.0m high with full mesh infill would be provided on each of the bridges. Safety barriers would be provided on the approaches to the bridges.

5.10 Lighting

5.10.1 For safety reasons the junctions with Witan Way, Oxford Hill and Cogges Hill Road would be served by street lighting. The use of flat glass, sharp cut off lights would minimise any impact of light pollution on the surrounding areas.

5.10.2 To retain rural character and minimise impact it is not proposed to light the central section of Cogges Link Road between the above junctions.

5.11 Landscape Design

5.11.1 As described above, the eastern section of the scheme would incorprorate sympathetic earth modelling to help the scheme integrate with the local landscape as far as is practicable.

5.11.2 The slopes on the western section have been design to be sufficiently shallow to reduce the impact of the engineered structure while minimising its footprint on the flood plain.

5.11.3 In discussion with local stakeholders, the central section of the embankment between the arms of the Windrush would be left unplanted to provide a degree of visual continuity with the existing rough grassland of the country park. Elsewhere, a significant amount of native tree and shrub planting would be undertaken to integrate the scheme with local landscape features. This would comprise plants indigenous to the local area. Grassland areas would include minimal topsoil and be sown with appropriate low maintenance grass mixes to encourage long term species diversity.

5.12 Biodiversity

5.12.1 The bridge and culvert structures on the river would be designed to maintain connectivity for wildlife along the riverbanks on either side of the road. The following specific environmental designs would also be included to reduce the impacts on local biodiversity:

- Dormouse bridge, possibly attached to the side or underneath of Stanton Harcourt Road Underbridge;
- Purpose built animal walkways at a high level in the box culverts to ensure free passage for larger mammals in times of flood;
- ‘Bat friendly’ bridge design providing suitable roosting sites;
- Mammal fencing to prevent badgers and otters crossing the road at ground level;
- Tunnels where appropriate for badgers to maintain continuity of existing foraging routes;
- Hedgerow planting to link existing hedgerows severed by the road and to

provide replacement dormouse habitat;
- Sympathetically designed lagoons and swales to provide a range of habitats.

6 Traffic

6.1 Introduction

6.1.1 Traffic figures were taken from an updated version of the Witney Traffic Model. The roadside interview data that had underpinned the previous SATURN model had become dated, leading to its replacement in October / November 2005. Newly validated 2005 AM and PM peak base year models were therefore built to form a sound base for all forecasting work.

6.1.2 Details of the model validation are included in the Local Model Validation Report (LMVR) produced by Jacobs in March 2007.

6.1.3 The forecast modelling is for the years 2011 and 2026. The first year (2011) is the planned year of opening for the Cogges Link Road, whilst 15 years beyond this (2026) represents the design year for a scheme.

6.1.4 Forecast matrices for the AM and PM peak hours were developed from the 2005 base using a combination of high or low global growth derived from TEMPRO version 5, policy-based south-east dataset 5.2, with additional trips associated with various identified committed developments. This was the Department for Transport's recommended dataset at the time the forecast models were built, as it is based on policy and uses information from the 2001 census.

6.1.5 The 2026 matrix included the full housing allocation of 800 units at North Curbridge, together with a district centre and the proposed Downs Road intersection with the A40 to the south west of the town.

6.1.6 The anticipated growth in traffic in and around Witney is such that the existing levels of congestion and delay in the Bridge Street and Staple Hall areas will continue to rise if alternative river crossings are not in place, together with measures aimed at discouraging unnecessary car use. Much of this traffic growth would be associated with the North East Development Area, where the estate link road Jubilee Way provides access between Woodstock Road and the proposed Cogges Link Road. By 2026 there will be additional traffic associated with the North Curbridge housing development to the south-west of the town.

6.1.7 A detailed traffic forecast modelling report can be found in Volume 2A.

6.2 Baseline Conditions

6.2.1 Current (base year 2005) two way traffic flow on Bridge Street is approximately 2575 passenger car units (PCUs) per AM peak hour and 2405 per PM Peak hour. Without Cogges Link (i.e. Do Minimum scenario), the 2005 peak hour traffic demand in Bridge Street is predicted to increase by an average of 11.1% by 2011 and 23.4% by 2026.

6.3 Environmental Impact and Mitigation

6.3.1 With the Cogges Link Road added, the peak hour traffic flows in Bridge Street are predicted to decrease by an average of 14.4% in 2011 with an average decrease of 10.8% by 2026. With all major complementary measures added however, the reduction in Bridge Street flows from the base year demand is

55.5% in 2011 with an average reduction of 52.7% by 2026. Hence there would be a significant reduction of traffic in Bridge Street with the Cogges Link Road in place along with the package of complementary measures. Figures 12A and 12B show predicted future traffic flows with and without the scheme.

6.4 Residual Impact

6.4.1 Traffic flows at year of opening (2011) on the Cogges Link Road (with complementary measures) are predicted to have an Annual Average Daily Traffic Flow (AADT) of 15325 pcus rising to 18645 pcus in 2026.

7 Environmental Impact Assessment: Approach and Methodology

7.1 Introduction

7.1.1 This chapter describes the methodology used to undertake the environmental assessment of impacts.

7.2 Scope of the Environmental Assessment

7.2.1 The environmental assessment for this scheme has included a comprehensive assessment of alternatives, covering a wide range of issues including environmental. It has also included an assessment of the suitability of the original scheme design and possible variations thereto. The assessment comprises a number of stages, including an initial assessment of a large number of possible alternatives, a more detailed assessment of a 'shortlist' of selected alternatives followed by an in depth assessment of the preferred scheme and the next best alternative. The assessment finally deals with the preferred scheme in accordance with the guidance in DMRB Volume 11.

7.3 The Study Area

7.3.1 The area over which Cogges Link Road is likely to have an effect on its surrounding environment is wider than the highway boundary and depends on the subject under consideration. For example, ecological effects can be dependant on the territories or habitats of the species under consideration, whilst land take and severance effects occur within the development boundary. The area investigated for each specialist study is detailed in the appropriate specialist report.

7.4 Assessment Methods

7.4.1 The DMRB, Volume 11: 'Environmental Assessment' provides detailed guidance on EIA for road schemes in the UK. It forms the basis for the assessment methods used in the EIA process for Cogges Link Road. Other guidance used for the specialist studies is detailed where appropriate. Updates to DMRB Volume 11 were issued by the Department for Transport in June 2006 in the form of Interim Advice Notes (IAN 76-82). However, the assessment process was already underway, so the specific guidance contained in these was not applied.

7.5 Determining Impacts and Significance

7.5.1 An impact is defined as a physical change to the environment that is attributable to the construction and/or operation of a proposal. The effects of impacts on existing resources and receptors may be adverse or beneficial, direct or indirect, temporary or permanent.

7.5.2 The environmental impacts of a proposal vary in both magnitude and severity. In order to determine whether an environmental impact is acceptable or not it is necessary to determine its significance. In general, it is possible to define a significant environmental impact as one that should be taken into account when developing the design.

7.5.3 For Cogges Link Road the significance of impacts has generally been assessed against a defined scale using guidance from the DMRB and TAG. However, where appropriate specialist guidance specific to a particular topic may also have been applied. Significance criteria are specific to each subject area and are included within relevant specialist sections. Broadly, significance of an impact is a function of a number of parameters including the following:

- Magnitude of impact;
- Number of individuals affected;
- Compliance with legislation or policy;
- Sensitivity, uniqueness and rarity of impacts' receptor;
- Timescale involved.

7.5.4 An assessment of effects and impacts of Cogges Link Road are shown in the Summary Environmental Impact Tables in Appendix A.

7.6 Mitigation Measures

7.6.1 Adverse impacts that can be reduced to acceptable levels through incorporation of practical and cost effective mitigation measures have been identified where appropriate and the EIA has considered the effects of the mitigated proposal. Mitigation techniques are discussed within each specific subject area.

7.6.2 Volume 10 of the DMRB: 'Environmental Design' provides detailed guidance on environmental mitigation for road schemes and has been used as the primary reference for environmental inputs to the design. Reference has also been made where appropriate to specialist guidance produced by, amongst others, the Environment Agency and Natural England.

7.7 Residual Impacts

7.7.1 The residual Impact is the predicted level of impact after the application of the proposed mitigation strategies has been taken into account.

8 Policies and Plans

8.1 Introduction

8.1.1 This section sets the planning context before the detailed assessment of environmental impacts is undertaken in this ES. The planning policy, which is relevant to the assessment of the environmental impacts and subsequent determination of this planning application, is summarised below. A policy by policy assessment in relation to the Cogges Link Road is included in Plans and Policies within Volume 2A of this ES.

8.2 Summary of Relevant Planning Guidance

Planning Policy Guidance Statements and Notes (PPSs and PPGs)

8.2.1 PPSs and PPGs provide national guidance on planning issues and are released by the Department for Communities and Local Government (DCLG) and its predecessors. They are topic based (e.g. transport) and lay down the national policies on which complementary geographically specific guidance - currently Regional Planning Guidance, County Structure Plans, Local Plans and new Local Development Frameworks - must be based.

Regional Planning Guidance for the South East (RPG 9)

8.2.2 RPGs provide regional strategic planning guidance on issues that are not of a national scale but at the same time cannot be addressed by an individual authority. Their primary purpose is to provide a regional framework for the preparation of local authority development plans. They also provide the spatial framework for other policies and plans, including Local Transport Plans.

8.2.3 RPG 9 provides the regional planning framework for the South East for the period up to 2016. This document identifies priorities and strategies for economic development and an improved transport network whilst seeking to ensure a high quality environment and the sustainable use of environmental resources.

A Clear Vision for the South East: The South East Plan Core Document (Draft) (2006, SEERA)

8.2.4 The South East England Regional Assembly has prepared a revised Regional Spatial Strategy for the South East, called the South East Plan, covering the period to 2026. The Assembly completed an extensive public consultation on the Draft South East Plan in 2005, and the full Plan, including the sub-regional policy framework, was submitted for Government approval on 31st March 2006. The Draft Plan is currently (July 2008) the subject of Public Consultation relating to the Government's proposed changes following a period of Examination in Public. Once approved by the Secretary of State for Communities and Local Government, it will completely replace the 2001/2004 version of RPG9, and will be part of the development plan.

Development Plan Policy

8.2.5 The local components of the development plan relevant to Witney comprise:

- The Adopted Oxfordshire Structure Plan 2016; and
- The Adopted West Oxfordshire Local Plan 2011.

Oxfordshire Structure Plan 2016, Adopted 2005

8.2.6 The Oxfordshire Structure Plan 2016, adopted in October 2005, sets out the strategic planning policies that will guide the future development and use of land within the County up to 2016. It provides the strategic framework in which national and regional policy is applied to the local level and is the mechanism through which future housing and employment development is distributed. The Structure Plan also sets out the need for strategically important infrastructure such as transport schemes. The Structure Plan will remain in force until the adoption of new regional planning guidance, at which point it will cease to be part of the development plan.

Adopted West Oxfordshire Local Plan 2011

8.2.7 The West Oxfordshire Local Plan 2011 was adopted in June 2006 and sets out the local 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. It is also the basis for coordinating future development with the provision of essential infrastructure and services.

8.3 Non-Statutory Guidance

Windrush in Witney Project (April 2001)

8.3.1 Windrush in Witney Project (April 2001) has been prepared to provide a landscape character assessment of the Windrush Valley which is intended to lead to a landscape management strategy for the area. This document is specifically referred to in Policy NE3 of the West Oxfordshire Local Plan (WOLP) 2011.

West Oxfordshire Landscape Assessment

8.3.2 West Oxfordshire Landscape Assessment has been prepared to identify the local landscape character areas. This document is specifically referred to in Policy NE3 of the West Oxfordshire Local Plan (WOLP) 2011. Details of the impact of Cogges Link Road on the West Oxfordshire Landscape Assessment are contained in Section 11 of this ES, and it is not considered further here.

8.4 Summary of Relevant Planning Policies

8.4.1 The section below sets out the policies of the guidance outlined above in terms of their relevance to the assessment of environmental impacts contained within this statement.

National Planning Policy

8.4.2 **PPS1 Delivering Sustainable Development** sets out the Government's overarching planning policies on the delivery of sustainable development through the planning system. It details the high level policy objectives for planning, and sets a framework for specific policies, which are set out in the

thematic Planning Policy Statements. Key objectives include making suitable land available for development; contributing to sustainable economic development; protecting and enhancing the natural and historic environment; ensuring high quality development; and ensuring that development supports existing communities

8.4.3 **PPS7: Sustainable Development in Rural Areas** sets out the Government's national policies on sustainable development in rural areas. The policies apply to the rural areas, including country towns and villages and the wider, largely undeveloped countryside up to the fringes of larger urban areas.

8.4.4 **PPS9: Biodiversity and Geological Conservation** sets out the Government's national policies for the conservation of biodiversity and geodiversity. The guidance determines the hierarchy of important sites of interest and sets of guidelines for species protection.

8.4.5 **PPG13 - Transport:** seeks to provide a safe, efficient and integrated transport system by integrating transport and planning at the national, regional, strategic and local level. It promotes sustainable transport choices and accessibility to facilities and services by public transport, walking and cycling.

8.4.6 Annex C (Transport Infrastructure) of PPG13 states that care must be taken to avoid or minimise the environmental impact of any new transport infrastructure projects. There is a requirement for certain types of project to be subject to EIA before development consent is granted.

8.4.7 **PPG15 - Planning and the Historic Environment** explains the role of the planning system in achieving sustainable development objectives through the protection of historic buildings, conservation areas and other elements of the historic environment. The guidance stresses the need to protect and conserve the nations' built and natural assets. It acknowledges the need to reconcile the demand for economic growth with the requirement to protect the natural and historic environment.

8.4.8 **PPG16 - Archaeology and Planning** advises on how to preserve and record archaeological remains in the urban and rural environment, including the weight to be given to them in planning decisions and the use of planning conditions. The statutory frameworks for protecting remains are outlined and the development control procedure is clearly identified.

8.4.9 **PPG17 – Planning for Open Space, Sport and Recreation** sets out a framework to ensure that there is effective planning for open space, sport and recreation Open spaces, sport and recreation all contribute to people's quality of life. Well-designed and implemented planning policies for open space, sport and recreation are therefore fundamental to delivering broader Government objectives.

8.4.10 **PPS23 - Planning and Pollution Control** advises on a number of issues that affect the relationship between planning and pollution control, including the redevelopment of contaminated sites. The importance of re-using previously developed sites is recognised, as is the opportunity for dealing with any threat to human health posed by contamination through the re-development process.

8.4.11 **PPG24 - Planning and Noise** sets a framework to prevent noise-sensitive

developments being affected by activities that create noise. It gives guidance to Local Authorities on the use of their planning powers to minimise the adverse impact of noise.

8.4.12 **PPS25 – Development and Flood Risk** seeks to ensure that any new development is safe and not exposed unnecessarily to flooding, particularly in the context of probable future climate change. It aims to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall.

8.4.13 Individual sections within this ES provide a detailed assessment of the effects of the proposed development, in the context of guidance provided in PPSs and PPGs. Overall, it is considered that the proposal is in general accordance with the objectives of national planning guidance.

8.5 Regional Planning Context

8.5.1 **RPG 9** contains twelve Key Development Principles which aim to build on the growing consensus among the key stakeholders in the Region, redefine the pattern of development in the Region and to ensure its continued environmental, economic and social health. The main principles that are relevant to this proposal are as follows:

- Urban areas should become the main focus for development through making them more attractive, accessible and better able to attract investment.
- Greenfield development (namely, on previously undeveloped land) should normally take place only after other alternatives have been considered and should have regard to the full social, environmental and transport costs of location.
- The pattern of development should be less dispersed with more sustainable patterns of activity.
- There should be continued protection and enhancement of the Region's biodiversity, internationally and nationally important nature conservation areas, and enhancement of its landscape and built and historic heritage.
- Access to jobs, services, leisure and cultural facilities should be less dependant on longer distance movement and there should be increased ability to meet normal travel needs through safe walking, cycling and public transport with reduced reliance on the car.
- Transport investment should support the spatial strategy, maintaining the existing network, enhancing access as part of more concentrated forms of development, overcoming bottlenecks and supporting higher capacity and less polluting modes of transport.

8.5.2 Policy Q1 states that *"urban areas should be the focus for new development and for redevelopment."* Policy Q2, states that *"the quality of life in urban areas, including suburban areas, should be raised through significant improvement to the urban environment, making urban areas more attractive places in which to live, work, shop, spend leisure time and invest, thus helping to counter trends to more dispersed patterns of residence and travel."*

8.5.3 Chapter 9 of Regional Planning Guidance for the South East sets out the

Regional Transport Strategy (RTS). It was incorporated into the RPG in 2004. The objectives of the RTS are based on promoting a sustainable transport system but include developing road links that improve inter and intra regional connectivity. Policy T1 sets out the overall approach to transport for development plans. It states that management policies should seek to encourage development that is located and designed to reduce average journey lengths and that investment should facilitate urban renewal and urban renaissance as a means of achieving more sustainable patterns of development.

Comments

8.5.4 The proposed link road is considered to contribute to meeting all of the relevant RPG key development principles. The development would provide a positive addition to the highway network and will improve the infrastructure required to enable the continuing development of Witney.

8.5.5 **The Draft South East Plan** contains a number of relevant policies. A key cross-cutting theme (CC2) relates to climate change. The Plan states that *"Mitigation, through reducing greenhouse gas emissions, will primarily be addressed through greater resources efficiency including reducing the need to travel and ensuring good accessibility to public and other sustainable modes of transport".*

8.5.6 Policy CC8a details the importance of Urban Focus and Urban Renaissance, concentrating new development in urban areas, to foster accessibility to employment, housing, retail and other services, and avoid unnecessary travel, while BE7 looks at management of the historic environment.

8.5.7 Section D4 updates the 2004 Regional Transport Strategy. It promotes management and investment of the transport infrastructure, in a very similar way to the current Policy T1.

8.5.8 Section E7 looks at specific policies for the Central Oxfordshire Region. Under Transport, it notes that country towns, including Witney, need local road and junction improvements to cater for recent and ongoing housing growth. Policy CO6: Transport, states that "*Oxfordshire County Council will promote the effective management and development of transport networks in Central Oxfordshire. This will be done in order to meet both strategic and local access requirements while reducing the need to travel, in particular by car or lorry*".

Comments

8.5.9 The proposed link road is considered to contribute to meeting all of the relevant South East Plan key development principles. The development would provide a positive addition to the highway network and would improve the infrastructure required to enable the continuing development of Witney.

8.6 Development Plan Policies

8.6.1 The key policies that are relevant to the assessment of the environmental impacts of this proposal are identified below. The broad issues that these policies raise in terms of assessing the impacts of the proposal are also addressed.

8.7 Adopted Oxfordshire Structure Plan 2016

8.7.1 The overall strategic planning policy for each individual District of Oxfordshire is contained within the Adopted Oxfordshire Structure Plan (OXP), which sets out policies for future development up to 2016.

Overall Aim

8.7.2 The main theme of the OXP is to *'provide a framework for development to sustain* economic *prosperity, meet housing and other requirements and guide the* investment *decisions of a range of organisations for the period to 2016'*.

Strategic Policies

8.7.3 The key diagram identifies Witney as a principal location for housing development, employment generating development and town centre development. Witney is therefore a key settlement in terms of accommodating future development in Oxfordshire. This is reflected in Policy G1, which identifies larger urban areas as the main focus for development.

8.7.4 The Cogges Link Road would assist this objective through providing infrastructure to serve and facilitate future development.

Transport

8.7.5 The transport policies of the OXP seek to influence how people travel with an emphasis on encouraging travel by foot, cycle and public transport, to protect and improve the environment and to promote safety. Policy T6 states that land required for highway network improvements will be safeguarded in local plans. It does not make a specific reference to the road schemes which will be promoted in the County; however Cogges Link Road is mentioned in Paragraph 4.24 as a major scheme expected to be programmed in the period 2006-2011.

8.7.6 Although a road scheme, the Cogges Link Road would contribute towards the overall creation of a more sustainable transport network for Witney. In particular, it would:

- Create new cycle and footway links between Cogges and Witney. This includes the creation of an off-carriageway cycle link between Witan Way and Stanton Harcourt Road connecting to the formal cycle routes on Oxford Hill and Jubilee Way.
- The relief of the congested town centre highway network would reduce traffic helping to improve the environmental quality and create opportunities for providing enhanced pedestrian areas in Witney town centre. It would relieve congestion from key pinch points such as the Bridge Street river crossing and create a safer and more attractive environment for pedestrians.

8.7.7 The need for selective road building, to assist with wider environmental and safety objectives, is recognised by the OXP and the Cogges Link Road is therefore, in accordance with the transport objectives of the plan. The new footway and cycleway is in accordance with Policy T5, which promotes a network of routes for pedestrian and cyclists particularly within and linking to urban areas.

Environment

8.7.8 The key environmental objectives of the OXP are as follows:

Environmental Protection

8.7.9 Policies EN1, EN2 and EN3 are general policies seeking to minimise the environmental impact and potential adverse effects of development on ecology, landscape and agricultural land. Although the Cogges Link Road would not impact on any areas designated for nature conservation interests it would affect the habitats of some protected species. The impact on protected species and proposed mitigation is identified within this ES.

Historic Environment

8.7.10 Policies EN4 and EN6 seek to protect the historic and cultural heritage, including guidance on development within Conservation Areas. The scheme would affect a small part of the Witney Conservation Area along Witan Way, however there would be considerable benefits in the town centre from reduction in traffic through the Conservation Area. Areas of archaeological potential would be affected by the proposals and archaeological field investigations would be required prior to construction.

Water Environment and Flooding

8.7.11 Policy EN8 and EN10 seek to protect water quality and water resources. The Cogges Link Road drainage scheme would include measures to intercept pollution and includes the provision of a storage lagoon and swale to filter water and collect silts and attenuate flows prior to discharging into the adjacent watercourses. Floodplain compensation would be provided as mitigation for loss of flood plain. The detailed design of the diversion of the river channel would be carried out in consultation with the Environment Agency.

8.7.12 Policy EN8 states that development in undeveloped areas which are at risk from flooding will not be permitted. A flood risk assessment will be required for proposals except where there is little or no flood risk. New development should also use sustainable drainage systems to regulate run-off. Cogges Link Road would be constructed above the 100 year flood plain and would include sustainable drainage systems in the form of the lagoon, swale, ditches and oversized pipes used for below ground attenuation.

8.7.13 A more detailed assessment of the scheme on water quality and flooding is provided within the Water Environment section of this ES.

Materials Re-use and Recycling

8.7.14 Policy G6 gives principal strategic support for local planning authorities in promoting energy and resource conservation. Where practical, the detailed design of Cogges Link Road would incorporate the re-use of excavated material and incorporate appropriate recycled products.

Countryside Recreation

8.7.15 Policies R1 and R2 seek to protect and enhance the existing countryside and

recreation facilities and the Rights of Way network. The Cogges Link Road would require the permanent diversion of several footpaths as shown in Figure 2. An application to permanently divert the footpaths would be made once planning permission has been obtained. It would also reduce the area of Witney Meadows country park, however a new area of land would be transferred to the country park and new access facilities provided.

8.8 Adopted West Oxfordshire Local Plan 2011 (WOLP)

8.8.1 As the WOLP represents the adopted local planning policy for Witney, this is afforded significant weight in determining a planning application.

Built Environment

8.8.2 Policies BE1 and BE2 deal with the protection and enhancement of the environment and landscape and set out development standard to ensure high quality infrastructure. . The environmental design of the scheme has been developed according to the current best practice and guidance.

8.8.3 Cogges Link Road has been designed to minimise the impact on the local environment and incorporates a comprehensive scheme of landscaping and ecological mitigation proposals including cuttings and screening. The scheme would also incorporate street furniture to be agreed with the local and County Councils.

8.8.4 Policy BE4 seeks to protect areas of open space adjoining built up areas. A play area to the south of Cogges, would be permanently lost as a result of the construction of the scheme. It is proposed that this would be replaced by new open space of an equivalent area and quality, including an area suitable for organised games.

Historic Environment

8.8.5 Policies BE5, BE8, BE12 and BE13 all aim to protect and enhance the character of Conservation Areas, listed buildings and archaeology (including archaeological monuments).

8.8.6 A small area of the application site lies within Witney Town Centre Conservation Area. It would be necessary to fell some trees within the Conservation Area, both along and in the vicinity of Witan Way. Replacement trees would be provided. The scheme would also facilitate environmental improvements in the town centre which would make a positive contribution towards improving the quality of the Conservation Area. An archaeological assessment and field evaluation would be carried out prior to construction, and appropriate measures taken to deal with any finds.

Noise

8.8.7 Policy BE19 aims to control exposure to excessive noise. As with all new road schemes, an element of noise generation is to be expected. Noise mitigation has been incorporated into the scheme including cuttings and bunds. This is set out within Section 17 of this ES.

Countryside

8.8.8 Policies NE1, NE2, NE3 and NE6 aim to protect and enhance the environment, countryside and local landscape character, including trees, woodlands and hedgerows. Adverse impacts of the scheme would be mitigated as far as is practicable by sensitive design of earthworks profile and the implementation of a comprehensive landscape and ecological planting scheme.

8.8.9 Policies NE7, NE8, NE9 and NE11 deal with issues of the water environment, including flood risk and water quality.

8.8.10 As previously outlined, the Cogges Link Road drainage scheme would include measures to intercept pollution and include a storage lagoon and swale to filter water and collect silts and attenuate flows prior to discharging into the adjacent watercourses. The road would be constructed above the 100 year flood plain, and compensation would be provided as mitigation for the loss of part of the floodplain. The detailed design of the diversion of the river channel would be carried out in consultation with the Environment Agency.

8.8.11 Policies NE13, NE14 and NE15 seek to protect sites and species of importance for nature conservation. Although there are potential impacts on protected species, the proposals include provision for the inclusion of dry walkways and culverts, the creation of new habitats and to appropriately plan and time construction operations.

Transport

8.8.12 The WOLP shows that the Application site is allocated as land safeguarded for distributor road, footway, cycle way and structural landscaping. This allocation is covered in policy T4

8.8.13 The Cogges Link Road proposal is a direct result of traffic congestion and delay caused by Bridge Street, which is the only direct approach to the town centre from the north and east. It is clear that the development proposals as applied for are fundamentally supported by the WOLP. As there is no alternative route to Bridge Street to gain access to the town centre of Witney, a second bridge over the River Windrush would help to reduce the traffic congestion in Bridge Street and the Staple Hall junction.

8.8.14 Policy T2 aims to improve the provision for pedestrians and cyclists. Reduction of traffic in the town centre would create opportunities for providing enhanced pedestrian areas. A new cycle way and footway link would be developed alongside the Cogges Link Road so that alternative modes of transport can be utilised.

8.8.15 Policy T2 promotes traffic management, particularly to support the safe and convenient movement of buses and pedestrians. The CLR would support this aim by reducing town centre traffic and facilitating a management scheme.

Recreation

8.8.16 Policies TLC5 and TLC8 seek to protect open space and public rights of way. Cogges Link Road would have an impact on four footpaths for which permanent diversions would be sought. As stated previously, there is also a small play area

to the south of Cogges that the proposed road would cut through. A replacement play area would be provided. There would also be loss of land within the country park, which would be compensated for by transfer of a new area of land into the park.

8.9 Oxfordshire Local Transport Plan 2006-2011

8.9.1 Cogges Link Road is a specific scheme for West Oxfordshire set out in the LTP. A number of problems in Witney are noted, for which the Cogges Link Road would provide a particular solution. These include congestion, air quality and a poor quality street environment.

8.9.2 Through reducing congestion in the town centre, and associated implications, CLR would contribute significantly to the meeting of numerous Core Targets and Local Indicators, as set out in the LTP. These include but are not limited to:

- Core Targets 5, 6 and 7 - number of road casualties;
- Core Target 9 – bus satisfaction;
- Core Target 11 – encourage cycling;
- Core Targets16 and 17 – bus punctuality;
- Local Indicator 1 – congestion;
- Local Indicators 2, 3 and 4 – road safety;
- Local Indicator 10 – quality of the street environment.

8.10 Windrush in Witney Project

8.10.1 The Windrush in Witney project has been set up by West Oxfordshire District Council, to provide guidance on the management of the River Windrush as it flows through Witney. Key aims are to protect and enhance this area's special landscape, character, ecological, cultural and recreational value.

8.10.2 Policies NCO1 – NCO4 aim to protect the ecological value of the environment along the Windrush, particularly protected species, unimproved grassland and wetland habitats. The CLR would have impacts on the ecological environment, however, as described above, a comprehensive suite of mitigation measures are proposed. These would ensure no detriment to protected species in the area, and provide extensive new habitat creation to compensate for those areas lost to the scheme.

8.10.3 Policies LO1 to LO8 seek to protect and enhance the local landscape quality, and particularly to ensure that development proposals are in accordance with the local landscape character, and include for example, planting of appropriate species. The scheme would have a significant effect on the local landscape, however as already detailed, an extensive programme of landscaping and replanting would be undertaken to help disguise views of the road and help it fit in with the surroundings.

9 Geology and Soils

9.1 Introduction

9.1.1 Volume 2B of the ES contains a detailed report on the geology and soils incorporating issues with contamination. The report is based upon desk top studies and field investigations. The report assesses issues and environmental impacts that the geology and soils would have on the scheme in accordance with the DMRB.

9.2 Baseline Conditions

9.2.1 The geological materials that would be encountered along the proposed route comprise a combination of predominantly Jurassic age clay overlain by alluvium and river gravels in the River Windrush valley. In all the soils the groundwater table will be close to existing ground level at all times.

9.2.2 The ground conditions east of Stanton Harcourt Road are predominantly Oxford Clay, and to the west Cornbrash overlain by alluvium and river gravels (Figure 15).

9.2.3 Very little man-made ground is present along the line of the route and therefore the risk of contamination of soils and groundwater resulting from construction of the scheme is considered to be low. The closest landfill is 260m south west of the route and in view of the distance and the nature of the ground conditions the risk of migration of landfill gas is considered to be low.

9.3 Environmental Impact and Mitigation

9.3.1 The earthworks would, as far as practicable, be balanced to minimise import of selected fills except for special purposes i.e. capping, reinforced soil, and drainage media. Fill would be sourced from the cuttings east of Stanton Harcourt Road for placement in the embankments across the River Windrush flood plain.

9.3.2 The earthworks season would be selected to maximize the re-use of on-site excavated material. Drainage measures would be selected in advance to minimise deterioration of any fill material.

9.3.3 A free draining granular blanket would be placed at the base of the embankments across the River Windrush flood plain to permit the movement of ground and surface water across the line of the road.

9.3.4 Batter slopes in the cuttings would be no steeper than 1:3 (a design of 1:4 has been adopted) with appropriate drainage measures to ensure long term stability. Batter slopes on the embankment would be no steeper than 1:2.5 unless the earthworks are reinforced or buttressed by granular materials to optimize the earthworks balance. However as part of mitigation for landscape and visual impacts, batters of 1:4 have been incorporated into the design.

9.3.5 The structures at Mill Stream Bridge Culvert and Spring Hill North Culvert are anticipated to be founded on shallow footings, and the River Windrush bridges on piled foundations. The type of piling selected would be chosen to minimise ground vibrations and noise.

9.3.6 Selected fills such as granular capping and drainage media would need to be imported to site. Where practicable, and subject to further testing, modification of the on-site materials would be used to provide specified selected fills and reduce the need for imported materials.

9.3.7 Stanton Harcourt Road would be closed for the earthworks season to enable on-site fill materials to be transported within the site boundaries to the fill areas east of the River Windrush. The excavated soils which are predominantly clayey are not considered to be vulnerable to generation of dust. Suitable protective measures against deposition of clay on existing roads would be included in the contract.

9.3.8 The proposed works are considered very unlikely to have a detrimental effect after construction is complete. The Contractor would be required under the contract to minimise the impact on groundwater during construction by suitable preventative measures. The earthworks element of the contract works would be restricted to the summer period (i.e. April to October). All the earthworks would be carried out during a single earthworks season.

9.4 Residual Impacts

9.4.1 Drainage of the cuttings east of Stanton Harcourt Road would reduce groundwater levels, but as these have been historically subject to soil drainage for agricultural purposes, the impact is not considered to be significant. Drainage systems encountered during construction would be reinstated and connected to appropriate outlets.

9.4.2 Building of embankments over the alluvium within the River Windrush flood plain would theoretically reduce the available soil permeability, but the impact is considered unlikely to be significant due to the incorporation of a high permeability basal drainage layer to the embankment design.

9.4.3 Geotechnical considerations may require the retention of topsoil in situ under the floodplain embankment. If this is the case there would be a net loss of topsoil resource.

10 Water Quality and Drainage

10.1 Introduction

10.1.1 The Cogges Link would affect the river channel and historic flood plain of the River Windrush as well as the hydrology of the surface water catchment run off from Oxford Hill. Two separate reports 'Proposed Revision to Flood Mapping: River Windrush in Witney ' and 'Preliminary Drainage Design – Outfall and Storage Proposals', are included in Volume 2B.

10.1.2 The area is drained by the River Windrush, which divides into two branches at this location, flowing in a north-west to south easterly direction. At Farm Mill the west branch is further divided into the Mill Backstream and the artificially channelled Mill Stream. There are also associated drains and ditches. Figure 16 – Topography shows the contours and relief of the area.

10.1.3 A desktop assessment of the water quality has been included in the Geology and Contamination Report in Volume 2B.

10.1.4 An assessment of pollution impacts has been included in Preliminary Drainage Design – Outfall and Storage Proposals report in Volume 2B.

10.1.5 Surface water arising from the new road would occur in three catchments – see Figure 6 and paragraphs 10.3.6 to 10.3.8.

10.2 Baseline Conditions

Water Quality

10.2.1 The chemical quality of the water within the River Windrush is classified as 'Good' by the Environment Agency.

10.2.2 Cogges Link would not impinge on any Aquifer Protection Zone, although there are water abstraction points within 2000m of the road, the closest of these (for laundry use) is some 600 metres away.

Drainage

10.2.3 The route of the Cogges Link Road crosses the historic floodplain of the River Windrush. The Proposed Revision of Flood Mapping: River Windrush at Witney prepared during 2007, has assessed the flood potential along the Windrush for a 100yr event with an extra allowance of 20% for climate change, in accordance with the recommendations set in Planning Policy Statement 25 – Development and Flood Risk (PPS25). The report identifies that the Cogges Link Road would have minimal impact on the 100yr + 20% flood level and this could be offset with the inclusion of flood compensation areas within the defined planning envelope and subject to agreement with the Environment Agency.

10.2.4 The surface water run off from Oxford Hill flows in a westerly direction towards Cogges where it is collected in ditches before passing through the settlement via a system of pipe, culverts and ditches before discharging into the River Windrush.

10.3 Environmental Impact and Mitigation

10.3.1 The alignment of the Cogges Link Road would require new bridges over both the east and west branches of the River Windrush and new culverts over Mill Stream and the watercourse adjacent to the pumping station. The clearance and span of the bridges has been the subject of discussions with the Environment Agency. The effects of the bridge openings on the hydrology of the River Windrush have been examined in the report ‘‘Preliminary Drainage Design – Outfall and Storage Proposals’ included in Volume 2B.

10.3.2 The west branch of the River Windrush would be diverted to suit the alignment of the overbridge. Methods for isolating the section of river to be diverted and proposals for creating the new river channel have been the subject of discussion with the Environment Agency. Finalised designs will incorporate the recommendations from the Geomorphology report (a supporting document to the Planning Application). Construction method statements would be submitted to the Environment Agency for agreement and approval prior to the start of construction.

10.3.3 The cuttings through Oxford Hill would interrupt the current flow of surface water off the hill. It is proposed to collect and attenuate the surface water run off from Oxford Hill in ditches at the top of the cutting slopes and then connect into the existing drainage network through the Cogges Estate.

10.3.4 Cogges Link Road would not impact on the 100 year +20% flood plain.

10.3.5 The Environment Agency requires that the discharge into any watercourse should not be greater than the green field run-off flows. The increased flows from the highway would have to be attenuated to comply with these requirements. There are also requirements to control the risk of pollution.

10.3.6 Surface water runoff from the carriageway would be collected by trapped gullies.

10.3.7 Surface water runoff from adjacent areas would be collected by a series of ditches and filter drains.

10.3.8 Catchpits would be provided at regular intervals to collect silts entering the drainage network.

10.3.9 Catchment area 1 (0.14ha) would be attenuated within the oversized surface water pipe system prior to connection to the existing highway drainage system along Witan Way.

10.3.10 Catchment area 2 (0.17ha) would be collected in trapped gullies before discharging to new swales. No specific attenuation is proposed for this catchment although the swale would provide some storage prior to discharging into the Windrush. Any rainfall event would be contributing directly to the watercourse or flood plain.

10.3.11 Catchment area 3 (40.1ha) would be attenuated in a storage lagoon prior to discharging into the adjacent water course. A shut off valve would be provided within the system so that any spillage could be isolated from the watercourse. The green field run off rates for a 1 year storm are calculated at 14.18l/s. Vegetative systems would be incorporated to further improve water quality. The

banks of the lagoon would be modelled to encourage plant growth and integrate the lagoon into the landscape. During construction, silts from surface water runoff from exposed embankments could be an issue. The contractor would be required to submit method statements for approval by the project manager for various aspects of the construction process to manage the risk of silts contaminating the river Windrush.

10.4 Residual Impacts

10.4.1 The highway drainage system has been designed to permit minor surcharging adjacent to the kerblines during periods of extreme rainfall (1:30 year storm) however this will be dealt with quickly by the drainage system.

10.4.2 Increased risk of pollution in the River Windrush from highway associated sources has been assessed in the Preliminary Drainage Design Report as having a very low probability.

11 Landscape and Visual Effects

11.1 Introduction

11.1.1 This chapter examines the landscape and visual impacts associated with the construction and operation of Cogges Link Road (CLR). The assessment firstly examines and interprets the baseline landscape character and features of the area together with the visual context of the proposed road. Secondly, it assesses what the landscape and visual impacts of CLR would be against this background.

11.1.2 The assessment has been prepared with reference to the Design Manual for Roads and Bridges (DMRB) and Guidelines for Landscape and Visual Impact Assessment (GLVIA). There is no Townscape report because CLR would not provide any significant impacts on the townscape of Cogges or Witney.

11.2 Baseline Conditions

11.2.1 Existing land use is predominantly rough pasture, with gravel pits and open areas of water across the flood plain. There is little woodland, although native hedgerows line some fields and willows and tall poplars mark the line of the river. Fields are generally small and irregular in shape, influenced by the meanders of the waterways. To the east of Cogges, fields are larger and of more regular geometric patterns with extensive areas of woodland. Witney Lake and Meadows Country Park, owned by Witney Town Council, lies to the south of the Scheme between the two waterways. Public Footpaths cross the pasture and follow the line of the River in places. As part of the floodplain of the River Windrush, the topography of the area is generally low lying.

11.2.2 Development comprises the residential areas of Cogges and Witney to the north and west of the Scheme, with a large industrial area to the south west of the Scheme, south of Witney. Major linear infrastructure is evident throughout the area, with the A40 to the south and lines of electricity pylons running parallel to the river between Witney and Cogges.

11.2.3 There are public rights of way (PROW) throughout the Study Area. A Public Footpath (number 410/15) follows the route of the River Windrush in a north south direction through Witney Lake and Meadows Country Park. Three Public Footpaths (numbers 410/7, 410/8 and 410/41) run east from the eastern urban edge of Cogges. To the east, a Public Footpath (number 410/42) runs north south between the B4022 Oxford Hill and the A40, parallel with the line of the proposed route of CLR.

1.2.2 At a national level, the Countryside Character Initiative defines the site within the *Upper Thames Clay Vales* character area. The area is described as an open landscape with gravel workings and flooded pits.

11.2.4 At a regional level, The Oxfordshire Wildlife and Landscape Study (OWLS,) published in 2004, defines regional landscape character areas across Oxfordshire. This study identifies three regional landscape character areas surrounding CLR: Woodland Estatelands, Terrace Farmlands and River Meadowlands.

11.2.5 The landscape character that provides the local context for the study area is

identified in the West Oxfordshire Landscape Assessment, published in 1997. This document provides the most detailed landscape information currently available for the study area.

11.2.6 The study area lies within three character areas identified in the West Oxfordshire Landscape Assessment (Figure 18):

- Lower Windrush Valley and Eastern Thames Fringes: Floodplain Pasture
- Lower Windrush Valley and Eastern Thames Fringes: Semi- Enclosed Flat Vale Farmland
- Eynsham Vale: Open Rolling Vale Farmland

11.2.7 Key Characteristics of Lower Windrush Valley and Eastern Thames Fringes: Floodplain Pasture:

- *'Located immediately adjacent to rivers and minor water courses on land prone to flooding, particularly in winter;*
- *Distinctively flat low lying land (below 70m AOD);*
- *Predominantly under permanent pasture with only occasional cultivated land;*
- *Riparian character, with strong pattern of ditches often lined by willow;*
- *Landscape structure provided by lines and groups of mature trees, with willow and alder conspicuous;*
- *Intimate, semi-enclosed and pastoral character;*
- *Remote and tranquil with limited intrusion by people and buildings;*
- *Moderate to low intervisibility.'*

11.2.8 Key Characteristics of Lower Windrush Valley and Eastern Thames Fringes: Semi- Enclosed Flat Vale Farmland:

- *'Drained and cultivated land (arable or reseeded grassland) within the floodplain;*
- *Distinctively flat and low lying;*
- *Network of ditches;*
- *Stronger landscape structure of willow lined ditches, hedgerows and occasional woodland blocks;*
- *Semi-enclosed character with moderate to low intervisibility.'*

11.2.9 Key Characteristics of Eynsham Vale: Open Rolling Vale Farmland

- *'Low-lying land off the floodplain floor (generally above 70m AOD);*
- *Well drained, productive land underlain by river terrace gravels;*
- *Large-scale, cultivated fields (arable predominant) with regular field boundaries;*
- *Weak structure of tightly clipped hedges and few hedgerow trees (dry stone walls absent);*
- *Open denuded character;*
- *High intervisibility;*
- *"Two dimensional", expansive landscape with dominant sky.'*

Landscape Designations and Planning Policies

11.2.10 There are no landscape designations in close proximity to the study area.

11.2.11 This assessment does assess the impact on the setting of cultural heritage features. There are three Scheduled Monuments relatively close to the scheme (Figure 21).

11.2.12 Policy BE12 Archaeological Monuments (West Oxfordshire Local Plan 2011) states that, *'Development proposals that adversely affect the site or setting of nationally important archaeological monuments and monuments of local importance, whether scheduled or not, will not be permitted'.*

11.2.13 The western end of CLR lies within Witney and Cogges Conservation Area. Policy BE5 Conservation Areas (West Oxfordshire Local Plan 2011) states that, *'historic and environmental character or appearance of the Conservation Areas will be preserved or enhanced.'*

11.2.14 CLR would bissect Witney Lake and Meadows Country Park, owned by Witney Town Council (refer to Figure 2). Although this is not covered by a landscape designation, it does fall within an area covered by Policy WIT3 in the West Oxfordshire Local Plan 2011. This policy aims to allow development, which would be visible from within this policy area, which protects and enhances the intrinsic landscape character, ecology and cultural value of the valley.

11.3 Potential Impacts

Landscape

11.3.1 The local landscape character areas identified in the West Oxfordshire Landscape Assessment would potentially incur impacts as a result of the scheme.

Lower Windrush Valley and Eastern Thames Fringes: Floodplain Pasture

11.3.2 The landscape is assessed as being of good quality and the sensitivity of the landscape is assessed as being medium. CLR would be on an embankment, with bridges crossing the River Windrush, severing the Witney Lake and Meadows Country Park. Potential impacts include:

- The raised landform would be out of character with the flat floodplain landscape and would reinforce the physical and visual severance of the Windrush valley already caused by the A40.
- CLR would run through the southern edge of Witney and Cogges Conservation Area to the south of Farm Mill.
- Alterations to the flow of the River Windrush (West Branch) which would be diverted beneath CLR, creating a slightly longer and more meandering channel.
- Alterations to an existing Footpath (No.410/15) which would also be diverted to follow the line of the diverted river beneath CLR.

Lower Windrush Valley and Eastern Thames Fringes: Semi- Enclosed Flat Vale Farmland

11.3.3 The landscape is assessed as being of poor quality and the sensitivity of the landscape is assessed as being low. CLR would be raised on embankment through the landscape, although strong vegetation belts throughout the area would give a low visibility. Potential impacts include:

- Increased urbanisation of the area.
- Proposed water storage lagoon between the existing A40 and CLR would appear slightly at odds with the landscape, particularly with space and engineering constraints limiting the design, shape and levels.
- The visual and aural impacts of moving traffic would reduce the tranquillity of the area.

Eynsham Vale: Open Rolling Vale Farmland

11.3.4 The landscape is assessed as being of ordinary quality and the sensitivity of the landscape is assessed as being low. CLR would be within cutting as it runs through the character area, with a raised embankment containing it from the eastern edge of Cogges. Potential impacts include:

- Some direct loss of hedgerows and hedgerow trees.
- CLR would impinge slightly upon a modern cemetery, accessed off the B4022 to the north.
- The increased noise, and to a much lesser degree the visual impacts of moving traffic (most would be screened by earth modelling or in cutting) would also slightly reduce the tranquillity of the area which is already affected by the urban edge of Cogges and roads, particularly the A40.
- Footpaths Nos. 410/7 and 410/8 would be stopped up where they reach CLR but their routes will continue either side of the proposed road.

Visual

11.3.5 A proportion of the CLR runs through cutting, thereby limiting views from surrounding visual receptors. However, some public areas, roads, houses and public rights of way within 1km of CLR would have views of the development (refer to Figure 19).

11.3.6 The junction of CLR with the B4022 Oxford Hill would be visible from properties north of Oxford Hill. Properties west of Cogges Hill Road at the northern extent of CLR would have views of CLR, although traffic would be moved further away from some properties with the removal of the northern section of Cogges Hill Road where it joins the B4022.

11.3.7 Views of CLR would be available from properties on the eastern and southern edges of Cogges. Oxford Hill (B4022) and the A40 are not visible from the edge of the estate; they are screened from view by hedged field boundaries and rising land to the east. The eastern side of Oxford Hill (B4022) is screened by mature structure planting. The properties located west of Stanton Harcourt Road, off Wadard's Meadow, are screened from the proposed route by a high grass bund and mature tree and shrub planting located on the western side of Stanton

Harcourt Road.

11.3.8 Views of CLR from properties on the western side of Cogges would be limited due to intervening hedge lined field boundaries. Witan Way is screened from view by woodland and tree lined ditches on the valley floor.

11.3.9 Station Lane to the west of CLR comprises business and residential properties at Station Lane Industrial Estate, Des Roches Square, Sainsburys supermarket and St Mary's Mead. All except the industrial estate are screened from the valley floor by the mature woodland associated with Farm Mill. For properties overlooking the roundabout there would be some potential for limited views of the proposed Scheme southeast of the mature woodland associated with Farm Mill.

11.3.10 Witney Lake and Meadows Country Park would have views of CLR running northwest/southeast, elevated on embankment. Views of CLR would be available from an existing public open space between Cogges and the A40 to the south, directly east of Stanton Harcourt Road. This area is currently used as an informal games pitch and would be significantly decreased in size as an impact of CLR implementation.

11.3.11 Views of CLR would be available from several public Footpaths within the area. Footpath No. 410/15 runs north south through Witney Lake and Meadows Country Park along the River Windrush and would be diverted under the western overbridge of CLR. Footpath Nos. 410/41, 410/7 and 410/8 also run from west to east from the outer eastern edge of Cogges toward the existing main road corridors of the A40 and B4022. CLR would also bisect these three Footpaths. Views of CLR would also be possible from Footpath No. 410/42, to the east which joins the A40 and B4022.

11.3.12 Views of CLR would be available from Stanton Harcourt Road which passes over the existing A40 to the south of Cogges and from the northern end of Cogges Hill Road as it nears the B4022. CLR would also be visible in parts from the existing A40 where landform allows.

11.4 Mitigation

11.4.1 The landscape and visual mitigation measures presented as part of CLR have been developed in conjunction with the engineering design and Environmental Assessment process. Specific landscape measures include the following:

- Use of screen mounding and cuttings to visually screen CLR;
- Use of shallow cutting and embankment slopes to reflect surrounding topography;
- Proposed planting on embankments and cuttings to soften artificial landform and provide additional visual screening;
- Design of surface water storage lagoon to be modelled to appear as natural as possible under space and engineering constraints;
- Planting around surface water storage lagoon to integrate into surrounding landscape;
- Positioning of sections of overhead electricity cables running through Witney Lake and Meadows Country Park underground;
- Landscape and biodiversity planting within Witney Lake and Meadows

Country Park;

- Additional parcel of existing arable land to be used as Witney Lake and Meadows Country Park compensation land;
- Construction of new public open space, adjacent to Cogges Hill Road, to accommodate informal playing field to replace playing area to the south which would be lost to the Scheme;
- Redesign of existing public open space south of Eton Close to accommodate playground area'
- Off-site hedgerow planting, by agreement with land owners, to the east.

11.5 **Residual Impacts**

Landscape Impact on Local Landscape Character Areas

Impact on Lower Windrush Valley and Eastern Thames Fringes: Floodplain Pasture

11.5.1 CLR would be on an embankment, with bridges crossing the River Windrush, severing the Witney Lake and Meadows Country Park. The raised landform would be somewhat out of character with the flat floodplain landscape and would reinforce the physical and visual severance of the Windrush valley already caused by the A40. In addition, CLR would run through the southern edge of a Conservation Area to the south of Farm Mill. A section of the River Windrush (West Branch) would be diverted beneath CLR, creating a slightly longer and more meandering channel. An existing Footpath (No.410/15) would also be diverted to follow the line of the diverted river beneath CLR.

11.5.2 There would be some direct loss of hedgerows, trees and some small woodland blocks to the south of Farm Mill. However the landscape mitigation proposals would largely replace lost vegetation in the longer term. In addition to this, the scheme would provide the benefit of laying sections of existing overhead power cables underground. An area of existing arable land to the east would also be used as compensation land for the disruption caused to the park, partially offsetting the impacts caused by severance. The extended Country Park would include a car parking area, accessed from CLR. The benefit of placing electricity cables underground and the extent of compensation land would not, however, fully counteract the adverse impacts caused by severance through the park. There would be a moderate adverse impact in terms of magnitude of landscape impact. Therefore, overall CLR would have a moderate adverse impact on the local landscape character area at all timescales.

Impact on Lower Windrush Valley and Eastern Fringes: Semi-Enclosed Flat Vale Farmland

11.5.3 CLR would be raised on embankment through the landscape, although strong vegetation belts throughout the area would give a low visibility. There would be an increased urbanisation of the area. A proposed surface water storage lagoon between the existing A40 and CLR would appear slightly at odds with the landscape, particularly with space and engineering constraints limiting the design, shape and levels. The visual and aural impacts of moving traffic would reduce the tranquillity of the area, but this is already affected by the surrounding housing and roads, particularly the A40. The landscape impact would be Slight Adverse one year following the opening of CLR, reducing to Neutral 15 in the

Design Year when planting mitigation would have matured.

Impact on Eynsham Vale: Open Rolling Vale Farmland

11.5.4 CLR would be mainly within cutting as it runs through the character area, with an earth bund forming a false cutting containing it from the eastern edge of Cogges. There would be some direct loss of hedgerows and hedgerow trees, but this would be limited in the context of the surrounding landscape. CLR would impinge slightly upon Windrush Cemetery, currently accessed off the B4022 to the north, although the existing boundary hedgerow within the Cemetery would be retained and enhanced where possible. A new access to the Cemetery from CLR is being separately proposed by Witney Town Council. The increased noise would slightly reduce the tranquillity of the area which is already affected by the urban edge of Cogges and roads, particularly the A40. The landscape impact would be Slight Adverse one year following the opening of CLR, reducing to Neutral in the Design Year when planting mitigation along cutting slopes would have matured.

Residual Effects on Relevant Designations

11.5.5 CLR would not impinge on any of the three identified Scheduled Monuments because of surrounding vegetation and built development. Therefore, CLR would have a Neutral impact on the setting of the Scheduled Monuments.

11.5.6 CLR enters the Witney and Cogges Conservation Area at the western edge of Witney. However, the residual impact on the Conservation Area would be Neutral because of the minimal extent of encroachment into the designated area and the industrial character of this urban edge of Witney.

Overall Residual Landscape Impact

11.5.7 CLR is assessed as having an overall Slight Adverse residual landscape impact. Planting mitigation, the existing A40 corridor to the south and the benefit of Country park compensation land and putting existing overhead electricity cables underground would lessen some of the landscape impacts caused by the scheme. However, CLR would cause localised Moderate Adverse residual landscape impacts on the floodplain of the River Windrush and the tranquillity of the Witney Lake and Meadows Country Park. CLR would sever this narrow belt of open space, which currently forms a distinct parcel of landscape between Witney and Cogges.

Visual Impact

11.5.8 Properties 71 – 83 inclusive (odd numbers) on the B4022 Oxford Hill would have views of an increase in road infrastructure around the junction with the CLR. A section of the existing belt of trees along Cogges Hill Road would be removed to accommodate the junction. The proposed junction would be wider than the existing junction between Cogges Hill Road and the B4022 Oxford Hill. There would be a Neutral residual impact due to establishment of mitigation planting on CLR verges.

11.5.9 Properties 2 – 8 and 18 – 28, Oxford Hill, inclusive (even numbers) have a well established vegetation belt positioned on a raised bund between properties west of CLR off Wadard's Meadow and Cogges Hill Road. This provides a filtered

screen for views of existing and proposed road infrastructure from upper storey windows. CLR would involve moving traffic from the northern section of Cogges Hill Road slightly further from these properties, although there would be an additional junction off Cogges Hill Road opposite the entrance of Wadard's Meadow. Removal of a section of the existing tree belt on the existing junction of Cogges Hill Road and the B4022 and opposite Wadard's Meadow for the accommodation of the junction to CLR would be necessary. There would be a Neutral residual impact.

11.5.10 Property numbers 1 – 9, 25 – 33, 65 – 71, 89 – 111 and 129 – 133 inclusive (odd numbers) Blakes Avenue, at the northern end of the eastern edge of Cogges, have a well established tree belt to the east, running between the properties and the line of CLR. There would be partial removal of existing field boundary hedgerows to accommodate the earthworks and CLR. The proposed planted embankment would partially visually screen the carriageway itself, but the artificial change in landform and the reduction in length of view would have an impact on views from these properties. The area of open space to the east of these properties would be redesigned as part of the scheme to accommodate an informal playing field, which would involve re-contouring the area to achieve a large informal play area. Additional planting would be proposed as part of the redesign. The character of the area would remain fairly open and informal. Overall from these properties, there would be a Slight Adverse impact at all time scales. The impact would not decrease over time because of the severed view and close proximity of land remodelling.

11.5.11 Property numbers 45 – 65, 69, 71 and 97 – 105 Eton Close inclusive (odd numbers) do not have the benefit of an existing well established visual screen (as properties to the north do) between them and the proposed CLR. A proposed false cutting would screen the road corridor itself but there would be visual implications of the change in landform upon the existing landscape, which is currently rough grassland with native hedgerow boundaries. There would be Moderate Adverse impact in Year 1 as a result of the change in landform and views from upper storey windows, in particular of higher vehicles moving along CLR. The visual impact would reduce as proposed mitigation planting on the embankment matures to Slight Adverse in the Design Year.

11.5.12 Properties on the south eastern edge of Cogges would incur visual impacts from proposed earthworks which would be located in close proximity to the south and east of these properties. CLR would run within cutting parallel to the existing A40 south of these properties. Views from the houses would not therefore be directly of the road, but there would be views of the tops of higher vehicles. The top of the cutting would be very close to these properties (approximately 10m at the closest point). The existing open space used informally as a games area would be reduced to approximately one third of its original size and the existing games pitch would be lost. Proposals would include redesign of the remaining public open space to accommodate a playground, earth mounding and additional planting. Existing vegetation to the south of the existing area would be removed to accommodate CLR. Property numbers 100 to 108 inclusive (even numbers), 109, 111, 115, 117 and 121 Eton Close would incur a Large Adverse impact in Year 1. The level of impact would reduce over time as a result of maturing mitigation planting on proposed cutting slopes to Moderate Adverse in the Design Year.

11.5.13 Forty six properties along the south – western edge of Cogges, off Manor Road

and Cogges Hill Road, would have slight glimpses of CLR through existing, mature intervening field boundary vegetation. Although field boundary vegetation is dense, traffic moving along CLR would be partially visible and the visual impact on these properties would be Slight Adverse at all timescales.

11.5.14 Station Lane to the west of CLR comprises business and residential properties at Station Lane Industrial Estate, Des Roches Square, Sainsbury's supermarket and St Mary's Mead. All except the industrial estate are screened from the valley floor by the mature woodland in the Farm Mill and Witan Way area. For properties overlooking the proposed roundabout (1 and 2 Des Roches Square), there would be limited views of CLR as it joins Witan Way. Some existing mature woodland east of Witan Way would be lost in this area. However the road would be seen against a foreground of Witan Way and the existing roads which join it. The visual impact would be Slight Adverse in Year 1, reducing to Neutral in the Design Year, when planting on the cutting slopes would soften the impact.

Public Places

11.5.15 CLR would run through Witney Lake and Meadows Country Park on an embankment, bisecting it in a northwest/southeast direction. There are currently urban influences within the park including overhead electricity cables, the industrial estate to the west and A40 corridor to the south. Proposals include placing sections of the overhead cables underground, which would be visually beneficial. An area of additional existing arable land to the east of the River Windrush (East Branch) would be provided as compensation land for the park. However, this would not mitigate the adverse visual impacts of CLR in this area. Overall, visual impacts from within the park would be Large Adverse in Year 1. No tree and shrub planting is proposed along a section of the road embankments to retain the open character of the landscape. Therefore near that section of the route, the visual impact would remain Large Adverse in the Design Year.

11.5.16 CLR would be visible from the recently established Windrush Cemetery to the east, currently accessed off the B4022 Oxford Hill. CLR and the proposed junction with Cogges Hill Road would be in cutting at this location. However, views across existing open space between Cogges Hill Road and the cemetery (albeit a short distance) would be lost. Additional lighting at the junctions with Cogges Hill Road and the B4022 and general encroachment of urban infrastructure would also be slightly detrimental to the setting of the cemetery. There would be a Moderate Adverse impact in Year 1 as a result of the encroachment of CLR on the cemetery. However, in the long term, proposed planting on the cutting slopes would form a hedgerow effect. This would reduce the level of impact to Slight Adverse in the Design Year.

Roads and PRoW

11.5.17 Views from Stanton Harcourt Road as it runs northbound over the A40 would be affected. CLR would be visible to the east, running alongside the A40. The proposed retained area of public open space would be visible from the bridge, incorporating a playground and planting. To the west of the bridge, the proposed surface water storage lagoon would be visible alongside CLR. Within the constraints of space and engineering requirements, the lagoon would potentially appear a little artificial and fail to integrate into the surrounding landscape

character. Arable land further west would be used as compensatory land for Witney Lake and Meadows Country Park, providing views across recreational pasture as within the existing park. From the topographically higher location of the bridge, vehicles and pedestrians/cyclists would have a clear but brief elevated view of CLR. There would be a Slight Adverse impact at all timescales.

11.5.18 From the A40 to the south (where it runs on embankment or at a level with the topography to the north), there would be passing views of CLR where it runs on embankment to the west. There would also be views of the proposed water storage lagoon immediately west of Stanton Harcourt Road. CLR would cause a Slight Adverse impact in Year 1 from the A40. Given the passing nature of views from vehicle travellers and proposed planting on embankment slopes and around the proposed surface water storage lagoon, the level of impact would reduce to Neutral in the Design Year.

11.5.19 CLR would sever Footpath No. 410/15 which runs north - south through Witney Lake and Meadows Country Park. It would run on an embankment across the park, providing clear views from the Footpath, which would be diverted in part to follow the line of the diverted River Windrush (West Branch). The river and Footpath would share an underpass beneath CLR. Visual impacts from Footpath No. 410/15 would be Large Adverse in Year 1. No planting is proposed along a section of the embankments, and the impact would therefore still be Large Adverse in the Design Year.

11.5.20 CLR would sever Footpath No. 410/41, which runs west from the eastern boundary of Cogges residential development. From the Footpath west of CLR, the proposed road would not be visible behind the proposed planted false cutting but it would detract from the existing field boundary pattern. Walking north - west on Footpath No. 410/41, on the east of CLR, moving vehicles along the road would be visible where the proposed cutting is shallow. The proposed false cutting on the western side of CLR would also be visible. Where the Footpath meets CLR on both sides, clear views north and south along the carriageway would be evident. CLR would cause a Large Adverse impact in Year 1. Proposed planting along earthworks would reduce the impact to Moderate Adverse in the Design Year.

11.5.21 There would be glimpses of CLR from Footpath No. 410/42, approximately 410 metres to the east, which joins the A40 and B4022. However, views would be partially obscured by hedged field boundaries. Due to the intermittent views and distance (approximately 325m at the closest point), the level of impact would be Slight Adverse in Year 1. Mitigation planting would mature, forming a hedgerow boundary effect along the top of the cutting, reducing the level of impact to Neutral in the Design Year.

11.5.22 CLR would sever both Footpath Nos. 410/7 and 410/8, which currently branch eastwards off Cogges Hill Road. The Footpaths would be stopped up on reaching CLR and would connect to a surface path running along CLR. Both Footpaths would view the proposed screen mound from the west of CLR and the proposed junction with Cogges Hill Road to the north. From the east, views of CLR would be available where the proposed cutting is shallow. Where the Footpaths meet CLR, clear views north and south along the carriageway would be evident. CLR would cause a Large Adverse impact in Year 1. Proposed planting along earthworks would allow a decrease in impact to Moderate Adverse in the Design Year.

11.6 Conclusions

Landscape Impact

Although CLR would result in Slight Adverse or Neutral landscape impacts along much of the route, it would cause localised Moderate Adverse residual landscape impacts on the floodplain of the River Windrush and the tranquillity of the Witney Lake and Meadows Country Park. CLR would sever this narrow belt of open space, which currently forms a distinct parcel of landscape between Witney and Cogges. The overall residual landscape impact is assessed as being *Moderate Adverse.*

Visual Impact

11.6.1 Overall, 131 properties would be affected. In Year 1, most properties affected would incur Slight Adverse impacts, with 11 incurring Large Adverse impacts and 18 Moderate Adverse impacts. During the Design Year, no properties would experience a Large Adverse impact. Whilst there would be a slight increase in night time illumination at the junctions, the impact is assessed as Neutral due to the limited amount of additional lighting and glow from existing light sources.

11.6.2 Other non residential visual receptors, which would incur significant adverse impacts, include four Footpaths which would be severed by CLR. Impacts from these Footpaths would be Large Adverse. Witney Lakes and Meadows Country Park would experience a Large Adverse impact due to the high visibility of the road on embankment as it severs the open space. There would be a Moderate Adverse visual impact in Year 1 on views from Windrush Cemetery, where CLR would encroach on its boundary. Although most visual impacts on non-residential visual receptors would be less severe by the Design Year, Witney Lakes and Meadows Country Park and the Footpath which runs through it (number 410/15) would remain at Large Adverse.

12 Biodiversity

12.1 **Introduction**

12.1.1 The area in which the Cogges Link Road (CLR) would be constructed contains a range of natural features owing to the varied topography and drainage conditions. Volume 2C of this ES contains reports on biodiversity issues based on desktop and field studies. Figure 20 summarises the habitats within the study area.

Thames and Avon Vales Natural Area.

12.1.2 The area that would be affected by the CLR falls within the Thames and Avon Vales Natural Area as defined by English Nature (Countryside Commission and English Nature: The Character of England: landscape, wildlife and natural features – 1996). The Natural Area is characterised by its mixture of arable and grass fields surrounded with thick hedgerows with scattered small woods. Key elements are the numerous river valleys, with characteristic floodplains and riverside trees.

12.1.3 Within the Natural Area, the following nature conservation features of national significance are highlighted:

- Various earth heritage features, including outcrops of limestone, cretaceous sands and several clays;
- Lowland meadows, including hay meadows, floodplain meadows and grazing pastures;
- Lowland mixed deciduous woodland;
- Standing open water and canals.

12.1.4 Nature conservation features noted as being of local significance within the Natural Area are rivers and streams. Mainly clay bottomed with calcareous water, they have in the past been adversely affected by river engineering for flood control and recreation uses. This has tended to limit their value for wildlife, although current initiatives are directed at improving the biodiversity value of watercourses. There is usually a rich diversity of fish species within the catchments.

United Kingdom Biodiversity Action Plan (UKBAP)

12.1.5 The UKBAP was developed following the Convention on Biological Diversity, signed in 1992 setting targets for a number of threatened habitats and species within the UK. The UKBAP has recently been updated, and as a result the following species and habitat action plans are of particular relevance to the locality:

Habitats:

- Boundary and Linear features, including hedgerows
- Rivers and Streams

Species:

- Water Vole
- Great Crested Newt
- Grass Snakes
- Common Toad
- Otter
- Dormouse
- Bats (various)

Oxfordshire Biodiversity Action Plan (OBAP)

12.1.6 The OBAP identifies a number of species and habitats that are considered important within the county and for which conservation strategies and targets have been developed. These are detailed in a series of Species Action Plans (SAP) and Habitat Action Plans HAPs have been developed for several groups of habitats under the following headings, each of which is guided by a task force:

- Earth Heritage
- Open Habitats
- Settlements
- Wetlands
- Woodlands

12.1.7 HAPs of particular relevance to the study area are farmland, grazing marshes & neutral grassland, hedgerows and wetlands. SAPs of relevance to the study area include water vole and bats.

12.1.8 In addition, otters are known to be expanding their territory within the Windrush catchment.

12.2 Baseline Conditions

The Study Area

12.2.1 The study area covered two distinctly different landscapes. The western section comprises the Windrush valley, with its associated floodplain, secondary watercourses and tree-lined ditches. This area is bounded by gently rising ground to the east, with fields bounded by substantial hedgerows. The eastern section is of a lowland farmland character, with small to medium fields bounded by managed hedgerows, with occasional hedgerow trees. The fields are predominantly semi-improved or improved pasture. The area investigated in detail extended 500m in any direction from the CLR.

Scoping

12.2.2 The following organizations were consulted in 2002 regarding wildlife records for the study area:

- The local office of Natural England, formerly English Nature;

- Environment Agency;
- The Berkshire, Buckinghamshire, Oxfordshire Wildlife Trust;
- Oxfordshire Biological Records Centre.

12.2.3 Wildlife records were updated in 2006 by consulting the Thames Valley Environmental Records Centre, the successor organization to the Oxfordshire Biological Records Centre.

12.2.4 Scoping field surveys together with a river corridor survey were carried out in 2002, and important habitats noted within the study area included:

- River Windrush channels
- Riparian habitats associated with river channels
- Grassland/scrub matrix in vicinity of disused railway
- Mature hedgerows
- Large trees along watercourses and field boundaries

Habitats

12.2.5 A phase 1 habitat survey was carried out in May 2002 full details are included in Volume 2C of this ES.

Species/Group Specific Surveys

12.2.6 As a result of the scoping surveys, specialist surveys were undertaken for the following species and groups:

- Bats;
- Badgers;
- Birds (breeding and wintering);
- Dormouse;
- Higher plants;
- Great crested newt;
- Reptiles;
- Otter;
- Water vole;
- Fish;
- Aquatic ecology to macro invertebrate level;
- Terrestrial invertebrates;
- Hedgerow survey.

12.2.7 The complete survey reports are contained in Volume 2C of this ES. The survey methodologies and results are summarised below.

River Corridor Survey

12.2.8 The survey took place during July 2002 in accordance with the methodology developed by The National Rivers Authority (1992). The three sections of the River Windrush surveyed had a diverse array of species present within them.

Channel vegetation was limited to species tolerant of fast flowing rivers. Along the western channel where cattle grazing was taking place, poached areas especially along the flatter sections of the river banks had increased species richness with a greater number of aquatic and marginal plants colonising these sections.

Hedgerow Survey

12.2.9 An initial hedgerow survey undertaken in June 2002 followed the methodology of the Hedgerow Survey Handbook (Bickmore 2002). An assessment was also made under the Hedgerow Regulations 1997 and it was also determined whether the hedgerows fulfill the criteria of the UK BAP for Ancient or species rich hedgerows. In total 140m of hedgerow would be lost. Of this, 40m is considered to be important hedgerow under the current regulations and 110m of species rich hedgerow under the original UK BAP.

Higher Plants

12.2.10 A survey of the study area was carried out in June 2002. In general the species recorded were typical of the habitats within the study area. However, one plant of note was recorded on a field margin just south of Cogges. This was thought to be Downy Woundwort (*Stachys germanica*), a plant listed under Schedule 8 of the Wildlife and Countryside Act 1981 (WCA). However, subsequent consultations with local specialists confirmed the plant as a hybrid. Further searches were undertaken, but no further individuals were recorded.

Bats

12.2.11 Two field surveys were carried out. The first survey, undertaken in June 2002, concentrated on trees with potential to provide bat roosts. It assessed the roost potential of each tree examined. Four trees containing nine potential roost sites would be lost to the scheme. However no roosts were located in the area during the 2003 bat activity surveys.

Badgers

12.2.12 A survey was undertaken in November 2002, searching for setts and foraging routes. No active setts were found within the study area, but three disused or partially disused setts were noted. Foraging routes were evident within the farmland to the east of the area.

12.2.13 An update survey was carried out in February 2006. Based on the findings of surveys carried out in 2002 and 2006 it has been shown that currently there would be no direct impacts on any badger setts. The scheme study area has evidence of badger use and it does impact on badger territories.

Birds

12.2.14 Surveys were carried out of both wintering and breeding birds during 2002-2003. The area is used by a typical selection of more common species. However, of particular note is the occurrence of kingfisher on the River Windrush. This species and its nest are fully protected under Schedule 1 of the WCA. Bird nesting habitats are provided by the numerous hedgerows and blocks of woody vegetation in the area.

12.2.15 Both wintering and breeding bird surveys were updated in 2006. Results were broadly similar to the previous studies, although a notable finding was the presence of barn owl recorded from just outside the CLR study area. It should be assumed that foraging activity would take place within the study area, although the surveys did not find any evidence of nesting. This species is also fully protected under Schedule 1 of the WCA.

Dormouse

12.2.16 A habitat suitability survey was undertaken in 2002 to examine the hedgerows in the area and assess their suitability as habitat. In particular, potential food plants were noted, along with the structure and connectivity of the hedgerows. Subsequently, a nest tube survey was undertaken during 2003 when a single dormouse was found. Further studies were carried out in 2004-5. However no dormice were detected as a result of the further surveys, although wood mice and their nests were found.

12.2.17 Results suggest that there is only a small population of dormice in the area; however, the fact that one individual was found during 2003 means that a European Protected Species licence and appropriate mitigation will be required.

Great Crested Newt

12.2.18 The scoping survey highlighted the presence of a shallow reed filled pond within the study area just west of the main river channel. This was assessed as potential great crested newt habitat, and a specialist survey was undertaken. This involved four visits to check for the presence of the species between March and June 2003. No animals were recorded during the surveys.

12.2.19 Surveys were updated in 2006 with similar results.

Terrestrial Invertebrates

12.2.20 A survey was undertaken in May and June 2003. This recorded a total of 244 invertebrate species of which two were Nationally Notable and 12 were Nationally Local. The older hedgerows and associated older scrub units and tree groups were important for invertebrates.

12.2.21 An updated survey was undertaken in 2006. Taken together the 2003 and 2006 surveys recorded a total of 319 invertebrate species of which four were Nationally Notable and 19 were Nationally Local. The overall assessment of the invertebrate community for the site is one of low conservation significance.

Reptiles

12.2.22 An initial survey was carried out during September and November 2002. However, as the conditions at the time were sub-optimal, a further survey was carried out in 2003. The survey recorded the presence of both juvenile and adult grass snakes, primarily associated with the banks of the Windrush. These are protected under Schedule 5 of WCA.

Otter

12.2.23 Consultations with the Environment Agency confirmed the presence of an

expanding otter population within the Windrush catchment. A specialist survey was undertaken during October 2002 to search for signs of otter, including spraints, tracks and holts. No otter holts were found within the study area. However spraint was found next to the river channel, confirming the movement of otter along the river corridor. Otter is fully protected under Schedule 5 of the WCA.

12.2.24 Further surveys in 2006 confirmed a continued otter presence but no holts were found.

Water Vole

12.2.25 An initial survey was carried out in May 2002 primarily to asses the quality of the riparian habitat in the study area, and to make recommendations for further survey work. As a result, a further survey was undertaken in October 2002. Signs of water vole activity were observed along both of the main channels of the river in the vicinity of the country park.

12.2.26 Surveys in 2006 confirmed the continued presence of water vole as well as identifying the presence of mink in the area. Numbers appear to have decreased since the previous surveys in 2002, as evaluated by the number of signs.

Fish

12.2.27 A comprehensive survey of the channels of the Windrush was carried out by a specialist survey team in October 2002. This involved a variety of techniques, including electrofishing, to provide a detailed assessment of fish species present. The survey recorded a range of species typical of this type of river. No protected species were found during these surveys but brook lamprey were recorded during the aquatic ecology survey. This species has declined in several parts of Europe and it is now given some legal protection being listed in Annexes IIa and Va of the EU Habitats and Species Directive, Appendix III of the Bern Convention, and as a Long List Species in the UK Biodiversity Action Plan.

12.2.28 The report provided also gives recommendations on the creation of a new river channel and dewatering of the channel to be abandoned. These would be incorporated into a method statement for agreement with the Environment Agency.

Aquatic Ecology

12.2.29 A survey was commissioned to assess the biological water quality of the watercourses within the study area including sampling of macro invertebrates and identification to family level. In general the results indicated good water quality in all channels.

12.3 **Potential Impact**

12.3.1 The scheme would cross the river corridor of the Windrush on a combination of bridges over the channels and embankment on the floodplain. It would then pass under Stanton Harcourt Road before moving into cutting across the fields and hedgerows east of Cogges. As a result, the road would impact on a number

of habitats and species. Environmental Impacts are set out below in relation to habitats, species and species groups.

Rivers

12.3.2 The most significant impact is on the river channels. Three channels would be affected. The old mill leat closest to Witan Way would be enclosed in a box culvert. The two main river channels would be bridged with new concrete structures. Due to the alignment of the road in relation to the river channels, the western channel would require diversion over a length of about 100m. Apart from the direct physical effects on the channel and riparian habitats themselves, these crossings would also impact on foraging and dispersal routes used by several protected species, including kingfisher, otter, water vole and several species of bat.

Hedgerows

12.3.3 The scheme would involve the loss of 140m of native hedgerow, primarily on the eastern section.

Other Habitats

12.3.4 A small area of swamp situated east of the west branch of the Windrush. This was assessed as of local importance, with relatively low diversity. It is not used by protected species. The swamp falls within the road corridor and would be lost as a result of the scheme.

Bats

12.3.5 Impacts would occur on bat foraging habitat and dispersal corridors provided by hedgerows and the river channels. No known bat roosts would be impacted. However further surveys would be required prior to felling trees with bat roost potential. If identified felling would only be undertaken outside of the bat breeding season (May to July) and the hibernation period (October through to March).

12.3.6 The carriageway would not be lit, thereby reducing impacts on certain species of bats.

Badgers

12.3.7 The scheme would sever foraging and dispersal routes used by badgers in the area with associated risk of road kills. No badger setts would be affected.

Birds

12.3.8 River habitat used by kingfishers would be subject to impacts. Although no nest sites were identified within the study area, it is possible that construction of the road could impact upon more recently constructed nest sites. Bird nesting habitat provided by the hedgerows and vegetation would be lost in connection with the scheme. There would also be negative impacts on birds, particularly in relation to breeding, as a result of increased noise pollution from the road.

12.3.9 Road verges are favoured by barn owl for hunting. This type of behaviour leads

to road traffic related mortality. During surveys in 2006 a barn owl was involved in a traffic accident and found dead by a roadside in the Cogges area just outside the study area.

Dormouse

12.3.10 CLR would impact on dormouse habitat provided by hedgerows and woody shrub areas between Cogges and the A40. It must be assumed at this stage that the hedgerows east of Cogges are also being used by the species. The current habitat would be fragmented by the road scheme.

Terrestrial Invertebrates

12.3.11 Invertebrates would be directly affected by removing associated habitats. Of particular importance are the older hedgerows, and associated older scrub units and tree groups.

Reptiles

12.3.12 Reptile habitat, in particular the Windrush margins, would be lost to the scheme. In addition the scheme would sever habitats leading to fragmentation of populations.

Otter

12.3.13 The main potential impacts on otter would be due to severance of the riparian dispersal corridor along the River Windrush, and the associated risk of road kills.

Water Vole

12.3.14 Cogges Link would impact on water vole habitat and potentially nest burrows. A further survey would be carried out prior to construction to locate burrows within the construction footprint.

Fish

12.3.15 Fish would be impacted in two ways by the scheme, directly when the western channel of the River Windrush is diverted and indirectly through potential construction works polluting the watercourse.

Aquatic Ecology

12.3.16 Many of the riverine species recorded would be highly susceptible to pollution incidents involving suspended solids, oil, lubricants, cements, grouts and other chemicals that could enter the River Windrush during construction.

12.4 Mitigation

12.4.1 Mitigation measures are set out below in relation to habitats, species and species groups. A summary of ecological mitigation proposals are shown in Figure 20.

12.4.2 The bridge structure design would retain continuity of dry land corridors beside the river channel due to the large width between abutments. Purpose built

animal walkways would be provided at a high level within the culverts to ensure free passage for larger mammals in times of flood.

12.4.3 Lighting is not proposed for the scheme carriageway except at the junctions at either end of the scheme and traffic controlled junctions to minimise impacts on bats.

12.4.4 Bank construction in relation to water vole mitigation measures will be agreed with the Environment Agency.

12.4.5 Excavation of the new river channel would aim to incorporate as much as practicable of the sedimentary material and vegetation excavated from the section of existing river to be lost. A method statement would be agreed with the Environment Agency prior to construction and would be based on recommendations provided in the fish survey report.

Hedgerows

12.4.6 The landscape planting scheme incorporates extensive planting of mixed native hedgerows along the eastern section highway boundary. These would provide new habitat corridors linking hedgerows severed by the scheme. In all 334m of hedgerow and 4.3ha of tree and shrub plots would be provided.

Bats

12.4.7 The new planting provided as part of the mitigation would provide new foraging habitat for bats. Where existing hedgerows would be severed, taller growing shrub and tree species would be planted to, in time, provide a measure of flight path connectivity across the road. There would be a net gain in total river channel length. Although some of this would be in culvert, the overall impact on bat foraging areas over water is not seen to be significant. The bridge structure would be designed to be 'bat friendly', providing suitable roosting sites. Lighting would be confined to traffic junctions and this would minimise impacts on bat foraging areas and commuting routes. Bat boxes would be erected in suitable trees to compensate for potential roost losses.

Badgers

12.4.8 Mitigation of the potential effects on badgers would comprise the provision of tunnels to maintain connections with existing foraging routes crossing the road. A further survey would be carried out prior to finalising scheme design to ensure the most appropriate location for tunnels. Badger fencing would be provided for a minimum 500m either side of the tunnel entrances to deter/prevent animals crossing the road at ground level. Detail design of the tunnels and fencing would be in accordance with current best practice.

Birds

12.4.9 It would be necessary to conduct a further survey prior to construction to identify any kingfisher nest sites within the construction footprint. The construction programme would be developed to take account of the need to avoid impacting such sites during the nesting season. Clearance of hedgerows, scrub and other potential bird nesting habitat would also be undertaken outside the nesting season or vegetation checked prior to removal to ensure the absence of nesting

birds. New hedgerow, tree and scrub planting provided as part of the scheme would in time replace the lost nesting habitat.

Dormouse

12.4.10 This issue has been discussed with English Nature, now part of Natural England, who are satisfied that the proposed new native hedgerow planting would provide sufficient compensatory habitat to offset the hedgerows lost to the scheme. Dormouse mitigation measures are gradually developing and the latest information on effective measures should be considered prior to construction. To mitigate the fragmentation it is proposed to install dormouse 'bridges' to provide links between the remnant habitat either side of scheme. These may be attached to the Stanton Harcourt Road Underbridge, giving the opportunity to improve connectivity across Stanton Harcourt Road as well. However, the exact locations would need to be agreed with Natural England.

Terrestrial Invertebrates

12.4.11 Direct losses to terrestrial invertebrate habitat would be replaced through planting of new hedges, tree and scrub plots. All dead trunks, roots, stumps and other saproxylic features would be retained where practicable. Where trees must be felled to facilitate road construction these would be retained as invertebrate features elsewhere within the locality.

Reptiles

12.4.12 It would be necessary to exclude reptiles from the scheme corridor during construction. To accommodate the displaced animals would require enhancement of the habitat remaining south of the new road and elsewhere. This would be carried out in accordance with current guidelines produced by English Nature/Natural England. Once the construction works are complete the southwest facing open grassland habitat to be created on the embankment slopes in this area would provide new reptile habitat. In addition, new drainage ditches and swales provided as part of the surface water drainage system would be designed to provide habitat suitable for grass snake and any other species to reptile to colonise the area, and the margins of the new section of river would be designed to maximise the habitat potential for these species. The country park compensation area would also provide additional potential habitat.

Otter

12.4.13 All the bridge and culvert structures crossing the river would be designed to maintain connectivity between the riverbanks either side of the road. Roadside boundary fences in the vicinity of the crossings would be otter proofed to limit the risk of the animals straying on to the carriageway. Animal walkways would be provided within culverts at a high level to ensure free passage for larger mammals in times of flood.

Water Vole

12.4.14 Water voles would be excluded from the construction footprint prior to the start of works in accordance with the current Environment Agency guidance. New riparian habitat appropriate for water voles would be created as part of the new section of channel. There would be a net loss of water vole habitat, but this is

not considered to be significant. Subject to landowner agreement, off site mitigation to enhance the habitat for water voles is also proposed on the west branch of the Windrush. This would be selected thinning of canopy to diversify the bank side vegetation (Figure 17).

Fish

12.4.15 To minimise the effect of the construction on fish and their breeding seasons, in-river and bank-side work would be performed between July and September. A method statement for the river diversion would be agreed with the Environment Agency.

12.4.16 Subject to agreement with the Environment Agency off site riparian habitat enhancements are also proposed on the east branch of the Windrush to the northeast of the East Windrush Overbridge.

12.4.17 Good site practice would include storing potentially polluting substances correctly, bunding around stored liquid and checking for leaks in on-site stored chemicals and fuels.

Aquatic Ecology

12.4.18 The construction specification would seek to minimise the possibility of pollutants entering the Windrush by good design and careful management of the construction team, especially when working close to watercourses. The contractor would be required to produce a Construction Environmental Management Plan to deal with all such risks.

12.5 Residual Impacts

Habitats

12.5.1 The scheme would involve an initial net loss of good quality aquatic and riparian habitat, due to shading from structures. However, the new section of river channel would in time compensate for the majority of this loss.

12.5.2 There would be a net gain in grassland/scrub habitat and wet areas (provided by the swales) suitable for reptiles. The majority of the south and southwest facing embankment slopes on the western section would be seeded and managed to achieve this aim. The compensation area to be provided for the country park would involve the conversion of arable land into a grassland habitat.

12.5.3 A net loss of mature hedgerow would result in the short term. However, as new hedgerow planting matures there would be a net gain of 730m of this type of habitat.

12.5.4 A relatively small number of large trees would be lost as a result of the scheme. However the proposed landscape planting scheme would involve the planting of approximately 19,000 trees and shrubs in addition to the provision of new hedgerow.

Bats

12.5.5 The scheme would disrupt linear landscape features currently used as corridors

for foraging and dispersal by bats. However by incorporating an open abutment design this would minimise habitat fragmentation impacts to a degree where it is considered that impacts would not be significant. Landscape planting and hedgerow planting proposed as part of the mitigation scheme would subsequently partially replace linear features lost to the scheme and provide new landscape features, eventually resulting in only a temporary disadvantage to bats in the area.

Badgers

12.5.6 The road would sever foraging routes used by badgers. Although connectivity of the routes would be maintained by tunnels, there would be a net loss of foraging habitat.

Birds

12.5.7 Loss of nesting habitat would in time be more than compensated for by new planting provided as part of the mitigation scheme. However, the value of this compensation would be downgraded by the proximity of the road and its associated noise impacts.

12.5.8 Limiting traffic speeds would in turn limit the impact on foraging barn owls.

Dormouse

12.5.9 The loss of dormouse habitat would be more than compensated for as new hedgerow and shrub planting developed into suitable habitat, from about 4-5 years after planting. Although new artificial habitat connections would be provided, little is currently known about the effectiveness of these structures in terms of how much use may be made of them by dormice.

Terrestrial Invertebrates

12.5.10 Although there would be a short-term adverse impact, there would be a net gain of hedgerow and shrub habitat through planting, providing suitable habitat.

Reptiles

12.5.11 Although there would be short term adverse impacts on reptiles, there would be a net gain of general reptile habitat. This would amount to approximately 0.32ha on south/southwest facing embankments and 0.4ha of wet habitat within the swales. The country park compensation area would provide a further 4.34ha of potential habitat.

Otter

12.5.12 Construction would cause temporary disruption to otters dispersing along the river corridor. However, the impacts on this species are assessed as insignificant.

Water Vole

12.5.13 As with the otter, there would be some short term adverse impacts on the local population, but the overall net effect would be insignificant.

Other Effects

12.5.14 A balancing lagoon would be constructed in connection with the highway drainage system. Some surface water discharges would be directed through swales before entering the main Windrush channel. These features would be designed to be as wildlife friendly as possible, with appropriate aquatic and marginal planting and fringed with a grass/ shrub mosaic.

12.6 Conclusions

12.6.1 Overall the impacts are mostly assessed to be neutral or slight adverse with only one category, hedgerows, being evaluated as of moderate adverse. Where a proposal affects more than one feature the principle here is that a proposal or option as a whole should be classified in the most negative category of the sites scored.

12.6.2 Advice in TAG guidance is that options in the 'moderate adverse' category should include at least 1:1 compensation (no net loss within the Natural Area) if the development is allowed.

13 Land Use and Agriculture

13.1 Introduction

13.1.1 The study area for the CLR examined land in two separate ownerships lying north of the A40 and south of Oxford Hill. The assessment has been carried out to DMRB Stage 3.

13.2 Baseline Conditions

Soils and Land Quality

13.2.1 Detailed soil survey records were consulted for the study area. Soils vary from clayey alluvium in the flood plain to heavy textured soils over Oxford Clay.

13.2.2 The climate is equable, with reasonable rainfall, and is not considered to be a limiting factor.

13.2.3 The provisional agricultural land classification map published by MAFF in 1971 shows Grade 3 land on the higher ground and Grade 4 in the floodplain. A field appraisal carried out by DEFRA east of the Cogges assessed that land as Grade 3b.

13.2.4 The mapped information and soils data indicates that much of the area is Grade 3b over the clayey soils on the Oxford Clay outcrop and in the Windrush floodplain. A small area of Grade 2 is found on a narrow floodplain terrace flanking the floodplain.

13.2.5 The bulk of the study area is in either arable or pasture use. The area west of the eastern river channel is a country park administered by Witney Town Council; however this area is also used for agricultural purposes. There are also small areas of allotments and some vacant land.

Land Ownership

13.2.6 The agricultural land with study area is within two ownerships, as follows:

- Church Farm, South Leigh – total area of holding 180 ha approximately;
- Witney Country Park – total area of 30 hectares including Witney Lake.

Environmentally Sensitive Area

13.2.7 Part of the study area is within the Upper Thames Tributaries Environmentally Sensitive Area – see Figure 14. The ecological interest is associated with the wet grassland of the valley bottoms, especially semi-natural hay meadows and wet pasture. However none of the local landowners land has been entered into an ESA agreement.

13.3 Potential Impacts

Land Take and Quality

13.3.1 Cogges Link would require a total of 11.9 hectares of agricultural land to construct.

13.3.2 Of this land lost, approximately 1.8 hectares is within the definition of "best and most versatile agricultural land" as defined in PPS 7.

Effects on Farms

13.3.3 The eastern part of the scheme would sever a parcel of land immediately east of Cogges. However this land is zoned for development in the Local Plan; therefore any impact is relatively short-lived. The western half of the scheme would sever two fields currently in agricultural production. The scheme would also split the country park

13.3.4 There are not considered to be any significant adverse impacts on agricultural use.

Environmentally Sensitive Area

13.3.5 The proposed scheme would not prevent any of the remaining land parcels for being entered into an ESA agreement.

13.4 Mitigation

13.4.1 The following mitigation proposals have been put forward:

- Provisions of reasonable periods of notice to agricultural land;
- Making good of any land drains or water supplies that are severed during construction;
- Provision of new field accesses to severed parcels of land;
- Provision of Country Park compensation land.

13.5 Residual Impacts

13.5.1 After mitigation the residual effects of the scheme will be slight negative on Agricultural Land Quality, as you can not mitigate against the loss of land, and slight negative on farm businesses.

13.6 Conclusions

13.6.1 The overall significance of impact on both Agricultural Land Quality and Farm Businesses is Slight Negative.

14 Cultural Heritage

14.1 Introduction

14.1.1 A full description of the cultural heritage of the study area, including the methodology and sources of information used to identify and assess sites of cultural heritage importance, is set out in Volume 2B. This summary includes a description of potential impacts identified, an assessment of the significance of those impacts and the mitigation measures proposed. The numbering of the sites has been carried over from the Volume 2B report without change.

14.1.2 Information on archaeology and the built heritage was gathered through a desk-based study and a subsequent walkover survey undertaken in May 2004, geophysical survey in December 2004 and trial trenching completed in the spring 2005. The study area for the survey covered the area shown on Figure 21 and extends 200m in all directions from the edge of CLR. Information from the surrounding area and region was also taken into account in order to put the area in context and gauge the possibility for previously unrecorded archaeology in the immediate locality. The results of this work are summarised on Figure 21. A variety of sources were consulted, including:

- English Heritage for Scheduled Ancient Monuments, Historic Parks and Gardens and Registered Battlefields;
- Oxfordshire County Council Sites and Monuments Record for archaeological sites and Listed Buildings;
- West Oxfordshire District Council for Listed Buildings and Conservation Areas;
- Centre for Oxfordshire Studies for historic mapping and published archaeological and historical literature;
- Consultation with the Oxfordshire County Archaeologist; and
- A walkover survey.

Assessment of Archaeological Importance and Significance of Impact

14.1.3 A provisional assessment of the grade of importance of each archaeological site within the study area has been made on a scale of "National", "Regional" or "Local" importance. These grades are based on professional judgment and the non-statutory criteria used in the process of designating Scheduled Ancient Monuments.

14.1.4 The significance of the potential impact on each site has been assessed on a scale of "Major", "Moderate" or "Minor" significance. These assessments have been made using a three-stage process, taking into account first the proportion of the site that would be affected, then the significance of the site, and finally any other relevant qualitative factors. These assessments have been made in the light of the policies contained in the relevant local plans and in PPG 16, "Archaeology and Planning". (for a fuller methodology see Volume 2B)

14.2 Baseline Conditions

14.2.1 A total of 18 archaeological sites and findspots including three ancient hedgerows have been identified within the study area and are numbered

between 1and 102 on Figure 21. The grade of importance of each site has been assessed using the methodology set out above. These assessments are based on the information currently available, which is often incomplete, and therefore should be seen as provisional.

14.2.2 There are two Scheduled Monuments within the study area. SM 28177 (1) includes a series of earthworks and buried remains centred on the present Manor Farm Museum. These comprise the remains of a moated manor, priory, settlement, water mill and fishponds. The monument also includes a World War II pill box. SM 21834 (2) is the Bishop of Winchester's Palace at Witney. The monument includes the known surviving extent of the moated palace. The moat survives as a buried feature on its western and northern sides enclosing an area approximately 116m from north to south by 84m from east to west. The moat measured 12m across and more than 3m deep. There are no Listed Buildings, Registered Parks and Gardens or Battlefield sites within the study area. The westernmost 120m of the CLR scheme intrudes into the Witney Central (including Cogges) Conservation Area.

14.2.3 The geology of the study area is composed of Oxford and Kimmeridge Clays with some overlying glacial gravel deposits. East of the Cogges many of the overlying deposits excavated have been described as ploughsoils, both buried and recent.

14.2.4 There is evidence of human activity within the study area from the Neolithic to the present day. Three sites or findspots have been dated to the prehistoric period and include Mesolithic flints and a possible Neolithic feature (31) and possible Bronze Age oval and circular enclosures (36) on or just above the floodplain to the east of the Windrush. Cropmarks on the south west margins of the study area (35) are thought to be prehistoric. Iron Age remains have been discovered during trial trenching (100) and there is a possibility of Iron Age remains to the east (30) and south-east (32) of Cogges. There is the potential for preserved archaeological and palaeoenvironmental remains to survive in the floodplain. Archaeological investigations along the river valley at Yarnton have demonstrated a distinct pattern of earlier sites including Neolithic and Bronze Age ceremonial sites and Bronze Age timber piling for wharves being located on the floodplain. There is a subsequent shift of activity onto the higher ground of the river terraces. This pattern is discernible within the study area with possible Bronze Age enclosures (37) located along the boundary between the alluvium and the first terrace and subsequent Iron Age (100), Romano-British (30) and medieval sites (1, 2 and 31) located on the higher terrace deposits and Oxford Clays

14.2.5 Previous evaluations to the east of Cogges, between Oxford Hill and Stanton Harcourt Road, have demonstrated clear evidence for Romano-British occupation (30) and some possible earthworks of unknown date along the northern section of the route. The cropmark site (37) east of the Windrush is considered to be of possible Anglo Saxon date. There is rather more ephemeral medieval (31) activity to the south east of Cogges. A series of earthworks which are likely to relate to medieval activity lie within this eastern section of the route corridor. None of these sites have been determined to be of national importance and are unlikely to be archaeologically complex. Significant medieval remains are represented by two Scheduled Monuments including the Bishop of Winchester's Palace in Witney (2) and the remains of a medieval moated manor, priory, settlement and associated features at Cogges (1).Farm Mill (46) is post

medieval and to the south between the mill stream and the Windrush is a World War 2 pillbox (101). There are two historic hedges (47, 48). The Windrush floodplain has potential for palaeoenvironmental remains to survive (102).

14.2.6 Initial studies identified three zones of archaeological potential. Zone 1 was the higher ground to the east of the Windrush and lying on both east and west sides of the Cogges housing development. Zone 2 is the area south and east of the pumping station and Zone 3 is the floodplain of the Windrush. Initially Zone 1 was perceived as having proven archaeological remains and Zones 2 and 3 as having potential for archaeological remains, with the latter also having potential for preserved palaeoenvironmental remains.

14.3 Potential Impacts

Direct Impacts

14.3.1 Of the 18 sites/findspots identified in the desk-based assessment there are seven that would suffer direct impacts as a result of the proposed route corridor.

Site 29 – Medieval Seal Matrix (Archaeological Zone 1)

14.3.2 Although this findspot is indicative of medieval activity, it is a stray find and unlikely to indicate the existence of a new site of this period.

Site 30 – Romano-British settlement (Archaeological Zone 1)

14.3.3 The proposed route is likely to have a direct impact on part of a Romano-British settlement. Archaeological evaluations carried out to the east of Cogges Hill Road in 2000 revealed linear features and pits containing early Roman material. These types of features are likely to extend into the route corridor which at the northern end of the eastern arm is in a cutting. Possible medieval features were also identified

Site 31 – Medieval Earthworks and Prehistoric Features / Findspots (Archaeological Zone 1)

14.3.4 The proposed route is likely to have a direct impact on medieval earthworks, including ridge and furrow and indistinct areas of earthwork features. Archaeological evaluations carried out in 2000 ahead of a previous scheme included trenching that revealed concentrations of 11th century pottery, a Neolithic posthole and a Mesolithic blade.

Sites 47 and 48

14.3.5 The proposed route would have a direct impact on two ancient hedgerows (47 and 48) causing partial loss and severance.

Site 100 (Archaeological Zone 2)

14.3.6 Site 100 comprises ditches and pits almost certainly of Iron Age date which seem to extend over both the first terrace and on to the eastern edge of the floodplain where some of the features are covered by alluvial deposits. The proposed route is likely to have a direct impact on Site 100.

Site 102 (Archaeological Zone 3)

14.3.7 Trial trenching and boreholes in the flood plain have identified three palaeochannels and while the potential for waterlogged conditions are suitable for the preservation of wood the general palaeoenvironmental potential is regarded as moderate as the alluvial deposits are clays and silts with a low humic content providing limited potential for the survival of plant and insect remains.

14.3.8 The road is carried on an embankment across the flood plain and the impacts would come from drainage of the road, the realignment of the Windrush and with the piles and abutments for the bridges. The embankment is to be constructed on the existing ground surface with no wicks drainage.

14.3.9 The magnitude and significance of direct impacts can be summarised as follows

Table 14.1 Significance of Impact

Site no.	Site type	Value	Magnitude of Impact	Significance of Impact
29	Seal matrix	Local	Negligible	Not significant
30	Roman settlement and possible earthworks	Regional	Moderate	Significant
31	Ridge and furrow, ditch, undated features and Neolithic and Mesolithic blade	Regional	Moderate	Significant
47	Hedgerow	Local	Substantial	Significant
48	Hedgerow	Local	Substantial	Significant
100	Iron Age remains	Regional	Substantial	High significance
102	Palaeoenvironmental remains in Windrush floodplain	Regional	Slight	Minor significance

Indirect Impacts

Site 1

14.3.10 The Scheduled Cogges Moated complex (1) would suffer some impact on its setting and the views out from the site but these are primarily in the form of slight potential for traffic to be visible on the southern end of CLR in winter months.

Site 46

14.3.11 Farm Mill (46) is mainly screened by mature trees and there would be only slight visual impacts.

Site 101

14.3.12 The realigned river channels would be closer to the World War 2 pillbox but the impacts on its defensive nature would be very slight.

14.4 Mitigation

Direct Impacts

14.4.1 Mitigation for the direct impacts has been discussed and agreed with the County Archaeological Officer. All excavation and survey work would be followed by post excavation/survey assessment leading to proposals for analysis, reporting, publishing and archiving of the excavated material. This is in line with English Heritage's guidance for managing archaeological projects.

Sites 29, 30 and 31

14.4.2 Site 29 is a stray find for which there is no mitigation. Sites 30 and 31 have some possible slight earthworks which would be surveyed and if appropriate would be sampled by hand excavation. The area from Oxford Hill junction to Stanton Harcourt Road has proven archaeological remains under a generally shallow ploughsoil .and following earthwork survey and investigation the area would be stripped of topsoil under archaeological control and archaeological features would be excavated and recorded. The best approach would be to carry this work out well in advance of the start of the road scheme programme.

Sites 47 and 48

14.4.3 Cross sections of these field boundaries would be recorded ahead of construction. Archaeologically significant layers contained within these profiles may require sampling.

Site 100

14.4.4 Mitigation of this site would be by archaeological excavation and recording.

Site 102

14.4.5 As the distribution of possible archaeological and palaeoenvironmental remains in the Windrush floodplain are difficult to predict the mitigation for their disturbance by piles and bridge abutments would be agreed with the County Archaeological Officer as the final design is completed. It may include some form of trenching and /or boreholes. It is proposed to mitigate the channel realignments by a watching brief involving the removal of topsoil and subsoil under archaeological control to allow for the recording of any archaeological features.

Indirect Impacts

Site 1

14.4.6 There is low intervisibility between the Scheduled Monument and CLR created by hedge lined field boundaries. Tree planting at the base of the embankments would further screen the views as the trees mature.

Site 101

14.4.7 A location and condition survey of the World War 2 pillbox should be done before construction starts and the site should be protected during construction.

14.5 Residual Impacts

14.5.1 The residual impact is the predicted level of impact, after the application of the proposed mitigation strategies has been taken into account for each site. Residual impacts on Sites 29, 30, 31 and 100 would be of no significance if the archaeological mitigation procedures are carried out as listed above. The partial removal of hedges 47 and 48 would leave a slight adverse residual impact after mitigation. Site 102 represents the potential for deposits which may contain archaeological remains, preserved timbers and palaeoenvironmental remains which after mitigation may leave a slight adverse impact.

14.6 Conclusions

14.6.1 Seven cultural heritage features are directly impacted by CLR. They include one find spot, three archaeological sites of Iron Age /Roman date, an area in the Windrush floodplain which has the potential for preserving wooden remains with limited potential for palaeoenvironmental remains and two historic hedges. No sites of National Importance suffer a direct impact although the view from the Scheduled Cogges moat site may suffer some impact in winter months until the planting along the embankment has matured. Mitigation has been outlined for these sites and there may overall be slight adverse effect.

15 Pedestrians, Cyclists, Equestrians and Community Effects

15.1 Introduction

15.1.1 This technical chapter evaluates the potentially significant environmental effects associated with the construction and operation of the CLR upon recreation and public access and identifies mitigation measures with which to minimise predicted adverse environmental effects. The full technical report can be found in Volume 2D.

15.2 Methodology

15.2.1 The methodology adopted in this technical report is based on the Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 8, Pedestrians, Cyclists, Equestrians and Community Effects. For the purposes of this technical report, an assessment framework has been developed to allow a systematic assessment of the effects of the CLR upon recreation and community amenities/facilities, based around the following topics:

- Journey length and travel patterns;
- Changes in amenity;
- Severance.

15.2.2 The assessment primarily uses desk-based information alongside site visits to generate baseline information. In addition, pedestrian counts have been undertaken along public footpaths crossing the scheme boundary to generate a picture of their use at peak times on a weekend day, and a weekday afternoon.

15.3 Summary Environmental Baseline

Pedestrian Access

15.3.1 Four public footpaths are situated within the boundary of the CLR, namely:

- Footpath No. 15 (Witney);
- Footpath No. 41 (Witney);
- Footpath No. 8 (Witney);
- Footpath No. 7 (Witney).

15.3.2 Discussions with Oxfordshire County Council indicate that the footpaths are well used by members of the public. Survey data generated as part of this study illustrates that the most frequently used is Footpath 15. The footpaths are commonly used for dog walking and few cyclists were found to use the footpaths in question.

Cyclists and Equestrians

15.3.3 There are no specific provisions for cyclists within the area of the CLR. A small section of bridleway extends west from Footpath No. 15 along Farm Mill Lane from Farm Mill to join Church Green.

Recreation

15.3.4 Part of the scheme alignment cuts across The Witney Lake and Meadows country park that extends to the north and south of the A40 Oxford-Cheltenham road. The boundary of the CLR is contained within the northern part of the country park. The area is owned and maintained by Witney Town Council.

15.3.5 The country park to the north of the A40 is an informal public recreation facility comprising 6.67ha of low-lying floodplain grassland in close proximity to Witney and Cogges. The principal recreational use of the country park is for walking, notably by dog walkers.

15.3.6 An area of paddocks and allotments adjoins the country park. These allotments are owned by the Bartlett-Taylor Charitable Trust. There is one remaining tenant at the allotments and the remainder are disused.

15.3.7 An area of public open space to the east of Stanton Harcourt Road and off Eton Close provides a play area of 1.1ha. Part of this area is set out with a small football pitch and is suitable for organised team games. The area is owned and maintained by Witney Town Council.

15.4 Environmental Impacts

15.4.1 With respect to recreation and public access, the predicted likely significant environmental effects of the scheme relate to the following impacts and are summarised below:

- Changes in journey lengths
- Changes in amenity value
- Land Use change
- Community Severance.

Construction

15.4.2 Public footpaths would remain open during the construction phase, although journey lengths may be increased as a result of temporary diversions put in place where necessary.

15.4.3 Increases in noise and the presence of construction landscapes in an area of open greenspace would reduce the amenity value for visitors using the public footpaths and recreation amenities including the country park and the remaining tended allotment.

15.4.4 Parts of the country park are required for the construction of the CLR and would therefore reduce the area available for recreation. Access to the remaining tended allotment could also be hindered during construction.

Operation

15.4.5 Four footpaths are severed by the CLR and would require diversions. In each instance, this would result in short (less than 250m) increases in journey lengths for pedestrians.

15.4.6 Under the proposals, Footpath No. 15 would be maintained beneath the CLR. At Footpath No.41 access would be provided up to the embankment on either side CLR. Pedestrian access would be controlled through pedestrian gates and pedestrians would be required to cross the CLR to continue along the footpath. Footpath No. 8 would be stopped up, and incur a short diversion north to meet Footpath No.7. The conjoined footpaths would then meet the footway of the CLR. A traffic island is proposed as a refuge to assist crossing the CLR from which access is provided to Cogges Hill Road.

15.4.7 Although pedestrian access by means of public footpaths would be maintained, the amenity value of the footpaths bisected by the CLR would be reduced as the tranquility of the meadow floodplain and open farmland is reduced and views of the CLR from the footpaths afforded.

15.4.8 The Witney Lake and Meadows country park would remain open for informal recreation. However, the amenity value of the country park would be likely to be reduced as a result of the CLR dissecting the northern part of the country park and would sever the allotments situated to the northwest of the country park. An area of approximately 12,794m^2 (1.2794ha) of the country park would be lost to the CLR.

15.4.9 In addition, noise from the CLR and the presence of an urban barrier in the country park could reduce a visitor's enjoyment and dissuade them from using the country park.

15.4.10 An area of public open space off Eton Close which provides a play area and a small football pitch would be reduced in size by the development proposals. The area of public open space lost to the proposed development would be 11,232m^2 (1.1232 ha).

15.4.11 The CLR includes the provision of a cycleway alongside the northern carriageway of the CLR and therefore would provide an alternative route for cyclists between Witan Way and Cogges via Stanton Harcourt Road. A further section of cycleway would be provided between Cogges Hill Road and the Junction of Oxford Hill and Jubilee Way and represents a positive impact of the CLR. In addition, a car park would be provided for 15 vehicles from the CLR from which access to the country park could be gained.

15.5 Mitigation Measures and Enhancement Opportunities

Mitigation Measures

15.5.1 During construction, temporary footpath closures or diversions would be advertised in advance of the proposed works and alternative routes clearly signposted. Advance warning of closure of all/sections of the country park including the allotments would be provided and alternative routes advertised.

15.5.2 Tree and shrub planting along the land take of the CLR is proposed to minimise views of the CLR and to act as a natural barrier to road noise. Planting is also proposed within the country park itself to reduce views of the CLR from the country park. Grass/wildflower areas would be managed within the land take of the CLR and further native planting encouraged and off-site planting with native species would also be undertaken within the country park in close proximity to the CLR to increase the amenity value of the country park.

15.5.3 It is proposed to extend the area of the country park to the south of the CLR which is currently under arable and woodland use to increase the area of the country park available for recreation. This would represent an increase in the area of the country park by 30,686m^2 (3.0686ha).

15.5.4 It is proposed to mitigate the loss of public open space at Eton Close by the creation of a new area of public open space situated in the northern part of the CLR area between the CLR and Cogges Hill Road. The new area of public open space would be 11,382m^2 (1.1382ha), representing an increase in area of 15m m^2 (0.015ha).

Enhancement Measures

15.5.5 Habitat enhancements are proposed to the East Branch of the River Windrush in the context of improving the geomorphological quality of the channel.

15.5.6 To provide an enhanced means of access to the country park, it is proposed to replace existing steps with ramps where existing footpath routes cross the disused railway and at the A40 underpass.

15.5.7 The scheme proposals include the underground placement of overhead electricity cables running eastwards from the country park and to the south of Cogges. Furthermore, a development and management plan for the country park would be prepared to set out the long-term objectives of the country park and to allow appropriate provision for the management of the country park for conservation and amenity/recreation.

15.6 **Conclusions**

15.6.1 It is considered the proposed mitigation measures could reduce predicted adverse effects upon recreation and amenity receptors to minor levels or neutralise such effects. Furthermore, the scheme proposals include a number of enhancement measures to improve access to and the recreational value of the country park.

16 Noise and Vibration

16.1 **Introduction**

16.1.1 A noise and vibration assessment for Cogges Link Road is included in Volume 2D of this ES.

Noise

16.1.2 Where alterations or improvements are made to an existing road network, the significance of the potential changes in traffic generated noise is assessed. In accordance with the requirements of DMRB Volume 11, this has been carried out by:

- Identifying noise sensitive locations and calculating the ambient and proposed noise levels to determine possible noise changes;
- Identifying appropriate mitigation methods to reduce the impact of any adverse effects.

16.1.3 The properties assessed were selected on the basis of the following principles:

- Where it is considered that buildings may qualify for sound insulation;
- Where it is anticipated that properties would experience significant changes in noise level;

16.1.4 Where properties are representative of surrounding buildings and the effects of noise would be similar. Traffic noise levels have been calculated in accordance with the Department of Transport publication 'Calculation of Road Traffic Noise' 1988 (CRTN). Using the method set out in this document, noise levels for both the existing and proposed road networks have been calculated for properties at a point 1m in front of the most exposed facade. All calculations are based on the maximum traffic flow expected on a normal working day during the first 15 years after opening using the highest traffic forecast.

16.1.5 Noise levels have been calculated at representative properties for the existing and proposed road network in the year of opening and the design year. The construction of the proposed scheme is likely to include the use of a low surface noise material, such as Stone Mastic Asphalt, which typically can give up to a 2.5 dB decrease in noise level (when compared with conventional Hot Rolled Asphalt as predicted by the CRTN methodology). It should be noted that the noise levels given below do not include this road surface correction. Therefore this assessment can be considered to be a worst case approach, with properties close to the proposed scheme likely to experience noise levels lower than those highlighted.

Vibration

16.1.6 Traffic-induced vibration is a low frequency disturbance, which can be transmitted through the air or ground. Air-borne vibration from traffic is produced by the drive-train of the vehicle, the engines and exhausts, whereas ground-borne vibration is produced by the interaction between rolling wheels and the road surface. There are two effects of traffic vibration that need to be considered, these being the effects on buildings and the disturbance caused to occupiers of properties. Extensive research has been carried out on a range of

buildings of various ages and types, and no evidence has been found to support the theory that traffic-induced ground-borne vibration is a source of significant damage to buildings (Watts 1990) although minor cracking may occur at high exposure sites. Ground-borne vibration is also much less likely to be the cause of disturbance to occupiers than air-borne vibration (Baughan and Martin 1981, Watts 1984). Therefore the assessment only considers the potential impacts of air-borne vibration on the sensitive receptors.

Construction Noise

16.1.7 The Code of Practice BS 5228 (1997) – 'Noise and vibration control on construction and open sites' provides guidance on the prediction of construction site noise and measures for its control. It recommends the use of the continuous equivalent noise level (L_{Aeq}) to define noise from such works. It falls short of recommending a limit for construction noise. However, previous guidance referred to a maximum daytime level of 75 dB $L_{Aeq\ (12\ hour)}$ and this figure has been widely accepted as a reasonable limit for temporary works.

16.1.8 The Control of Pollution Act 1974 gives local authorities powers to control noise from construction sites and other similar works. Section 61 of the 1974 Act provides for developers to approach the authority to agree control measures prior to commencement of work. Such an approach would be made in this case and the agreed measures would be provided for in the works contract. These measures would include setting restrictions on: the hours of working, noise and vibration limits, the type of machinery employed on site together with the location of localised noise barriers.

16.2 Baseline Conditions

16.2.1 The noise levels in terms of dB $L_{A10,18hr}$ have been predicted at a number of typical locations for the base year 2005 together with projections for the do-minimum scenarios in the year of opening 2011 and the design year of the scheme, 2026.

16.2.2 Residential properties in Oxford Hill and Newland currently experience noise levels in the high 60s to low 70s dB with 21 Oxford Hill experiencing noise levels of 70 dB and 12/14 Newland experiencing a noise level of 70 dB.

16.2.3 Residential properties fronting on to Bridge Street and the High Street currently experience relatively high noise levels at their front facades, with traffic noise levels in the mid 70s dB. 27 Bridge Street currently experiences noise levels of 73 dB. Properties such as 65 Woodstock Road which front directly on to the road network currently experience noise levels of 72 dB.

16.2.4 The residential properties in the residential area of Cogges currently experience relatively low levels of background noise, with the aural environment being dominated by noise from the A40. Properties in Manor Road and Eton Close experience noise levels in the low 40 to 50s dB, with properties such as 108 Eton Close experiencing a noise level of 49 dB.

16.3 Environmental Impacts

16.3.1 The technical report in Volume 2D of this Environmental Statement lists the predicted noise levels at typical property facades for the "do-minimum" and "with

scheme" options respectively in the year of opening 2011 and the design year 2026.

16.3.2 Residential properties in Oxford Hill and Newland currently experience noise levels in the high 60s to low 70s dB. With the opening of the Cogges Link these properties would experience a reduction in noise levels, with 61 Oxford Hill experiencing a reduction in noise levels of 4 dB to 68 dB and Elm View, Newland experiencing a reduction of 3 dB to noise level of 71 dB.

16.3.3 Residential properties in Oxford Hill and Newland currently experience noise levels in the high 60s to low 70s dB. With the opening of the road, these properties would experience a reduction in noise levels, with 21 Oxford Hill experiencing a reduction in noise levels of 5 dB to 65 dB $L_{A10,18hr}$ and 12/14 Newland experiencing a reduction of 5.5 dB to noise level of 65 dB .

16.3.4 Residential properties fronting on to Bridge Street and the High Street currently experience relatively high noise levels at their front facades. With the opening of the road, traffic noise levels would fall from the mid 70s dB. 27 Bridge Street experiencing a reduction in noise levels of 4 dB to 70 dB. 65 Woodstock Road which fronts directly on to the road network would experience noise levels of 68 dB a reduction of almost 5 dB on existing levels.

16.3.5 The properties in the residential estate of Cogges, such as those properties in Manor Road and Eton Close would experience noise levels in the mid 50s to low 60s dB following the opening of the scheme, with properties such as 108 Eton Close experiencing a noise level of 60 dB, a noise level increase of approximately 10 dB on the current noise environment.

16.4 Mitigation

16.4.1 In mitigation, extensive use would be made of earth bunding, running alongside the Cogges Link east of the Cogges residential area, providing substantial noise attenuation to the road traffic noise at the nearest residential housing. Noise mitigation measures may also include the use of a low noise surfacing together with the provision of noise insulation to residential properties, where the thresholds are met under the Noise Insulation Regulations 1975 (as amended).

16.5 Residual Impact

16.5.1 Properties fronting directly on to the current road network would experience a noise increase of approximately 1 dB by 2011 in the "do-minimum" scenario. With the opening of the scheme the majority of these properties would experience a noise decrease of up to 5 dB in 2011.

16.5.2 Residential properties in Cogges would experience a noise increase of up to 10 dB at the rear façade compared to the "do-minimum" in the year of opening. The noise levels at the property façades are substantially below the criteria for eligibility for noise insulation.

17 Air Quality

17.1 **Introduction**

17.1.1 An air quality assessment for Cogges Link Road is included in Volume 2D of this Environmental Statement. Vehicular traffic is one of the principal sources of urban air pollution and therefore the road traffic associated with the construction and operation of the proposed road has been assessed as it comprises a potentially significant source of local air pollution.

17.1.2 The purpose of this assessment was to:

- Identify existing levels of ambient air pollution in the study area;
- Assess potential air pollution as a result of the proposed development;
- Identify measures to mitigate these;
- Assess the residual impacts of the scheme.

17.1.3 The Environment Act 1995 (Part IV) sets out a requirement for a National Air Quality Strategy to be developed. The Strategy sets health based standards for a number of pollutants of concern (benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, ozone, particles and sulphur dioxide). The UK Strategy was revised in 2000 and updated in 2007 (The Air Quality Strategy for England, Scotland, Wales and Northern Ireland). The 2007 Strategy re-established objectives for improvements in air quality in the United Kingdom and includes new targets for ultra fine particulates ($PM_{2.5}$) utilising the exposure reduction methodology. Within the Strategy, the revised set of Air Quality Objectives (AQOs) are presented, with some objectives being dropped (PM_{10} Objective for 2010) as well as new additions, such as objectives for $PM_{2.5}$ and ozone (O_3) concentrations together with one for the protection of vegetation and fragile ecosystems.

17.1.4 The air quality assessment has been undertaken in accordance with the following documents:

- Air Quality Regulations, 1989;
- Air Quality (England) Regulations, 2000;
- Air Quality (England) Amendment Regulations;
- Air Quality Strategy for England, Scotland, Wales and Northern Ireland: (AQS 2007) (Department for Environment, Food and Rural Affairs - DEFRA);
- Environment Act, Part IV, 1995;
- Local Air Quality Management Technical Guidance LAQM. TG(03), 2007 (DEFRA);
- Design Manual for Roads and Bridges Volume 11 (2007).

17.1.5 Air quality within the site and the surrounding area has the potential to be affected by Cogges Link Road specifically from vehicular emissions both during construction (e.g. site plant and haulage vehicles), although this would be of a temporary duration and after it's opening. Of those pollutants for which AQOs have been set the key pollutants which have been considered in this assessment are nitrogen dioxide (NO_2) and particulates (PM_{10}). LAQM TG.03 gives various criteria which need to be exceeded before an air quality assessment of the emissions from road traffic sources needs to be undertaken

for each pollutant species. In this case the threshold for pollutants other than NO_2 and PM_{10} are not met, and therefore are not considered further in this assessment. Therefore the pollutants of NO_2 and PM_{10} are of the most concern with regard to their likelihood of non-compliance with the Air Quality Objectives (AQOs) and the effect on health within the urban environment.

17.1.6 The potential impacts associated with dust from the construction phases of the proposal, including the importation of material to the site have been qualitatively assessed.

17.2 Baseline Conditions

17.2.1 Air quality in the area of Cogges Link is largely influenced by emissions from traffic using nearby roads. There are no large industrial processes in the vicinity that influence air quality. The area to the north and west is predominantly mixed residential and is characterised by moderately sensitive receptors. The receptors that may potentially be affected by air quality impacts are those residents living in Cogges; particularly those properties in Eton Close to the south of the residential development which are relatively close to the proposed route. Residential properties along the current road network of the High Street, Bridge Street, Witan Way, Newlands and Oxford Hill may also be potentially beneficially affected by reductions in traffic caused by the reassignment of traffic due to the opening of the proposed road.

17.2.2 Bridge Street in the centre of Witney, currently carries the majority of traffic within the local road network. Traffic flows are heaviest during both the morning and afternoon peak hours producing queues around a number of junctions in the local road network. The limited storage capacity of these junctions leads to vehicles queuing and journey delays producing a situation which tends to generate significantly more emissions than free flowing traffic. Studies (Exhaust Emission Factors 2001: Database and Emission Factors. Barlow et al 2001) have shown that the highest rates of emissions occur in congested, slow moving traffic. Emission rates under stop start driving conditions are much higher than those when the vehicle is driven more smoothly. Hydrocarbon emissions from a car traveling at a steady speed have been shown to be only half of those measured at the same average speed but with the car driven in a more typical way over a driving cycle containing accelerations, decelerations and periods of idling.

17.2.3 The Environment Act 1995[2], specifically sections 82-84, requires Local Authorities to carry out reviews of air quality within their administrative areas and, where it is assessed that the AQOs may not be complied with by the objective dates; an Air Quality Management Area (AQMA) must be declared. The Local Authority must then formulate an Action Plan, setting out the measures that will be employed to achieve compliance with the objectives. In March 2005 West Oxfordshire District Council (WODC) declared two AQMAs in the towns of Witney and Chipping Norton. The Council's detailed investigation into the local air quality concluded that NO_2 was likely to fail the Government's annual mean objective for NO_2 in 2005.In particular, this assessment and subsequent Updating and Screening assessments of the local air quality carried out by West Oxfordshire District Council (WODC) have shown that the current concentrations of NO_2 at certain locations are above the AQOs within the town centre. Therefore, an Air Quality Management Area (AQMA) has been declared for NO_2 incorporating Bridge Street, together with its junctions with New Yatt

Road, Newland, Mill Street and High Street.

17.2.4 This air quality assessment therefore focuses primarily on nitrogen dioxide as previous assessments carried out on behalf of the local authority have shown that concentrations of the other air pollutants associated with road traffic emissions, such as carbon monoxide (CO), benzene (C_6H_6), particulates (PM_{10}) and 1,3-butadeine (C_4H_6) will meet the objectives in this area and they have therefore been scoped out of this assessment.

17.2.5 WODC has undertaken extensive NO_2 diffusion tube surveys at sites located in the AQMA and in other areas of Witney. The survey has been undertaken with passive diffusion tubes with the aim of producing representative baseline concentrations of NO_2. A continuous NO_2 analyser also operated at the junction of Newland and Bridge Street and provided useful information about the baseline distribution of the pollutants and of the local NO_X/NO_2 relationship. A detailed dispersion modelling study carried out in 2006 predicted that the NO_2 concentrations at the façade of the buildings in Bridge Street is between 48 µg/m3 and 52 µg/m3The results of detailed dispersion modelling for the baseline scenario 2005 and year of opening of the scheme, 2011 are detailed in Table 2 in Volume 2 of the ES.

17.3 Environmental Impact and Mitigation

Construction Phase

Air Quality

17.3.1 There would be some temporary periods of relatively high construction traffic movements, which would occur after the construction of the main site accesses off Oxford Hill and Witan Way. The transport assessment data indicate that the predicted increase in traffic is likely to be less than 10%. DMRB states that traffic flow increases of less than 10% are not considered significant in terms of air quality. It is therefore anticipated that there would be no significant change in the local air quality due to construction traffic

Dust

17.3.2 Dust is defined in British Standard BS 6069 as comprising small solid particles between 1 and 75µm (microns) in diameter and it is present in the atmosphere from a variety of natural and manmade sources.

17.3.3 Dust emissions during the construction phase of the proposal could arise from various sources including:

- Mixing of aggregate on site (i.e. cement);
- Mechanical handling operations, including crushing and mixing processes, where in general the more powerful the machinery and the greater the volume of the material handled, the greater the potential for fugitive dust;
- On site storage of cement, finer fractions within stockpiles etc.

17.3.4 If not controlled, airborne dust can pose a nuisance to surrounding neighbours and sensitive receptors through:

- Annoyance;
- Health effects especially those sensitive to respiratory problems;
- Loss of amenity (e.g. due to dust deposition);
- Interference with sensitive industrial or commercial activities;
- Coating of vegetation.

17.3.5 Dust emissions from construction sites are very variable, depending on factors such as type of activity, ground conditions, the prevailing wind speed and over riding meteorological conditions. Measures may be undertaken to prevent dust from becoming airborne through careful management of the construction activities on site.

Operational Phase

Calculated Concentrations at Representative Locations

17.3.6 Predicted levels of pollutants (calculated in accordance with the methodology in TG.03) are used to compare the existing situation with the proposed Cogges Link Road scenario in place at representative locations and indicate that all of the objectives adopted in the Air Quality Strategy 2007 would be complied with at all locations studied for the year of opening (2011). The principal findings from the modelling of the Do Minimum 2011 and Do Something 2011 Scenarios, when the predicted levels of pollutants are compared with the existing situation at representative locations, are shown in Volume 2. This highlights the calculated concentrations at the chosen representative locations and indicates the expected decrease in pollutant emissions over time, with pollutant concentrations in the Do Minimum 2011 decreasing from the current ambient levels. Although reductions in the annual mean concentrations of NO_2 are predicted they would however remain above the objective at a number of receptors.

17.3.7 In the Do Minimum scenario, traffic remains congested along Bridge Street, the High Street and Newland, with properties fronting on to the road experiencing annual mean NO_2 concentrations in the mid 40s to low 50s $\mu g/m^3$. With the introduction of the scheme the reassignment of traffic would lead to a significant reduction in pollutant concentrations along these roads. The annual mean NO_2 concentrations would fall by up to 14 $\mu g/m^3$, to below 40 $\mu g/m^3$ within the majority of the town centre. Other properties fronting onto roads in the highway network experiencing a reduction in traffic flows, such as Oxford Hill, Woodstock Road and Newland would also experience a reduction in pollutant concentrations of up to 6 $\mu g/m^3$, over the do-minimum scenario. The contour plots as detailed in Volume 2 of the proposed scheme's impact upon the pollutant concentrations within Witney town centre would indicate that the town centre AQMA could be redrawn and reduced in area or could be un-declared as an AQMA as a result of the introduction of the proposed Cogges Link Road as the annual mean NO_2 concentrations are predicted to fall below the AQO of 40 $\mu g/m^3$.

17.3.8 Properties in Eton Close and Blakes Avenue, relatively close to the proposed scheme would experience an increase in pollutant concentrations with the

opening of the road, with the annual mean NO_2 concentrations increasing from low 20s μg/m³ by up to 6 μg/m³ to 26 μg/m³. Pollutant concentrations would however remain within the Air Quality Objectives.

17.3.9 With both the Do Minimum and Do Something scenarios, at all properties considered in the assessment the pollutant concentrations would reduce from the current ambient levels for the year of opening, 2011. This is due to the expected decrease in pollutant emissions over time as a result of improvements in fuel and engine technology.

Mitigation

17.3.10 No mitigation measures in relation to air quality would be required.

17.4 Residual Impacts

17.4.1 It is concluded that the proposed road scheme would result in no residential properties experiencing a significantly adverse impact in terms of local air quality, with the introduction of the proposed road scheme. In addition there are a substantial number of properties within the centre of Witney that would experience a significant improvement in local air quality due to the reduction in town centre traffic associated with the scheme which would also result in a reduction in the size of the town centre AQMA. Overall the impact of the proposed scheme is positive in terms of local air quality with many properties experiencing improvements in air quality and no properties experiencing negative residual impacts.

18 Vehicle Travellers

18.1 Introduction

18.1.1 This part of the ES covers the assessment of impacts on travellers' views from the proposed road and the stress caused whilst following the proposed route.

18.2 Baseline Conditions

18.2.1 Currently all vehicle travellers between Cogges, North East Witney and the south end of the town centre have to follow a route along Oxford Hill, to the Staple Hill Junction, then Bridge Street and the High Street. This route suffers severe congestion. The current route taken by vehicle travellers from Witan Way roundabout, the west end of the proposed scheme, to Oxford Hill, the north end of the scheme, provides a journey through the town of Witney.

18.2.2 The initial part of the journey follows Witan Way, which takes the form of a single lane, two-way carriageway with a footway on either side. Witan Way is not a straight stretch of road, allowing alternating views of the more open aspect of Witney and the more developed areas. The alignment of Witan Way generally follows that of the River Windrush.

18.2.3 On the western side of Witan Way is a long ribbon of housing with small accesses leading into the residential areas. On the other side the view is open to the wooded space of the floodplain until reaching the Windrush Sports Centre and the community centre.

18.2.4 Having crossed the roundabout junction with Langdale Gate, the road continues in a northerly direction with a continuation of the wooded space to the east and car parking areas on the left. At the north end of Witan Way is a signal-controlled junction, which leads onto the High Street.

18.2.5 On turning right at the end of Witan Way into the High Street, there is a public house immediately on the right followed by a row of residential units. Similarly on the left hand side of the High Street is a row of houses as the roundabout is approached leading onto Bridge Street.

18.2.6 On Bridge Street itself there are shops and residential units on both sides of the road for the full length of the street. Along this stretch of road, on both sides, there is on street parking throughout. At the top end of Bridge Street there are double mini roundabouts, with the first joining with West End and the second connecting to the A4095 and the B4022. Heading eastwards along the B4022 there are residential units on the right hand side, with a cricket ground on the left and a football ground further in the distance.

18.2.7 The B4022 is a single lane, two-way carriageway, with a variety of cycle and bus facilities aligned along this part of the route. The houses on either side of the road restrict the view from the road on the approach towards Oxford Hill and the junction with Cogges Hill Road.

18.3 Environmental Impact and Mitigation

Construction impacts

18.3.1 Temporary traffic management measures would be required on Witan Way, Station Road, Oxford Hill, Wadards Meadow, Cogges Hill Road and Stanton Harcourt Road to enable the safe construction of the works.

18.3.2 The temporary closure of Stanton Harcourt Road would be required to enable the construction of Stanton Harcourt Road Underbridge. Details of the traffic management arrangements and diversion routes would be agreed with the local Highway Authority.

18.3.3 Temporary diversions of the access to the Witney Lake and Meadow Country Park would be required to enable the safe construction of the works.

View from the Proposed Road

18.3.4 DMRB Volume 11 Section 2 Part 9 Chapter 2 sets out guidelines for describing the view from the road.

18.3.5 It suggests four categories:

- No view – road in deep cutting or contained by earth bunds, environmental barrier or adjacent structures.
- Restricted view – frequent cuttings or structures blocking the view.
- Intermittent view – road generally at ground level but with shallow cuttings or barriers at intervals.
- Open view – view extending over many miles, or only restricted by existing landscape features.

18.3.6 Starting the journey from Witan Way roundabout vehicle travellers would initially travel over the floodplain of the River Windrush towards Stanton Harcourt Road. This route is on embankment and would include travelling over two bridging structures, which would carry the road over the two branches of the River Windrush. Views would be partially open on this stretch, as far as the existing large hedgerows east of the River Windrush.

18.3.7 As Stanton Harcourt Road is approached from the west there would be a water pumping station on the left in close proximity to Cogges Link. In the distance to the north would be the residential village of Cogges. To the immediate south of the Cogges Link would be the A40, with open spaces beyond. At this stage however, Cogges Link would experience intermittent views to housing at Cogges and the A40 immediately south.

18.3.8 The Cogges Link would run roughly parallel with the A40 for approximately three hundred metres, before passing underneath the Stanton Harcourt Road. Emerging from under the bridge the Cogges Link would be in shallow cutting augmented by earth modeling, giving restricted local views from east of the public open space the road would be partially in cutting, with earth modeling to provide further screening. Traveller's views would be restricted until close to the junction with Cogges Hill Road. At this point travellers' views would be more intermittent but restricted by the surrounding built environment.

Driver Stress

18.3.9 DMRB Volume 11 Section 2 Part 9 Chapter 3 sets out a framework for assessing road-induced stress in vehicle travellers.

18.3.10 Levels of driver stress on Bridge Street are currently categorised as 'high' because of the volume of slow traffic, particularly at peak hours. This is not assisted by the facility for on street parking and pedestrians.

18.3.11 Levels of driver stress on the Cogges Link would be categorised as low due to the open nature of the road.

18.3.12 It is stated that the frustration element is caused by 'a driver's inability to drive at a speed consistent with his or her own wishes in relation to the general standard of the road' (DMRB). The Cogges Link Road would ease the traffic congestion through the town centre and in particular Bridge Street. With the reduction in traffic on Bridge Street the driver stress categorised as 'High' would be reduced.

18.3.13 The new scheme would initially cause slight stress due to the uncertainty of the route, but as this becomes more familiar to the vehicle travellers the stress levels would reduce.

18.4 Residual Impacts

18.4.1 The vehicle travellers using the proposed route would experience a less complex journey, in terms of on street parking and the number of pedestrians using the footways. They would also experience a less congested journey using the Cogges Link than they do using the current road network. Drivers that do still have to use the Bridge Street route would also experience reduced levels of stress due to reduced traffic congestion.

19 Summary of Environmental Effects

19.1.1 The Environmental Impact tables in Appendix A give a comprehensive summary of the impacts.

19.2 **Water Quality and Drainage**

19.2.1 The surface water runoff would be collected by ditches and trapped gullies to remove initial pollution for silts and hydrocarbons. Further pollution control would be provided by bypass interceptors, a storage lagoon and vegetated swales prior to discharge into existing water courses.

19.2.2 In accordance with the requirements of PPS 25 the following Flood Risk Assessments have been carried out:

- The *Cogges Link Road: Preliminary Drainage Design – Outfall and Storage Proposals 2008* Report considers the flood risk associated with the surface water runoff during extreme events, including allowance for climate change. There would be no increased risk to property.
- The *Proposed Revisions to Flood Mapping: River Windrush at Witney 2008 Report* considers the flood risk associated with extreme events, including allowance for climate change on flows in the River Windrush. The assessment concludes that the Cogges Link Road does not actually impact on the 100 year (+20%) flood plain of the Windrush.

19.2.3 The nature of new traffic corridors is that to link areas of development they often need to cross rivers and flood plains. PPS 25 identifies that transport infrastructure is essential development and is permitted within flood plains.

19.2.4 Historic towns such as Witney are often sited on rivers; therefore this type of impact is often unavoidable.

19.3 **Landscape, Townscape and Visual Effects**

19.3.1 The Cogges Link Road would pass through a rural urban fringe landscape which is locally important. The landform of the floodplain landscape would be slightly disrupted, because the road is unavoidably on embankment to give adequate clearance at the river crossings. Landscape and biodiversity mitigation planting in the Witney Lake and Meadows Country Park, and an additional area of compensation land for the park, would help to mitigate the adverse impacts of the scheme. In the rolling farmland landscapes east of Cogges, the road would be mainly in cutting or false cutline with shallow slopes reflecting the local topography. Earth modeling and planting to screen the road from nearby housing would also help integration into the landscape. The scheme would cause a localised moderate adverse residual impact on the floodplain of the River Windrush and the Country Park. The overall residual landscape impact of the scheme would be moderate adverse, although significant sections of the scheme would cause slight adverse or neutral impacts. There is no Townscape assessment because CLR would not have any significant impacts on the townscape of Cogges or Witney, although there would be localised changes at Witan Way, Oxford Hill/Cogges Hill Road (N) and Cogges Hill Road (S).

19.3.2 The Country Park and some of the footpath network which the road crosses would experience large adverse visual impacts, although mitigation would

reduce most of these effects to moderate adverse in the design year. The Country Park, and Public Footpath which runs through the Park , would still have a Large Adverse visual impact in the Design Year because the road and moving traffic would still be clearly visible. Receptors further from the road, such as the housing on the edge of Cogges, would mostly experience a slight adverse impact which would reduce to a neutral or very slight adverse impact in the design year.

19.4 Biodiversity

19.4.1 The habitats of a number of protected species including dormice, otter, water vole, bats and grass snakes would be adversely affected.

19.4.2 However, these impacts would be substantially mitigated as part of the scheme, in agreement with Natural England and the Environment Agency. Measures would include habitat creation and improvement and the incorporation of tunnels and bridges to facilitate movement and dispersal of animals. Overall there would be a moderate adverse impact.

19.5 Cultural Heritage

19.5.1 There may be adverse impacts on areas of archaeological potential including Mesolithic, Iron Age and Roman sites, which would require more detailed investigation prior to construction. The scheme is assessed as having a slight adverse effect based upon the possibility that the road would adversely impact on a small number of regionally important sites.

19.6 Pedestrians, Cyclists, Equestrians and Community Effects

19.6.1 The lost public open space/playing field South of Cogges would be replaced by a new public open space east of Cogges Hill Road. There would be permanent loss of amenity relating to the reduction and severance of the Country Park, although an additional area south of the new scheme would provide partial compensation. Overall there would be a minor adverse impact on recreation and amenity receptors.

19.7 Noise and Vibration

19.7.1 There would be a beneficial effect in the town centre in relation to properties fronting onto to the High Street, Bridge Street, Newlands and Oxford Hill as road traffic is removed from the town centre, with adverse effects upon the residential properties in Cogges as traffic is brought closer to these properties. Overall, through the use of extensive earth bunding and a quiet road surfacing noise level increase will be minimised.

19.8 Air Quality

19.8.1 There would be significant beneficial effects on air quality within the town centre particularly adjacent to the High Street, Newland and Bridge Street as pollution concentrations are reduced to below the air quality objectives, allowing the current air quality management area to be substantially reduced in size. There would be no impact from the scheme on the air quality experienced in the Cogges estate. Overall the scheme would give rise to significant benefits as traffic is removed from the town centre and personal exposure to emissions of

pollutants is reduced.

19.9 Disruption due to Construction

19.9.1 The construction works would be likely to involve installation of bored and driven piles, numerous excavations, and the laying of foundations and pavements. These works would result in local disruption for 12 - 24 months.

19.9.2 Impacts that would result because of these construction methods relate to noise and vibration, and disruption to vehicles and pedestrians. Temporary traffic management measures, closures of some roads and diversions (of roads and public rights of way) would be required. However, any impacts created by the construction works would be temporary during the construction period and mitigation measures would form part of the construction contract and be enforced to keep disruption to a minimum.

Appendix A

Summary Environmental Impact Tables

GROUP 1: LOCAL PEOPLE AND THEIR COMMUNITIES

SUB-GROUP	EFFECT	UNITS	MITIGATION	RESIDUAL IMPACT		DO-NOTHING
Residential	Properties demolished - None	Number				0
	Noise increase	1<3 dB(A)	The use of SMA road surfacing to reduce road noise and the provision of an earth bund between Cogges Link and Cogges	154 Properties	No properties are likely to be eligible for noise insulation	134
	Noise increase	3<5 dB(A)		4 Properties		0
	Noise increase	5<10 dB(A)		74 Properties		0
	Noise decrease	1<3 dB(A)	None	173 Properties	This is a beneficial impact within the centre of Witney	0
	Air quality - Properties adjacent to Cogges Link would experience an adverse impact, however a substantial number of properties in the centre of Witney would experience an improvement in air quality.		No mitigation in relation to air quality is required.	There would be a significant improvement in air quality in the town centre leading to a reduction in the size of the declared AQMA		Properties in the centre of Witney would experience a decrease in the air quality as a result of increased congestion
	Visual Impact - Year 1 Assessment Slight Adverse Impact: 102 Properties, Moderate Adverse Impact: 18 Properties, Large Adverse Impact: 11 Properties, Year 15 Winter Assessment Neutral: 27 Properties, Summer Assessment Neutral: 27 Properties, Winter and Summer Assessment Slight Adverse Impact: 93 Properties, Moderate Adverse Impact: 11 properties	Number of properties subject to: Large, Moderate, Slight, Neutral Impact	Generally earth modelling would have immediate mitigating effect, but cannot be utilised within the floodplain, as it would detract from local character. Sensitive and appropriate planting would reinforce landscape structure and provide appropriate screening in the long term. Redesign and replacement of the area of public open space.	93 Properties would experience a Slight Adverse Residual Impact. 11 Properties would experience a Moderate Adverse Residual Impact		No Change
Community Facilities	Loss of 1.167 ha of country park.	ha	Planting would help to mitigate adverse visual and character effects. Replacement country park land is to be provided.	Not possible to mitigate direct loss of land area.		No Change
	Loss of playing fields 0.24 ha	ha	New open space to be provided with 0.25 ha of land suitable for organised team games	None		No Change
	Visual Impact on Witney Lake and Meadows Country Park Year 1 Assessment: Large Adverse, Year 15 Assessment: Large Adverse	Community facility subject to: Large, Moderate, Slight, Impact	Section of existing overhead cables placed underground.	Large Adverse residual impact. Proximity of road, which runs through the middle of the Country Park and its elevation above the flood plain is difficult to mitigate without changing the character of the area		No Change
	Visual Impact on Windrush Cemetery Year 1 Assessment: Moderate Adverse, Year 15 Assessment: Slight Adverse	Community facility subject to: Large, Moderate, Slight, Impact	Native planting along cutting slope. Earth mounding between urban edge of Cogges and cemetery.	No residual impact.		No Change

GROUP 2: TRAVELLERS

SUB-GROUP	EFFECT	MITIGATION	RESIDUAL IMPACT	DO NOTHING
Traveller Amenity				
Vehicle users' amenity	Driver Stress	Reductions of traffic in the town centre would reduce driver stress in Bridge Street	Moderate on Cogges Link and reducing on Bridge Street	Driver stress in Bridge Street would remain High
	View from the Road	-	Less urban	No Change
Pedestrian's, cyclists and equestrians' amenity	Cogges Link crosses four Public Rights Of Way	PROWs diverted.	Slight increase in length of Footpaths is a slight adverse effect.	Pedestrian's, cyclists and equestrians' amenity will deteriorate with increase traffic flows in the parts of the town centre.
	A new cycleway link is provided between Witan Way and Stanton Harcourt Road.	-	New Cycleway provided would be beneficial.	
	A new footway link is provided between Witan Way and Stanton Harcourt Road.	-	New footway link provided would be beneficial.	
Traveller Safety				
Pedestrian Cyclist And Equestrians' Safety	Change in safety	Cogges Link would reduced traffic in Bridge Street and Town centre. Reducing potential conflict with vehicle traffic	No Change	No Change
Vehicle Users safety	Simplified Road layout	-	COBA assesses that there would on average be a 1% reduction in accidents.	No Change

GROUP 3 : THE CULTURAL AND NATURAL ENVIRONMENT

SUB-GROUP	EFFECT	MITIGATION	RESIDUAL IMPACT	DO NOTHING
Archaeological	There would be direct impacts on Prehistoric, Roman and possible medieval remains on the eastern arm and on Iron Age remains west of Stanton Harcourt Road. There may be impacts on palaeonevironmental remains during construction of the bridge over the river Windrush and during realignment of the river. There are indirect impacts on setting of the Scheduled Monument of Cogges Moated Complex and on Mill Farm and a Pillbox.	Remains on the eastern arm would be mitigated by Strip, Map and Record (archeaological investigation and recording), the Iron Age remains would be excavated and recorded. There would be a watching brief on bridge works and river realignment. All investigations would be asessed, analysed, reported, published and archived. The visual impact from the Scheduled Monument would be mitigated by planting but there is no mitigation for the slight indirect impacts on Mill Farm and the Pillbox	Slight Adverse Residual Impact	No Change
Witney Lake and Meadows Country Park	The scheme would cut through the Witney Lake and Meadows Country Park, owned by Witney Town Council	Country Park compensation land (see drawing No. B0834600/DWG/CLR/14). Landscape and biodiversity mitigation within the Country Park (see drawing number B0834600/DWG/CLR/14).	Moderate residual adverse effect.	No Change
Witney and Cogges Conservation Area	The scheme would run into Witney and Cogges Conservation Area, close to its boundary, on the embankment. Reduction in traffic flows would occur elsewhere in the conservation area.	Native planting on embankments.	Neutral residual adverse effect.	Increasing traffic in the conservation area would have an adverse effect.
Landscape (Local Character Areas Eynsham Vale: Open Rolling Vale Farmland and Lower Windrush Valley & eastern Thames Fringes: Semi-Enclosed Flat Vale Farmland)	Flat floodplain landscape with riparian vegetation is cut through by road on embankment.	Sensitive planting of willows and alder on lower slopes of embankment would help screen the road whilst maintaining distinctive wetland character and integrating road into the landscape. New lagoons and ponds would include appropriate planting to reinforce marshland character.	Neutral residual impact on landscape character.	No Change
Landscape (Local Character Area Lower Windrush Valley and Eastern Thames Fringes: Floodplain Pasture)	Road dissects Witney Lake and Meadows Country Park on embankment, diverting a section of the River Windrush and a public footpath.	Placing existing overhead electricity cables underground. Earth modelling and native planting on embankments.	Moderate adverse residual impact on landscape character.	No Change

SUB-GROUP	EFFECT	MITIGATION	RESIDUAL IMPACT	DO NOTHING
Visual	There would be visual impacts for properties surrounding the scheme, particularly from upper windows (refer to Group 1).	A comprehensive scheme of landscape planting is included as part of the scheme to provide mitigation of visual impacts in the medium to long term.	The planting and earth modelling would mitigate most impacts. However there would still be some views of the road that could not be mitigated against, (refer to Group 1).	No Change
Public Footpaths and Public Access Land	Visual Impact Year 1 Assessment: Large Adverse: 4, Moderate Adverse: 2, Slight Adverse: 3. Year 15 Assessment: Large Adverse:2/3, Moderate Adverse: 5, Slight Adverse: 2, Neutral: 2	Earth mounding and planting on cutting slopes and embankments.	Proximity of road which severs footpaths/public open spaces is difficult to mitigate entirely. Large Adverse: 2, Moderate Adverse Residual Impact: 3 Footpaths, Slight Adverse Residual Impact: 2 Footpaths, Neutral Residual Impact: 2 Footpaths	No Change
Roads (Visual)	Visual Impact on Roads Year 1 Assessment: Slight Adverse: 2 Roads, Year 15 Assessment: Slight Adverse: 1 road, Neutral: 1 Road	Earth mounding and planting on cutting slopes and embankments. Redesign of public open space between southern edge of Cogges and proposed CLR.	Slight Adverse Residual Impact: 1 Road.	No Change
Townscape	Slight adverse effects at each end of Cogges Link and at Cogges Hill Road (South) because of increased scale of road infrastructure.	Planting to integrate junctions.	Slight Adverse	No Change
River Channel	Direct effect on channel and riparian habitats and impact on foraging and dispersal routes used by several protected species.	The bridge structure design would retain continuity of dry land corridors beside the river channel. The new section of river channel would incorporate sympathetic bank reinforcement treatment, based as far as practicable on the use of appropriate marginal vegetation reinforced with appropriate mesh or geotextile type materials.	The new section of river channels would in time compensate for the majority of this loss.	No Change
Hedgerows	Loss of 334m of native hedgerow	The planting scheme for the proposed road incorporates extensive planting of mixed native hedgerows along the eastern section road boundary. These would provide new habitat corridors to link existing hedgerows severed by the scheme.	The scheme would lead to the net loss of mature hedgerow. However, as new hedgerow planting matures there would be a net gain of this type of habitat.	No Change
Bats	Impact on bat foraging habitat and dispersal corridors.	The new planting provided would provide new foraging habitat for bats. Where existing hedgerows would be severed, taller growing shrub and tree species would be planted to, in time, provide a measure of flight path connectivity across the road. There would be a net gain in total river channel length. The bridge structure would be designed to be 'bat friendly', providing suitable roosting sites.	There would be an overall net disbenefit to bats in the area through the disruption of linear landscape features currently used as corridors for foraging and dispersal by bats	No Change

SUB-GROUP	EFFECT	MITIGATION	RESIDUAL IMPACT	DO NOTHING
Badgers	The scheme would sever foraging areas and dispersal routes.	The provision of tunnels to maintain connections with existing foraging routes crossing the road. Badger fencing would be provided for a minimum 500m either side of the tunnel entrances to prevent animals crossing the road at ground level.	The road would sever foraging areas/commuting routes used by badgers in the area. Although connectivity of the routes would be maintained by tunnels, there would be a net loss of foraging habitat.	No Change
Kingfisher and other birds	Potential impact on nest sites, loss of bird nesting habitat.	It would be necessary to conduct a further survey prior to construction to identify any kingfisher nest sites. The construction programme would avoid impacting such sites during the nesting season. Clearance of hedgerows scrub and other potential bird nesting habitat would also be undertaken outside the nesting season. New hedgerow and scrub planting provided as part of the scheme would in time replace the lost nesting habitat.	Loss of nesting habitat would in time be more than compensated for by new planting provided as part of the scheme. However, the value of this compensation would be downgraded by the proximity of the road and its associated noise impacts	No Change
Dormouse	Impact on dormouse habitat provided by hedgerows and woody shrub.	This issue has been discussed with English Nature, who are satisfied that the proposed new native hedgerow planting would provide sufficient compensatory habitat to offset the hedgerows lost to the scheme. To mitigate the fragmentation it is proposed to install dormouse 'bridges' to provide links between the remnant habitat either side of the proposed road. Dormouse mitigation measures are gradually developing with experience and the latest information on effective measures should be considered prior to construction.	There would be a net adverse effect on the dormouse population in the area. New planting would make up for lost habitat over time but it is not known whether the artificial habitat connections would be successful.	No Change
Terrestrial Invertebrates	The scheme would directly affect invertebrates by removing the habitats they are associated with.	Direct losses to this resource would be replaced through planting of new hedges and scrub units. All dead trunks, roots, stumps and other saproxylic features should be retained.	Although there would be a short-term adverse impact, there would be a net gain of hedgerow and shrub habitat through planting, providing suitable habitat.	No Change
Reptiles	Reptile habitat would be lost.	It would be necessary to exclude reptiles from the scheme corridor. To accommodate the displaced animals would require enhancement of the habitat remaining south of the new road. This would be carried out in accordance with current guidelines produced by English Nature. New habitat would be provided on the south west facing open grassland habitat on the embankment slopes and new drainage ditches and lagoons would be designed to provide habitat suitable for grass snake.	Although there would be short term adverse impacts on reptiles, there would be a net gain of reptile habitat as a result of the scheme.	No Change
Otter	Severance of riparian dispersal corridor, risk of road kills from attempting to cross the proposed road.	All the bridge and culvert structures crossing the river would be designed to maintain connectivity between the riverbanks either side of the road. The roadside boundary fences in the vicinity of the crossings would be otter proofed to limit the risk of the animals straying on to the carriageway.	The construction of the scheme would cause temporary disruption to otters dispersing along the river corridor. However, the impacts on this species are assessed as insignificant	No Change

SUB-GROUP	EFFECT	MITIGATION	RESIDUAL IMPACT	DO NOTHING
Water vole	Impact on water vole habitat and potential nest burrows.	Water voles would be excluded from the construction footprint prior to the start of works in accordance with current EA guidance. New riparian habitat appropriate for water voles would be created as part of the new section of channel.	There would be a net loss of water vole habitat, but this not considered to be significant.	No Change
Fish	Fish would be impacted directly when the western channel of the River Windrush is diverted and in-directly through potential construction works polluting the watercourse.	Work should be undertaken during July and September to avoid the breeding season. Good site practice should be undertaken to avoid polluting the watercourse.	There is not expected to be any residual impacts on fish.	No Change
Aquatic Ecology	Many of the riverine species recorded would be highly susceptible to pollution incidents	Important to minimise the possibility of pollutants entering the Windrush by good design and careful management of the construction team, especially when working close to watercourses	There may be a residual impact with the resulting of the shading from the bridge, although this is not expected to be significant.	No Change

GROUP 3A : THE CULTURAL AND NATURAL ENVIRONMENT

DESCRIPTION OF FEATURE/ATTRIBUTE	SCALE	BIODIVERSITY VALUE	MAGNITUDE OF IMPACT	SIGNIFICANCE
Terrestrial Invertebrates	Local	Low	Minor negative	Slight adverse
Bat foraging habitat over water and vegetation	Local	Low – large area of water and vegetation in area.	Neutral	Neutral
Otter habitat and dispersal corridors	Local	Medium – otter range is increasing, depends on habitat corridors	Neutral – connectivity maintained with appropriate mitigation	Neutral
Water Vole habitat on banks of watercourses	Local	Low – extensive habitat in area	Minor Negative – direct loss of habitat to bridges. New river channel developed to provide additional habitat.	Slight adverse
Barn owl foraging habitat	Local	Low	Minor Negative – loss of foraging habitat to the road and bridges. Potential for increase in road traffic casualties.	Slight adverse
Kingfisher nesting and foraging habitat	Local	Low	Minor Negative – possible loss of potential nest sites to bridges	Slight adverse
Reptile habitat on river banks and in country park	Local	Low	Minor Negative – loss of habitat to bridges.	Slight adverse
Nesting birds	Local	Low	Minor Negative – direct loss of habitat. New planting would mitigate in time.	Slight adverse
Dormouse habitat and dispersal corridors	Regional	Medium – interconnecting habitat	Intermediate Negative – loss of connectivity. Dormouse bridges would partially mitigate this effect. New hedge planting would provide additional habitat in the medium term.	Moderate adverse
River Channel habitat/fish/aquatic ecology	Regional	Medium	Neutral in long term with replacement channel	Neutral
Hedgerows	Local	Medium	Intermediate negative – severance of habitat corridors	Moderate adverse

GROUP 4: POLICIES AND PLANS

Regional Planning Guidance for the South East (RPG 9)

POLICY	OBJECTIVE	AUTHORITY	EFFECTS	CT OF PUBLISHED RC	DO NOTHING
Q1	Urban areas should be the prime focus for new development and for redevelopment	**GOSE**	The scheme would support development within Witney town centre	Beneficial	Adverse With poor infrastructure and high congestion Witney would not be an attractive place for new development
Q2	The quality of life in urban areas, including suburban areas, should be raised through significant improvement to the urban environment, making urban areas more attractive places in which to live, work, shop, spend leisure time and invest	**GOSE**	The scheme would improve the quality of the urban environment, reducing congestion and air quality problems	Beneficial	Adverse Quality of life in the town centre would deteriorate
Q4	Land in the urban fringe should be enhanced, effectively managed and appropriately used	**GOSE**	The scheme would comprise development on the urban fringe, but it would also support improvements to local nature conservation e.g. in the Country Park	Neutral	No Change
E1	Priority given to protecting areas designated at international or national level either for their intrinsic nature conservation value, their landscape quality or their cultural importance.	**GOSE**	Cogges Link Road would not affect any areas designated at international or national level.	Neutral	No Change
E2	The Region's biodiversity should be maintained and enhanced with positive action to achieve the targets set in national and local biodiversity action plans through planning decisions and other measures.	**GOSE**	Cogges Link Road would have an adverse impact on biodiversity in the local area but would provide a comprehensive mitigation package	Slight Adverse	No Change
E4	The landscape wildlife, natural character and built heritage qualities of the coastal zone should be protected and enhanced, especially those areas designated as Heritage Coast.	**GOSE**	There would be adverse impact on the river corridor, but mitigated in the form of landscape planting and ecological features to encourage and sustain use by otter, dormouse and badger.	Adverse	No Change
E5	Woodland habitats in the Region should be increased whilst protecting the biodiversity and character of existing woodland resources and other areas of established or potential nature conservation value.	**GOSE**	Cogges Link Road would not affect any woodland.	Neutral	No Change
E6	Opportunities should be provided for leisure and recreation in, and access to the countryside in ways which retain and enhance its character.	**GOSE**	Cogges Link Road would retain access to the local footpath network. Minor diversion would be required to the existing rights of way.	Neutral	No Change

E7	Local authorities should work with the Environment Agency and others to play a positive part in pollution control and encourage measures to improve air quality.	**GOSE**	Cogges Link Road would have an adverse impact on air quality and water quality along the route of the new road. Pollution control measures have been designed into Cogges Link to mitigate and control the effect of pollution from surface water run off and spillage on the highway. Air Quality would be improved in parts of the town centre.	Neutral	Adverse Air quality in the town centre would deteriorate
E8	Valuable characteristics of soil and land should be protected	**GOSE**	Topsoil stripped from the site would be reused on screen bunds and embankments of the scheme. There would however be a net loss of topsoil resource as it would be left in situ beneath the road across the floodplain for geotechnical reasons.	Slight Adverse	No Change
RE1	The regional economy should be supported and further developed to ensure that it contributes fully to national growth and follows the principles of sustainable development	**GOSE**	This policy is not directly affected by the Cogges Link Road proposals. However Cogges Link Road would be an addition to the highway network and will improve the infrastructure required to enable the continuing sustainable development around Witney.	Beneficial	Adverse The current levels of traffic congestion in and around the town centre would not encourage sustainable development.
T1	Policies should be developed which minimise the distance which people need to travel whilst enhancing choice and ease of access to activities, taking into account the needs of all users including disabled people and others with reduced mobility.	**GOSE**	Cogges Link Road would provide easier access to the town centre for residents of Cogges including a new cycleway/footway.	Beneficial	No Change
T4	Walking and cycling should be vigorously promoted especially for shorter distances, as the healthiest and most environmentally-friendly ways to travel.	**GOSE**	Cycleway and footway provisions are incorporated into the Cogges Link Road.	Beneficial	No Change
T5	Public transport (bus, train and water-borne) should be improved to enable it to compete more effectively with the private car and to increase its share of total travel	**GOSE**	Cogges Link would not directly contribute to public transport however reduction of traffic in the town centre should enable free movement of buses.	Slight Beneficial	Adverse Growth in traffic in the town centre would reduce the reliability of public transport system.
INF1	Development should be guided away from areas at risk or likely to be at risk in future from flooding, or where it would increase the risk of flood damage elsewhere. Existing flood defences should be protected where they continue to be relevant.	**GOSE**	Cogges Link Road would have an impact on the Windrush Floodplain, but mitigation would be provided in the form of flood compensation measures adjacent to the existing floodplain.	Neutral	No Change

GROUP 4: POLICIES AND PLANS

Draft South East Plan

POLICY	OBJECTIVE	AUTHORITY	EFFECTS	IMPACT OF PUBLISHED ROUTE	DO NOTHING
CC1: Sustainable Development	The principal objective of the Plan shall be to achieve and to maintain sustainable development in the region.	**GOSE**	This policy is not directly affected by the Cogges Link Road proposals. However Cogges Link Road would be an addition to the highway network and will improve the infrastructure required to enable the continuing sustainable development around Witney.	Beneficial	Adverse The current levels of traffic congestion in and around the town centre would not encourage sustainable development.
CC8a: URBAN FOCUS AND URBAN RENAISSANCE	The prime focus for development in the South East should be urban areas, in order to foster accessibility to employment, housing, retail and other services, and avoid unnecessary travel.	**GOSE**	The scheme would support development within Witney town centre	Beneficial	Adverse With poor infrastructure and high congestion Witney would not be an attractive place for new development
CC12: CHARACTER OF THE ENVIRONMENT AND QUALITY OF LIFE	Actions and decisions associated with development and the use of land should actively encourage the conservation, and where appropriate the enhancement of the character, distinctiveness, and sense of place of settlements and landscapes throughout the region. Opportunities for creating a high quality environment should be sought, with an emphasis on good design, sustainability and a high quality of life	**GOSE**	The scheme would have a detrimental impact on conservation and the character of the landscape, however would benefit the character of the town centre and improve quality of life there	Neutral	Adverse Quality of life in the town centre would deteriorate although there would be no change to landsacpe character
T1: MANAGE AND INVEST IN THE TRANSPORT SYSTEM	Promoting investment in transport infrastructure, to support the region's gateways and facilitate urban renewal	**GOSE**	The Cogges Link Road supports this policy and would facilitate the development of Witney.	Beneficial	No change
NRM3: SUSTAINABLE FLOOD RISK MANAGEMENT	The sequential approach to development in flood risk areas (as per PPS25) will be followed. Inappropriate development should not be allowed in zones 2 and 3 of the floodplain.	**GOSE**	The floodplain would be adversely affected by the proposals. Flood plain compensation would be provided as mitigation, and the method has been agreed with the Environment Agency. Attenuation would be provided to maintain green field run off flows by means of storage lagoons, swales and ditches and oversized pipes with flow controls.	Neutral	No Change
NRM4: CONSERVATION AND IMPROVEMENT OF BIODIVERSITY	A net loss to biodiveristy should be avoided, and opportunities to create a net gain pursued	**GOSE**	Cogges Link would affect habitat of the following protected species: dormouse, otter, grass snake, water voles and kingfishers. Mitigation measures would be comprehensive and discussed in detail with Natural England. Licences would be sought as appropriate.	Slight Adverse	No Change

NRM7: AIR QUALITY	Seek to reduce air pollution so that there is a significant reduction in the number of days with medium and high air pollution	**GOSE**	Cogges Link Road would have an adverse impact on air quality along the route of the new road. Air Quality would be improved in parts of the town centre.	Neutral	Adverse Air quality in the town centre would deteriorate
NRM8: NOISE	Measures to address and reduce noise pollution will be developed e.g. through traffic management and requiring noise attenuation in major transport schemes	**GOSE**	Removal of town centre traffic reduces the population experiencing high noise levels. A new noise source is introduced around Cogges although noise level increase are kept to a minimum and attenuation is provided.	Slight Adverse	Adverse increased traffic in the town centre would have an adverse impact on noise within parts of the town centre.
C3: LANDSCAPE AND COUNTRYSIDE MANAGEMENT	High quality management of the countryside should be promoted. Seek to protect and enhance landscape character and the sustainable management of landscapes	**GOSE**	The landscape assessment addresses the impact on local landscape character. A scheme of landscape mitigation would partially mitigate landscape impacts.	Adverse	No Change
C4: COUNTRYSIDE ACCESS AND RIGHTS OF WAY MANAGEMENT	Encouragement of access to countryside including maintaining public rights of way	**GOSE**	All links to the country side are retained with minor diversions of the rights of way. An area of land would be lost from the country park, however it is proposed that a new area of land is transferred into it, to be managed as public open space for recreation.	Neutral	No Change
BE1: MANAGEMENT FOR AN URBAN RENAISSANCE	Concentration of development in urban areas will require significant improvements to the urban environment	**GOSE**	The scheme would support development within Witney town centre	Beneficial	Adverse With poor infrastructure and high congestion Witney would not be an attractive place for new development
BE7: MANAGEMENT OF THE HISTORIC ENVIRONMENT	Support the conservation and enhancement of the historic environment	**GOSE**	Some trees would be lost from the fringe of the conservation area along Witan Way. Reduction of traffic in the town centre would have a beneficial impact on the character of the town centre conservation area. Archaeological field investigations would be undertaken prior to construction and further action agreed with the planning authority.	Slight Adverse	Adverse increased traffic in the town centre would have an adverse impact on the Town Centre conservation area.
TC1: DEVELOPMENT OF TOWN CENTRES	Accessible, vibrant and attractive town centres are fundamental to the sustainable development of SE England	**GOSE**	The scheme would support development within Witney town centre, particularly improving accessibility	Beneficial	Adverse With poor infrastructure and high congestion Witney would not be an attractive place for new development

GROUP 4: POLICIES AND PLANS

Oxfordshire Structure Plan - Oxfordshire County Council

POLICY	OBJECTIVE	AUTHORITY	EFFECTS	IMPACT OF PUBLISHED ROUTE	DO NOTHING
G1: General Strategy	To provide sustainable planning framework for development.	**OCC**	The development of Witney is an approved policy. Cogges Link is an integrated package for the future growth and development of Witney, with wider benefits for traffic, public transport, pedestrians , cyclists, environmental improvements	Beneficial	Adverse An overall increase in demand on the town's road network would necessitate a new road to relieve town centre congestion.
G2: Improving the quality and design of development	All development should be suitable for its location according to size, incorporate a high quality of layout and encourage alternative means of transport to the car.	**OCC**	New pedestrian and cycle links would be provided as part of the proposals together with full landscape design to mitigate the effect of the new road.	Neutral	No Change
G6: Energy and resource conservation	All new developments should incorporate best practice in energy efficiency and resource conservation, in particular through passive solar design, providing high levels of insulation, water conservation measures and by minimising the use of construction materials, maximising use of recycled and secondary materials in place of primary aggregates and minimising production of waste.	**OCC**	The design has been amended to reduce the volume of materials to be removed from site. Use of recycled materials would be encouraged where appropriate.	Neutral	No Change
T1: Sustainable travel	Transport measures and development proposals should give emphasis to the needs of pedestrians, cyclists and public transport and balance these against ease of traffic movement, thereby improving travel choice and reducing dependence on private motorised travel. Suitable provision should be made for servicing, for the needs of disabled people and for promotion of safety.	**OCC**	Cogges Link would result in a reduction of traffic on Bridge Street and in the town centre around the High Street. This would improve the environment and create opportunities for providing enhanced pedestrian areas and improve public transport reliability. New cycle way and footway links between Cogges and Witan Way would be of benefit for pedestrians and cyclists.	Beneficial	Adverse increasing traffic congestion in the town centre would have an adverse impact on pedestrians, cyclists and public transport using parts of the town centre.
T3: Public transport	Increased use of public transport will be sought through the encouragement and promotion of convenient, reliable, secure and high standard public transport services and through improved integration between different modes of transport and improved interchange facilities.	**OCC**	No specific provision has been made for public transport however any reduction in traffic in the town centre would quicken public transport journey times and reliability.	Neutral	No Change
T5: Networks for pedestrians and cyclists	Networks of routes for pedestrians and cyclists will be promoted and developed particularly within and linking to urban areas, so as to improve access for facilities and widen travel choice.	**OCC**	The proposed footway and cycleway links between Witan Way and Oxford Hill would be a benefit to pedestrians and cyclists and link up with the cycling facilities along Oxford Hill and Jubilee Way.	Beneficial	No Change

T6: Networks for motorised travel	The County Council will promote and support a comprehensive transport networks strategy for the safe and convenient carriage of people and freight by road, rail or special track.	**OCC**	Cogges Link would provide an improvement to the existing highway network.	Beneficial	No Change
EN1: Landscape character	Local planning authorities will ensure that proposals for development contribute to the protection, maintenance and enhancement of Oxfordshire's landscape character, and in particular the natural beauty of Areas of Outstanding Natural Beauty to reflect their national importance. Development will be permitted only if it does not unacceptably damage the local landscape.	**OCC**	Cogges Link would not affect any Areas of Outstanding Natural Beauty. The landscape assessment addresses the impact on local landscape character. A scheme of landscape mitigation would partially mitigate landscape impacts.	Adverse	No Change
EN2: Biodiversity	On sites of acknowledged nature conservation importance, development will be permitted only if there is an overriding need or if damage to the ecological interest can be prevented by the use of conditions or planning obligations.	**OCC**	Cogges Link would affect habitat of the following protected species: dormouse, otter, grass snake, water voles and kingfishers. Mitigation measures would be comprehensive and discussed in detail with Natural England. Licences would be sought as appropriate.	Slight Adverse	No Change
EN3: Agricultural land quality and soil	Development on the best and most versatile agricultural land shall have a regard to the quality and productiveness of such land alongside other sustainability considerations. Where significant development of agricultural land is unavoidable, areas of poorer quality land shall be used in preference to that of a higher quality, except where this would be inconsistent with other sustainability considerations. Where undeveloped agricultural land is to be developed, any adverse effects on the environment shall be minimised.	**OCC**	Approximately one hectare of Best Most Versatile agricultural land would be lost. New accesses would be provided for agricultural land severed by the scheme.	Slight Adverse	No Change
EN4: Historic and cultural heritage	The fabric and setting of listed buildings will be preserved and the character or appearance of conservation areas and their settings will be preserved or enhanced. Other elements of the historic environment, including historic parks and gardens, battlefields and historic landscapes will also be protected from harmful development.	**OCC**	Some trees would be lost from the fringe of the conservation area along Witan Way. Reduction of traffic in the town centre would have a beneficial impact on the character of the town centre conservation area. Archaeological field investigations would be undertaken prior to construction and further action agreed with the planning authority.	Slight Adverse	Adverse increased traffic in the town centre would have an adverse impact on the Town Centre conservation area.
EN6: Archaeology	To physically preserve nationally and internationally important archaeological and geological remains, whether scheduled or not, and their settings.	**OCC**	Areas of archaeological potential are affected by the proposals. A full desktop assessment has been carried and further field investigations would be undertaken prior to construction and further action agreed with the planning authority.	Slight Adverse	No Change

EN8: Water quality	Development that will lead to unacceptable deterioration in water quality will not be permitted.	**OCC**	Cogges Link Road would include measure to intercept pollution. The proposals include a storage lagoon and swale to filter water and collect silts prior to discharging into the adjacent watercourses.	Neutral	No Change
EN9: Flood risk and surface water drainage	Development in undeveloped areas at high risk from flooding or in the functional floodplain will not be permitted. Proposals for redevelopment of existing building and their curtilage within areas of high flood risk should aim to improve conditions locally and not worsen flood risk elsewhere.	**OCC**	The floodplain would be adversely affected by the proposals. Flood plain compensation would be provided as mitigation, and the method has been agreed with the Environment Agency. Attenuation would be provided to maintain green field run off flows by means of storage lagoons, swales and ditches and oversized pipes with flow controls.	Neutral	No Change
EN10: Water resources and Waste Water Infrastructure	Development will be permitted only where adequate water resources for the development already exist or can readily be provided without risk to existing abstractions, water quality, the water environment or nature conservation.	**OCC**	The scheme would generate surface water runoff in times of rainfall, discharging ultimately to local watercourses. The Cogges Link Road drainage scheme would include measures to intercept pollution. The proposals include a storage lagoon and swale to filter water and collect silts prior to discharging into the adjacent watercourses.	Neutral	No Change
R1: Countryside recreation	The local planning authorities will encourage optimum use to be made of existing countryside recreation facilities and resources. Opportunities to create new outdoor facilities which are appropriate in scale and sensitive to a rural location will be supported.	**OCC**	All links to the country side are retained with minor diversions of the rights of way. An area of land would be lost from the country park, however it is proposed that a new area of land is transferred into it, to be managed as public open space for recreation.	Neutral	No Change
R2: Access to the countryside and rights of way network	The local planning authorities will seek to increase and improve access to the countryside.	**OCC**	Rights of way would be retained however there are some minor diversions proposed that would not effect the quality of the right of way.	Neutral	No Change

GROUP 4: POLICIES AND PLANS

West Oxfordshire District Council Local Plan 2011

POLICY	OBJECTIVE	AUTHORITY	EFFECTS	IMPACT OF PUBLISHED ROUTE	DO NOTHING
BE1: Environmental and Community Infrastructure	Development not permitted unless appropriate supporting transport service and community infrastructure is available or will be provided and appropriate provision to safeguard local environment.	**WODC**	Part of the funding of the proposal is linked to local development in order to provide necessary infrastructure for existing and proposed development	Neutral	Additional roads and transport links would be required to encourage and enable future sustainable development.
BE2: General Development Standards	New development should respect and where possible, improve the character and quality of its surroundings.	**WODC**	The environmental design of the scheme has been developed according to the current best practice and guidance and would respect the local surroundings.	Adverse	No Change
BE4: Open Space Within and Adjoining Settlements	Proposals for development within or adjoining the built-up area should not result in the loss or erosion of an open area, an area of nature conversation value, common land or a village green.	**WODC**	The existing open space lost as a result of the scheme would be replaced with new open space of equivalent area and quality.	Neutral	No Change
BE5: Conservation Areas	The special architectural, historic and environmental character of the conservation areas will be preserved or enhanced.	**WODC**	The conservation area would be affected by the proposals. Some trees would be lost from the fringe of the conservation area along Witan Way. Reduction of traffic in the town centre would have a beneficial impact on the character of the town centre conservation area.	Neutral	Adverse increased traffic in the town centre would have an adverse impact on the conservation area.
BE8: Development Affecting the setting of a Listed Building	Development should not detract from the setting of a listed building.	**WODC**	Cogges Link would not affect any listed buildings.	Neutral	No Change
BE12: Archaeological Monuments	Development proposals that adversely affect the site or setting of nationally important archaeological monuments and monuments of local importance will not be permitted	**WODC**	The scheme does not affect any archaeological monuments.	Neutral	No Change
BE13: Archaeological Assessments	Provide an archaeological assessment to determine the significance, character and importance of any archaeological monument, the likely impact of the proposed development on monuments and the level of mitigation required to protect archaeological monuments.	**WODC**	Areas of archaeological potential are affected by the proposals. A full desktop assessment has been carried and further field investigations would be undertaken prior to construction and further action agreed with the planning authority.	Slight Adverse	No Change
BE18: Pollution	To ensure that development does not give rise to unacceptable levels of pollution	**WODC**	Release of substances during construction will be controlled through the use of standard construction methods and compliance with the Environment Agency PPGs	Neutral	No Change

BE19: Noise	To protect occupants of housing and other noise sensitive developments from excessive noise levels.	**WODC**	Removal of town centre traffic reduces the population experiencing high noise levels, a new noise source is introduced around Cogges although noise level increase are kept to a minimum.	Slight Adverse	Adverse increased traffic in the town centre would have an adverse impact on noise within parts of the town centre.
BE21: Light Pollution	Reduce excessive levels of light, to limit light spill, reduce the effect of surrounding occupiers, reduce impact on the character of town/village and not to be detrimental to an area of nature conservation interest .	**WODC**	Lighting would be limited to the junctions at either end of Cogges Link Road in areas that are already served by street lighting	Neutral	No Change
NE1: Safeguarding the Countryside	Proposals for development in the countryside should maintain or enhance the countryside for its own sake i.e. its beauty, its character and distinctiveness.	**WODC**	The proposals would not affect any Areas of Outstanding Natural Beauty. The landscape assessment addresses the impact on local landscape character. A scheme of landscape mitigation would partially mitigate landscape impacts.	Adverse	No Change
NE2: Countryside around Witney Carteton	Development in the strategic gaps/buffer areas which would harm the rural character of an area or lead to the undesirable sprawl of a settlement will not be permitted.	**WODC**	The scheme does not affect these areas.	Neutral	No Change
NE3: Local Landscape Character	Development will not be permitted if it would harm the local landscape character of the District. Proposals should respect and where possible, enhance the intrinsic character, quality and distinctive features of the individual landscape types.	**WODC**	The proposals would not affect any Areas of Outstanding Natural Beauty. The landscape assessment addresses the impact on local landscape character. A scheme of landscape mitigation would partially mitigate landscape impacts.	Adverse	No Change
NE6: Retention of Trees, Woodlands and Hedgerows	Planning permission will not be granted for proposals that would result in the loss of trees and woodlands or hedgerows, or their settings, which are important for their visual, historic or biodiversity value.	**WODC**	The scheme would sever a range of hedgerows, of varying quality. The proposed landscaping and ecological mitigation scheme includes substantial planting of new mixed native hedgerows along the boundaries of the road.	Slight Adverse	No Change
NE7: The Water Environment	Development should not have an adverse impact on the water environment. Initiatives which seek to restore or enhance the natural elements of this environment will be supported.	**WODC**	The drainage design of the scheme has been developed in accordance with current best practice guidance.	Neutral	No Change
NE8: Flood Risk	New development or intensification of existing development will not be permitted within areas at risk from flooding which is likely to: i) impede the flow of water ii) result in the next loss of flood plain storage; iii) increase the flood risk elsewhere.	**WODC**	Cogges Link Road would have an adverse impact on the flood plain of the Windrush and the flow of flood water beneath the proposed bridges over the branches of the Windrush. A hydrology study been carried out and the span of the bridges agreed with the Environment Agency, flood compensation measures would be provided on land adjacent to the existing floodplain.	Neutral	No Change

NE9: Surface Water	To prevent additional surface water run-off otherwise resulting in adverse impacts such as an increased risk of flooding, river channel instability or damage to habitats , unless appropriate attenuation and pollution control measures are provided.	**WODC**	Surface water runoff from the scheme would be attenuated by swales and balancing lagoons prior to entering watercourses.	Neutral	No Change
NE11: Water Quality	Development should not have an adverse impact on the quality of surface or ground water supplies and resources.	**WODC**	There would be no adverse effects on ground water supplies or resources.	Neutral	No Change
NE13: Biodiversity Conservation	In determining planning applications, the Council will seek to safeguard, maintain and enhance priority habitats and species within the District.	**WODC**	Comprehensive mitigation of biodiversity impacts has been developed as part of the scheme.	Slight Adverse	No Change
NE14: Sites of Nature Conservation or Geological Importance	Development should not destroy or damage a site or area designated for its international, national regional or local nature conversation or geological importance.	**WODC**	No such sites would be affected.	Neutral	No Change
NE15: Protected Species	Development that would have an adverse effect on a site supporting a specially protected species will not be permitted unless damage to ecological interest can be prevented through compliance with conditions or planning obligations.	**WODC**	Affects on protected species would be mitigated in accordance with current legislation and guidance and in compliance with conditions or planning obligations.	Neutral	No Change
T1: Traffic Generation	Proposals which will generate significant levels of traffic will not be permitted in locations where travel by means other than the private car is not a realistic alternative.	**WODC**	The proposed scheme is not anticipated to generate above average traffic growth.	Neutral	No Change
T2: Pedestrian and Cycle Facilities	Measures taken to improve and extend facilities for cyclists and pedestrians.	**WODC**	The scheme would provide a new cycle and pedestrian link from central Witney towards Stanton Harcourt and Oxford Hill	Beneficial	No Change
T4: Major Highway Schemes	Land will be safeguarded for proposed highway schemes as shown on the Proposals Map and Inset Maps	**WODC**	This scheme is one of the major highway schemes in this policy.	Beneficial	No Change
T5: Interchange Facilities	Public transport interchange will be permitted.	**WODC**	Not applicable to this scheme.	Neutral	No Change
T6: Traffic Management	Traffic Management schemes will be sought which promote and prioritise safety and convenient movements for pedestrian, cyclists and buses. Reducing traffic conflicts and environmental damage caused by traffic.	**WODC**	The proposal would facilitate traffic management schemes in central Witney.	Beneficial	Do Nothing' would adversely effect the opportunity to implement traffic management schemes in the town centre.
TLC5: Existing Outdoor Recreation Space	Development proposals should not result in the loss of existing recreational open space.	**WODC**	Open space lost as a result of the scheme would be replaced with an equivalent area.	Neutral	No Change
TLC8: Public Rights of Way	The existing public rights of way network will be safeguarded and, where appropriate, improved access to the countryside will be sought, with additional public rights of way for walkers, horseriders and cyclists.	**WODC**	Any footpaths to bes severed would be diverted, with road crossings provided as appropriate.	Neutral	No Change

Witney Proposal 7: Cogges	The land between the eastern section of the Cogges Link Road and the Cogges housing area is allocated for open space (3.0 hectares), and housing (1.4 hectares). The release of the land for housing and open space will be dependent on securing the development of the Cogges Link Road as shown on the Witney Inset Map.	**WODC**	The scheme is fundamental to this policy.	Beneficial	No Change
Witney Proposal 12: Traffic Management in the Central Core and Fringe Central Area	Measures to give increased priority to pedestrian, cyclists and public transport will be promoted in Witney Central Area in conjunction with Oxfordshire County Council	**WODC**	This scheme is fundamental to progressing this policy.	Beneficial	'Do Nothing' would adversely effect the opportunity to implement improvements within the Core Central Area.

GROUP 4: POLICIES AND PLANS

Oxfordshire Local Transport Plan

POLICY	OBJECTIVE	AUTHORITY	EFFECTS	IMPACT OF PUBLISHED ROUTE	DO NOTHING
Congestion Action 1 and Air Quality Action 1	Make public transport faster, more reliable and more user-friendly	**OCC**	CLR would not directly impact on this policy. However, reduced congestion in the town centre should improve reliability of the public transport services using the commercial centre.	Beneficial	Adverse Increased traffic in the town centre would have an adverse impact reliability of public transport
Congestion Action 2 and Air Quality Action 2	Manage, develop and maintain the county's road network to reduce the impact of bottlenecks (including road works) and make better use of existing road capacity to improve the flow of traffic	**OCC**	CLR would reduce the key bottleneck on Bridge Street	Beneficial	Adverse Increased traffic in the town centre would have an adverse impact on Bridge Street and congestion generally
Congestion Action 3, Air Quality Action 3 and Street Environment Action 3	Make walking and cycling safer and more convenient	**OCC**	The provision of safe walking and cycling facilities within the CLR would encourage additional non-motorised trips between Cogges and Witney.	Beneficial	No change
Road Safety Action 1	Improve the design and layout of the highway where necessary to address known safety problems	**OCC**	CLR would facilitate a reduction in the predicted number of accidents within Witney	Beneficial	Adverse Without the improvements, accident rates are likely to increase over time
Air Quality Action 8	Provide alternative routes for traffic to avoid areas of poor air quality	**OCC**	CLR would improve air quality in the town centre by drawing traffic away.	Beneficial	Adverse Without the scheme, traffic would continue and increase in the AQMA
Air Quality Action 9	Ensure that new development is planned in such a way as to minimise negative impacts on local air quality	**OCC**	There will be some deterioration in air quality in the vicinity of the new road, however air quality in the AQMA will improve	Neutral	Adverse Without the scheme, exhaust pollution would increase in the AQMA
Street Environment Action 1	Improve the design and layout of streets with poor quality environment, using high quality materials and street furniture wherever possible.	**OCC**	Reduction in traffic in the historic town centre and conservation area could facilitate and encourage investment in improvements to the streets.	Beneficial	No change
Street Environment Action 2	Restrict vehicles from areas with a poor street environment	**OCC**	Implementation of CLR may allow pedestrianisation of parts of the historic town centre, creating local enhancements.	Beneficial	No change

Street Environment Action 6	Provide alternative routes for traffic to avoid streets with a poor environment	**OCC**	CLR would perform this function, removing traffic from areas which currently have a relatively poor environment, creating a substantial benefit.	Beneficial	No change
Specific Strategies for West Oxfordshire					
Problem: Congestion	Measures are proposed to reduce congestion, particularly in Bridge Street. These include the CLR proposal	**OCC**	CLR is an integral part of the solution to the traffic problems in Witney.	Beneficial	Adverse Without the scheme, traffic would increase over time
Problem: Air Quality	Measures are proposed to reduce air quality problems in the Witney town centre AQMA. These include the CLR proposal	**OCC**	CLR is an integral part of the solution to the traffic problems in Witney.	Beneficial	Adverse Without the scheme, pollution in the AQMA would increase over time as traffic increases
Problem: Street Environment	Measures are proposed to improve the street environment in Witney town centre. These include the CLR proposal	**OCC**	CLR is an integral part of the solution to the problems in Witney.	Beneficial	No change
Core Target 3: Condition of Unclassified Roads	To reduce the proportion of unclassified roads on which structural maintenance is required	**OCC**	CLR would not impact on this policy, although the provision of the new route would better enable improvements within the town centre particularly Bridge Street.	Slight beneficial	No change
Core Target 5: Road Casualties – Killed or Seriously Injured	To reduce the number of fatalities or seriously injured casualties on Oxfordshire roads	**OCC**	CLR would facilitate a reduction in the predicted number of accidents within Witney.	Beneficial	Adverse Without the improvements, accident rates are likely to increase over time
Core Target 6: Child Casualties	To reduce the number of child casualties on Oxfordshire roads	**OCC**	CLR would facilitate a reduction in the predicted number of accidents within Witney, some of which would have affected children.	Beneficial	Adverse Without the improvements, accident rates are likely to increase over time
Core Target 7: Slight Casualties	To reduce the number of slight casualties on Oxfordshire roads	**OCC**	CLR would facilitate a reduction in the predicted number of accidents within Witney.	Beneficial	Adverse Without the improvements, accident rates are likely to increase over time
Core Target 9: Bus Satisfaction	To increase the proportion of the local population satisfied with the quality of bus services	**OCC**	CLR would not directly impact on this policy. However, reduced congestion in the town centre should improve reliability of the public transport services using the commercial centre.	Beneficial	Adverse Increased traffic in the town centre would have an adverse impact reliability of public transport

Core Target 10: Total Area-Wide Road Mileage	To limit the growth in overall traffic levels on Oxfordshire roads	**OCC**	The proposed scheme is not anticipated to generate above average traffic growth.	Neutral	No change
Core Target 11: Index of Cycling Levels	To maintain current levels of cycling across the county	**OCC**	The provision of safe cycling facilities within the CLR would encourage additional cycling trips between Cogges and Witney.	Beneficial	No change
Core Target 16: Bus Punctuality (non-frequent services)	To improve the punctuality, both at start of route and at intermediate points, of non-frequent bus services (i.e. services with a service interval greater than 10 minutes).	**OCC**	CLR would not directly impact on this policy however reduced congestion in the town centre should improve reliability of the public transport services using the commercial centre.	Beneficial	Adverse Increased traffic in the town centre would have an adverse impact reliability of public transport
Core Target 17: Bus Punctuality (frequent services)	To reduce the excess waiting time for frequent bus services (i.e. buses with a service interval 10 minutes or less)	**OCC**	CLR would not directly impact on this policy however reduced congestion in the town centre should improve reliability of the public transport services using the commercial centre.	Beneficial	Adverse Increased traffic in the town centre would have an adverse impact reliability of public transport
Local Indicator 1: Congestion	To reduce levels of congestion in Oxfordshire, either generally across the county or on specific selected routes or corridors	**OCC**	CLR would reduce levels of traffic and congestion in the town centre, and particularly across Bridge Street.	Beneficial	Adverse In the absence of the scheme, traffic is likely to increase over time
Local Indicator 2: Road Safety – Pedestrian Casualties	To reduce the numbers of pedestrian casualties on Oxfordshire's roads.	**OCC**	CLR would facilitate a reduction in the predicted number of accidents within Witney.	Beneficial	Adverse Without the improvements, accident rates are likely to increase over time
Local Indicator 3: Road Safety – Cyclist Casualties	To reduce the number of cyclist casualties on Oxfordshire's roads	**OCC**	Reduction in traffic in Witney town centre, and provision of safe cycling facilities between Witney and Cogges would reduce the number of cycle accidents.	Beneficial	Adverse Without the improvements, accident rates are likely to increase over time
Local Indicator 4: Road Safety – Powered Two-Wheeler Casualties	To reduce the numbers of powered two wheeler user casualties on Oxfordshire's roads	**OCC**	CLR would facilitate a reduction in the predicted number of accidents within Witney.	Beneficial	Adverse Without the improvements, accident rates are likely to increase over time
Local Indicator 8: Accessibility – Pedestrian Crossings with Facilities for Disabled People	To increase the number of controlled pedestrian crossings which are fully accessible to disabled persons.	**OCC**	Crossing points will be in accordance with the Disability Circulars, and could include measures such as drop kerbs and tactile paving.	Neutral	No change
Local Indicator 10: Streetscapes – Quality of the Street Environment	To improve the perception of the condition and quality of the street environment in the county's main towns.	**OCC**	Removal of traffic from the town centre would improve the street environment and quality of the conservation area.	Beneficial	No change

GROUP 4: POLICIES AND PLANS

Windrush In Witney

POLICY	OBJECTIVE	AUTHORITY	EFFECTS	IMPACT OF PUBLISHED ROUTE	DO NOTHING
NCO1	Encourage the protection, restoration and enhancement of unimproved neutral grassland, through, for example, the establishment of a conservation grazing project for the study area.	**WODC**	The scheme involves the transfer of an area of land to Country Park to be managed as floodplain grassland and woodland.	Beneficial	No change
NCO2	Encourage the protection, restoration and enhancement of wetland habitat and the river corridor.	**WODC**	The scheme would result in the loss of an area of wetland and there would be two crossings of the river. A replacement area of wetland habitat including reedbeds and wetland scrapes will be created, while mitigation measures will ensure no detriment to the river corridor.	Neutral	No change
NCO3	Encourage continuing survey work. Eg. Ecological surveys should be undertaken as an integral part of planning applications.	**WODC**	Extensive ecological surveys have been undertaken as part of this environmental assessment.	Beneficial	No change
NCO4	Safeguard priority habitats and species in accordance with relevant Biodiversity Action Plans, Habitat Action Plans and Species Action Plans by, for instance, improving the habitats for otters and water voles.	**WODC**	Selected thinning of the canopy along the river is proposed, to diversify the bankside vegetation, enhancing the habitat for water voles. An otter underpass with accompanying mammal fencing will be provided.	Beneficial	No change
LO1	Ensure that any new development integrates with the landscape character of the study area.	**WODC**	The scheme is in the Local Plan nevertheless it will have significant impact on the local landscape. Mitigation, including landscaping and replanting are proposed to help the road fit in with the surroundings.	Adverse	No change
LO2	Encourage land management practices that are in keeping with the landscape character.	**WODC**	It is proposed to transfer an area of land into the country park, to be managed as floodplain, grassland and woodland.	Beneficial	No change
LO3	Ensure that new planting is in character with the landscape type. Eg. District Council will provide guidance on suitable species.	**WODC**	The District Council will be consulted on the planting proposals	Neutral	No change

LO4	Encourage the appropriate screening of poor views/features.	**WODC**	There would be views over the new road from the country park but a scheme of landscape mitigation would partially mitigate landscape impacts.	Adverse	No change
LO5	Encourage the management of existing riverside willows and planting new willows where appropriate.	**WODC**	No riverside willows will be lost as part of the scheme.	Neutral	No change
LO6	Encourage management of tree screen and veteran trees along Witan Way. This provides a valuable buffer between the road and the river.	**WODC**	There will be some loss of vegetation in this area, which cannot fully be compensated for.	Adverse	No change
LO7	Encourage protection, awareness and management of historic features. E.g. The area contains pill boxes, fish ponds, drystone walls, park railings and the Old Bathing Place.	**WODC**	An archaeological assessment and field evaluation would be carried out prior to construction, and appropriate measures taken to deal with any finds.	Adverse	No change
LO8	Encourage the removal of inappropriate urban detractors. Eg. Overhead powerlines detract from the rural character of the area.	**WODC**	The new road would be a new urban influence on the area but the design incorporates comprehensive landscape mitigation proposals designed to minimise views over the scheme.	Adverse	No change
PA1	Improve quality of existing public access provision within the study area. Eg. Improve the standard of maintenance along footpaths and repair stiles, bridges and kissing gates.	**WODC**	As part of the scheme, a new car park is proposed for the Country Park – this would improve access to the area.	Beneficial	No change

LAND USE TABLE

TYPE OF LAND	DEFINITION	AREA REQUIRED FOR SCHEME (m^2)	COMMENTS
Grade 2 Agricultural Land	Very good quality land with minor limitations which affect crop yield, cultivations or harvesting.	18425	Area includes the land required for the storage lagoon.
Grade 3b Agricultural Land	Moderate quality land capable of producing moderate yields of a narrow range of crops.	98774	Area combines data from MAFF survey and an estimated area.
Non Agricultural Land	Land not built on nor in agricultural use which could mostly be returned relatively easily to agriculture.	12416	Area combines values of two plots of non agricultural land. Made up of public open space, country parks and allotments.
	TOTAL	129615	