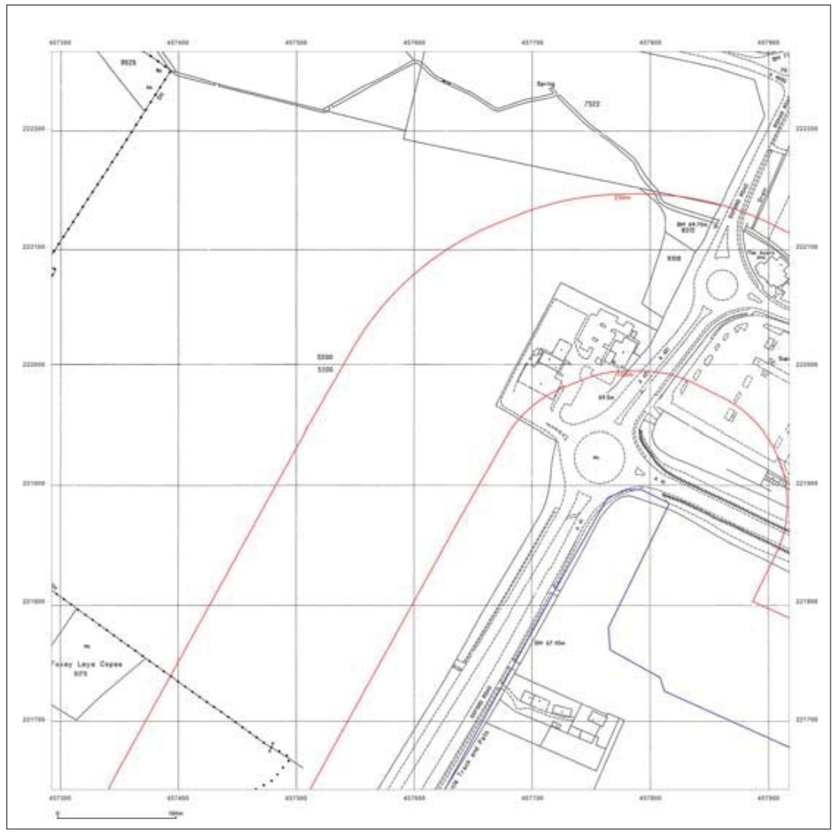

Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_1_2
Grid Ref: 457605, 221953

Map Name: National Grid
Map date: 1995
Scale: 1:2,500
Printed at: 1:2,500

N W E S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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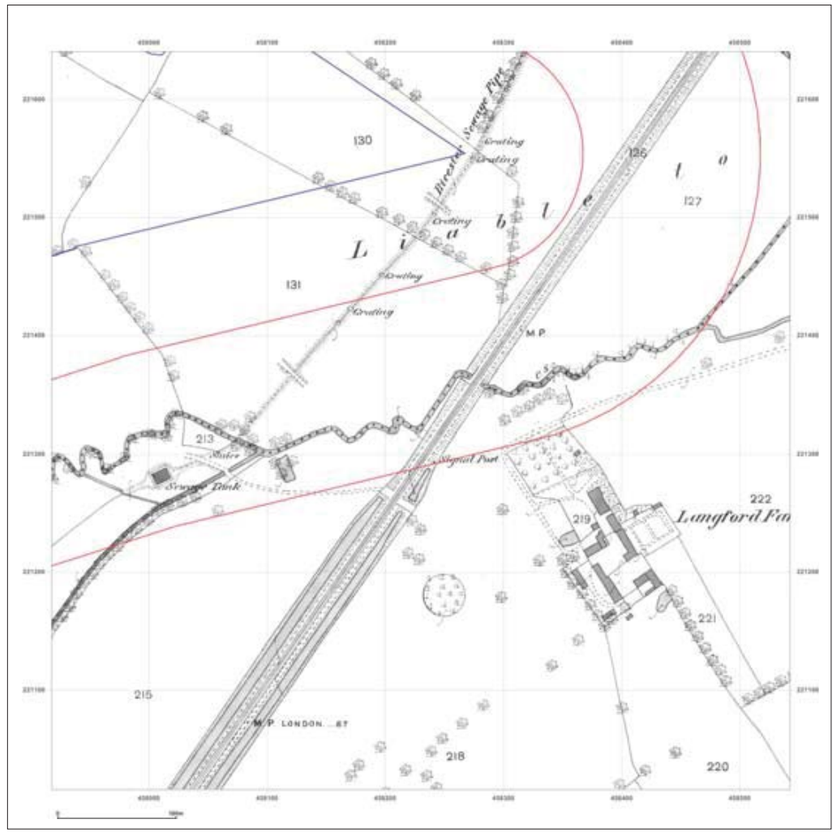
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: County Series
Map date: 1881
Scale: 1:2,500
Printed at: 1:2,500

N W E S

Surveyed 1881
Revised 1881
Edition N/A
Copyright N/A
Levelled N/A

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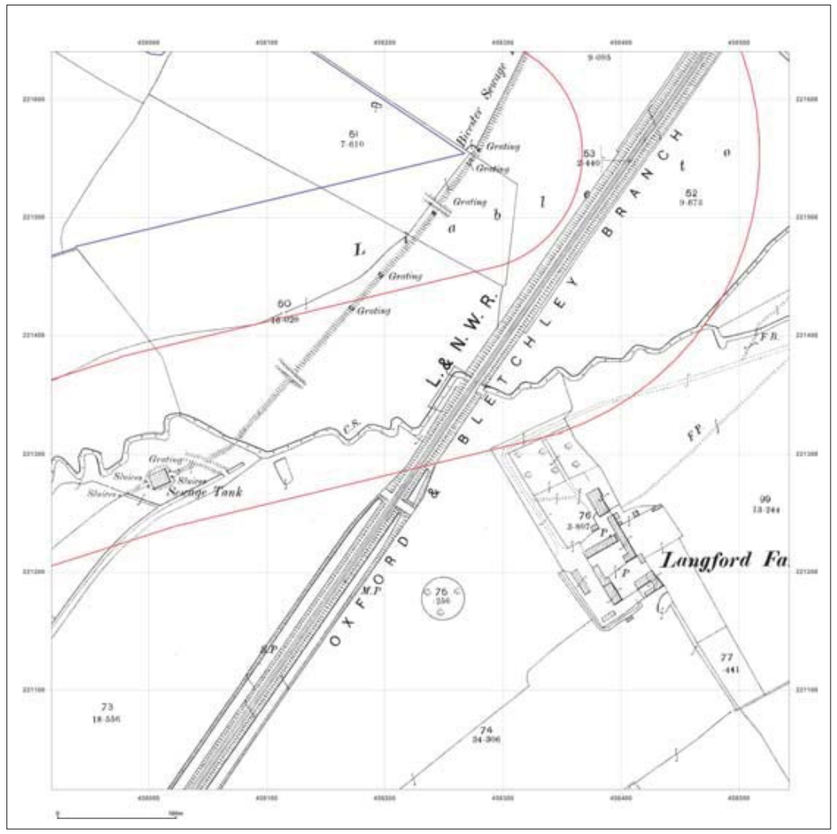

Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: County Series
Map date: 1900
Scale: 1:2,500
Printed at: 1:2,500

N W E S

Surveyed 1900
Revised 1900
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 13 March 2017

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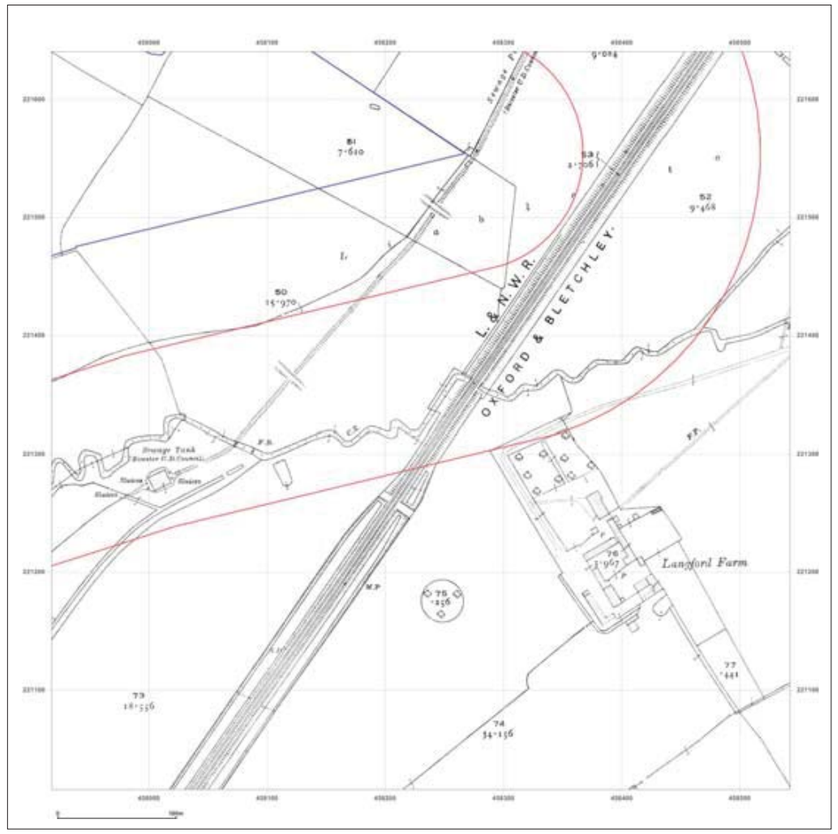

Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: County Series
Map date: 1922
Scale: 1:2,500
Printed at: 1:2,500

N W E S

Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

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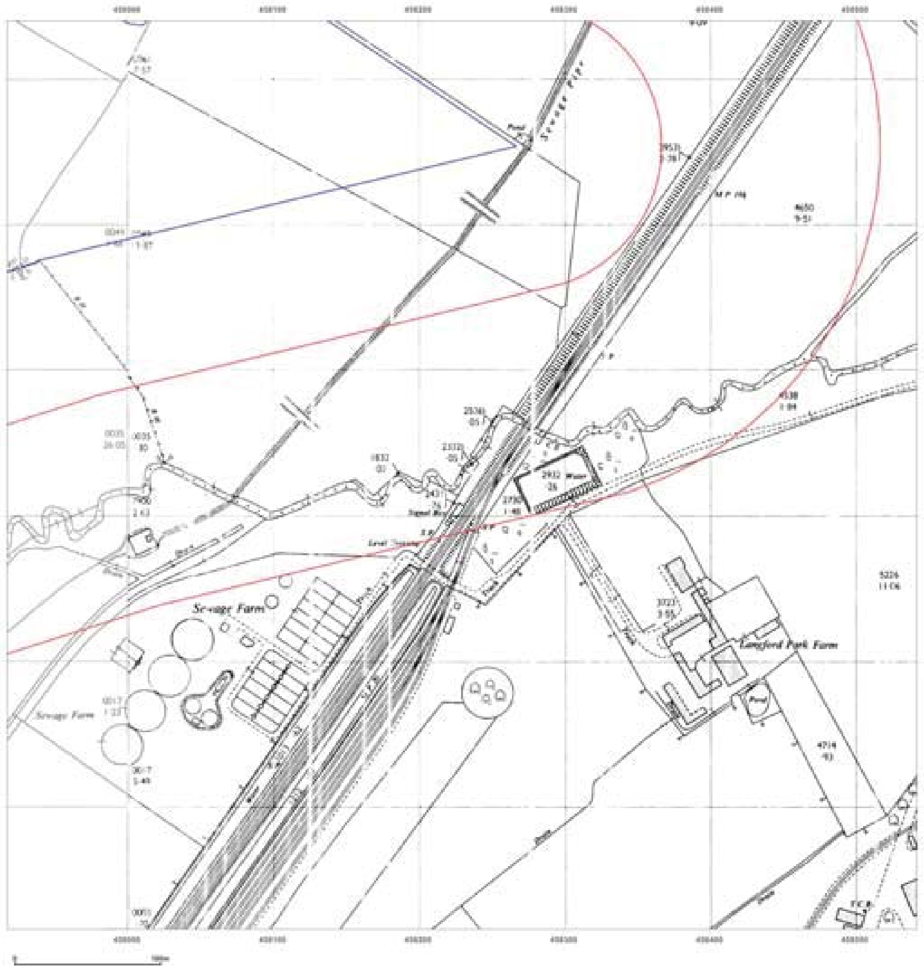
Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure
INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: National Grid

Map date: **1966-1968**

Scale: 1:2,500

Printed at: 1:2,500

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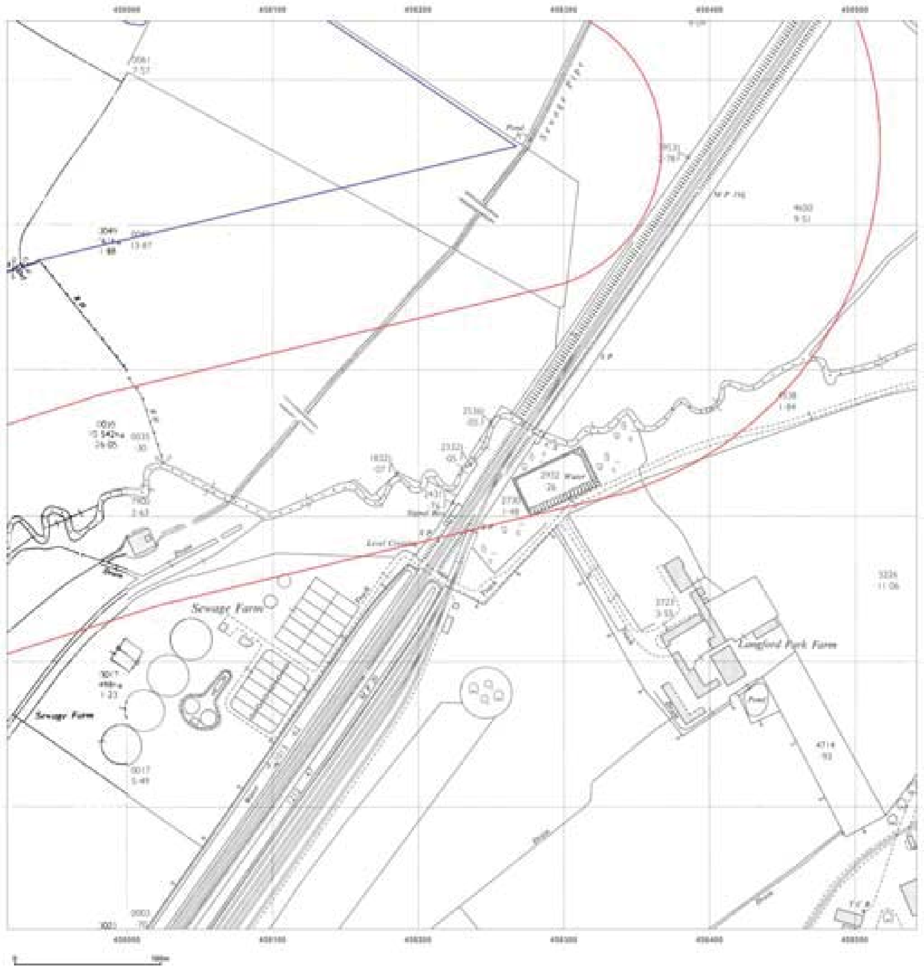
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure
INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: National Grid

Map date: **1967-1968**

Scale: 1:2,500

Printed at: 1:2,500

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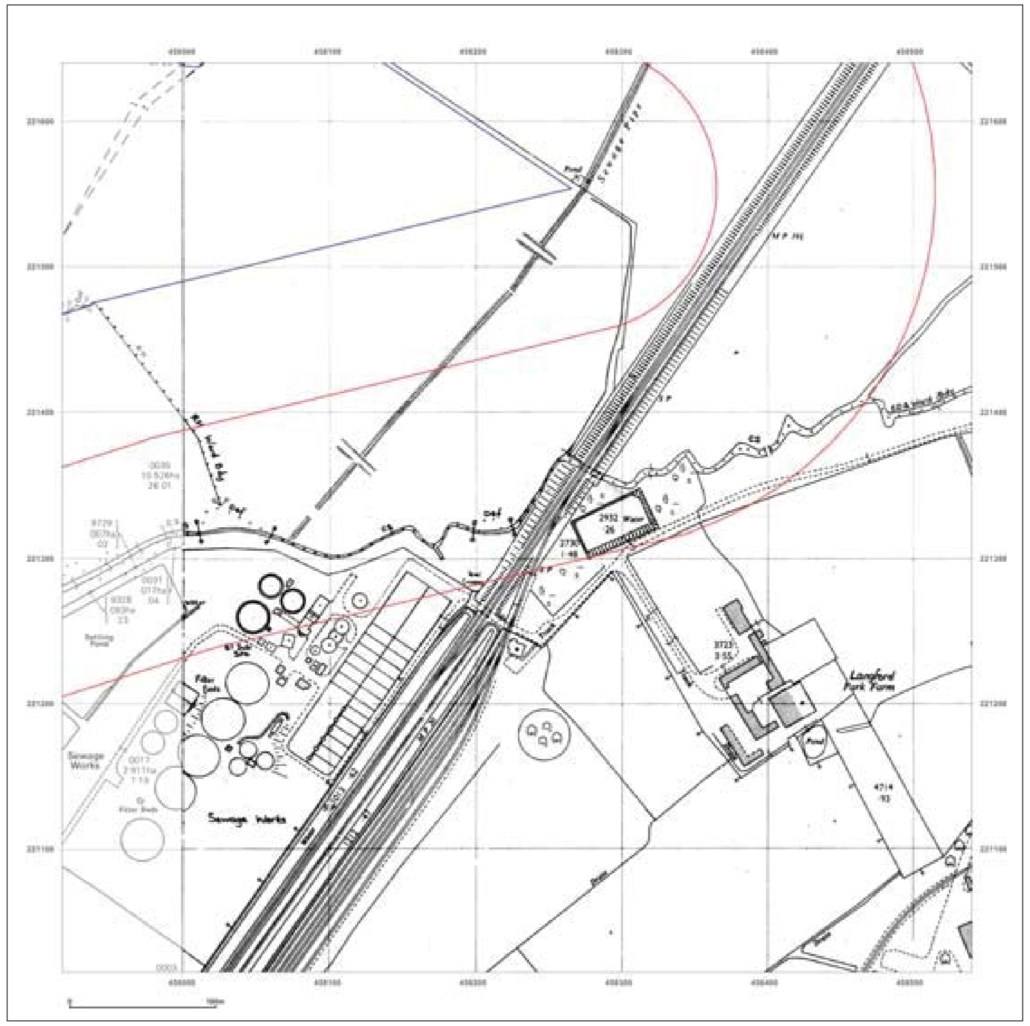
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: National Grid

Map date: **1983-1986**

Scale: 1:2,500

Printed at: 1:2,500

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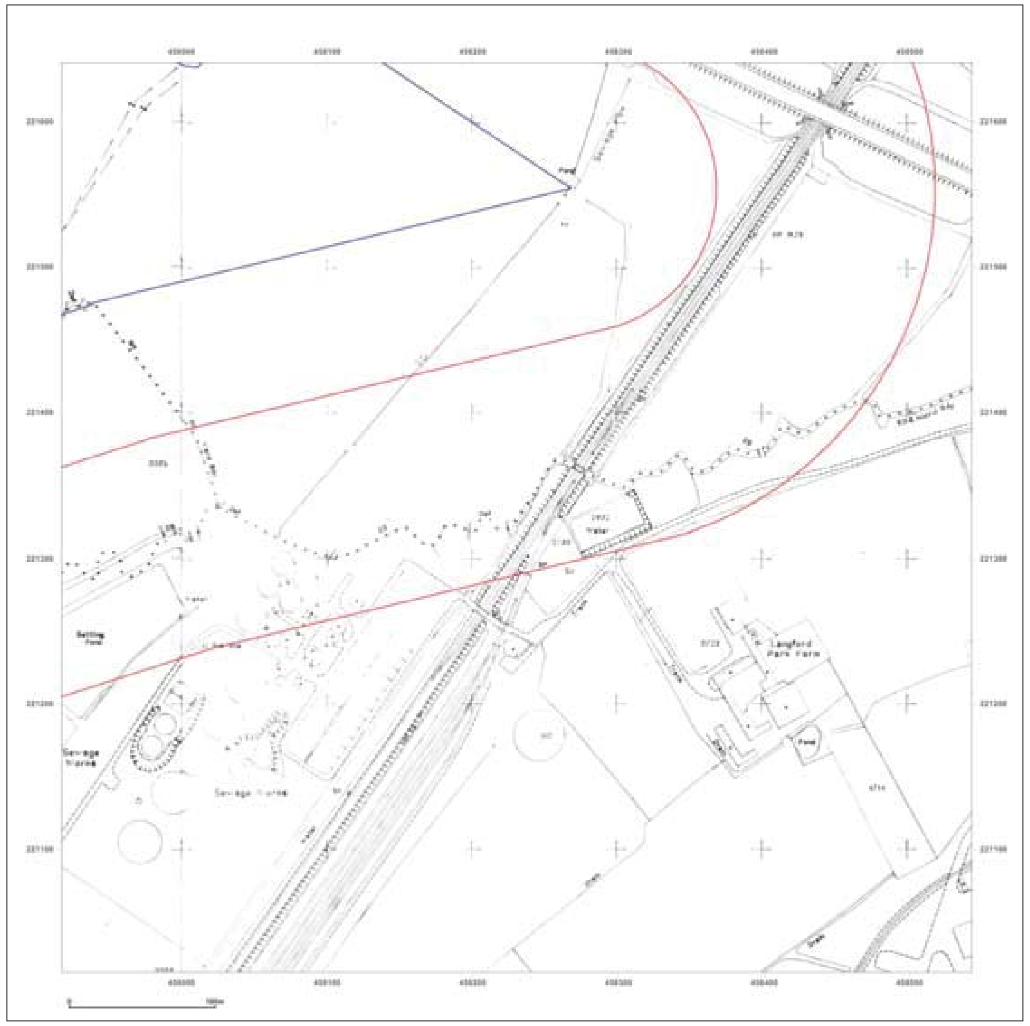
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: National Grid

Map date: **1992**

Scale: 1:2,500

Printed at: 1:2,500

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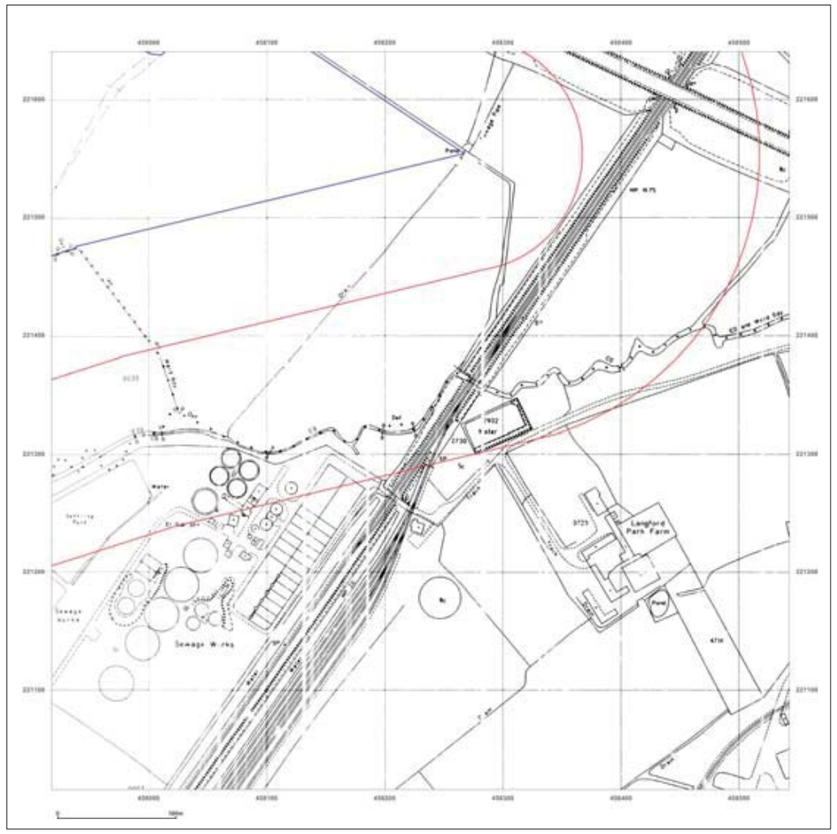
Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: National Grid
Map date: **1993-1994**
Scale: 1:2,500
Printed at: 1:2,500

N
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Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

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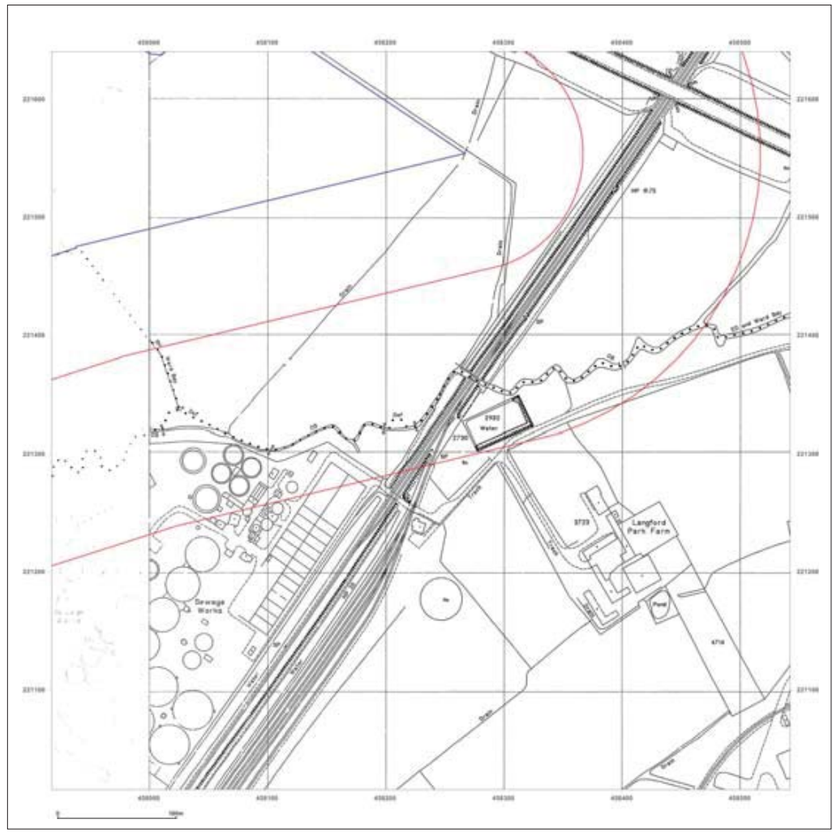
E: info@groundsure.com
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: National Grid
Map date: **1995**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1995
Levelled N/A

Surveyed N/A
Revised 1995
Edition N/A
Copyright 1995
Levelled N/A

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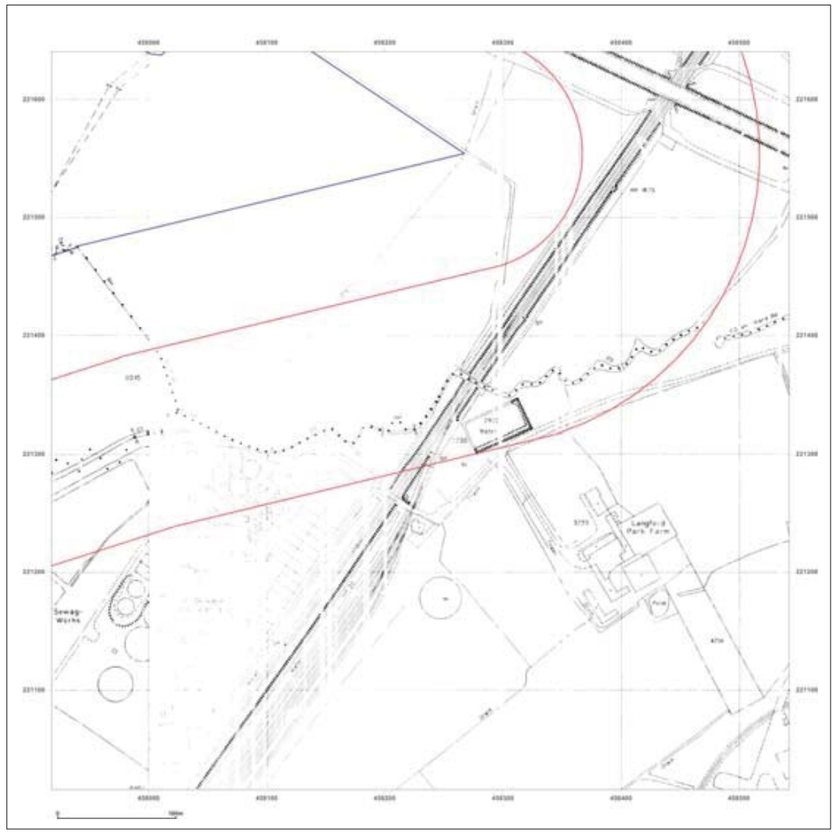
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_1
Grid Ref: 458230, 221328

Map Name: National Grid
Map date: **1994-1995**
Scale: 1:2,500
Printed at: 1:2,500

Powered by OS

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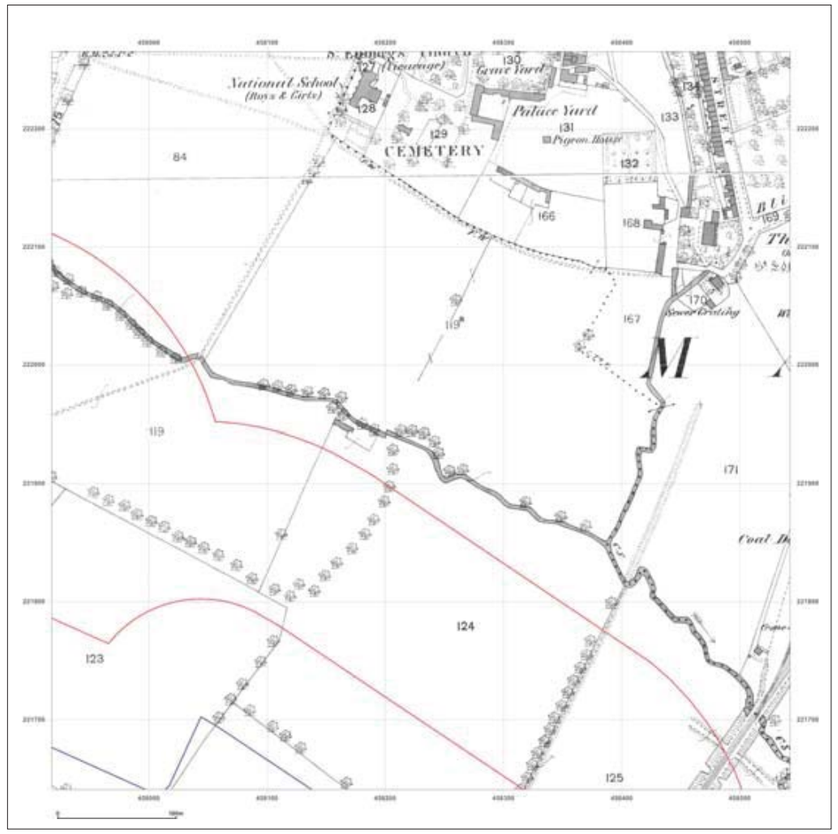
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



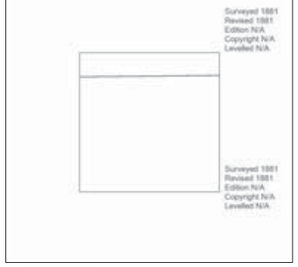
Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: County Series
Map date: **1881**
Scale: 1:2,500
Printed at: 1:2,500



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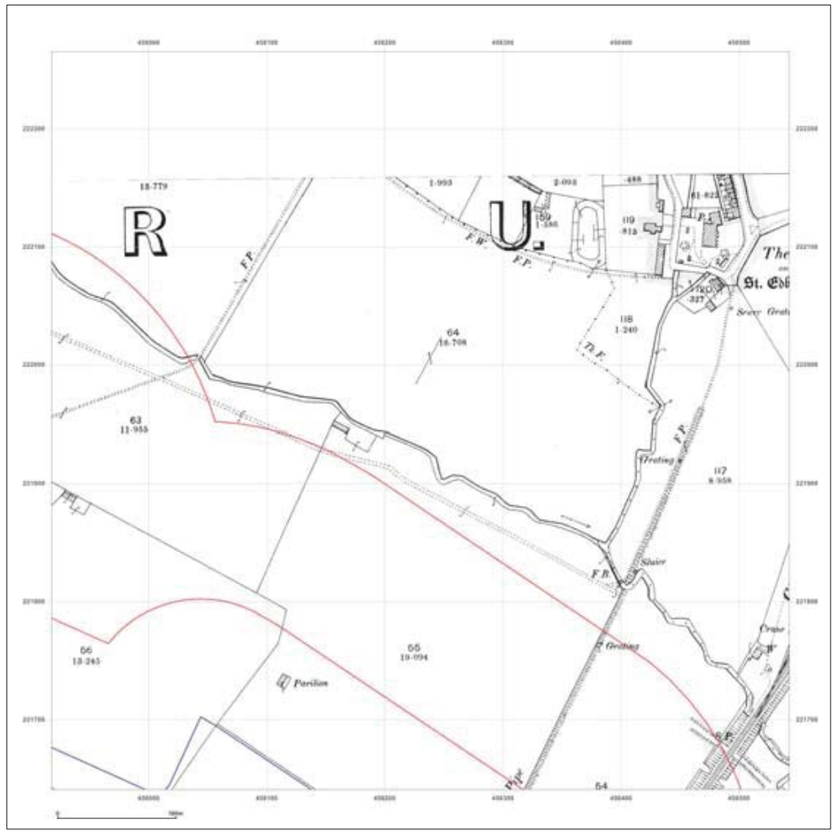
E: info@groundsure.com
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: County Series
Map date: 1900
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1900
Revised 1900
Edition N/A
Copyright N/A
Levelled N/A

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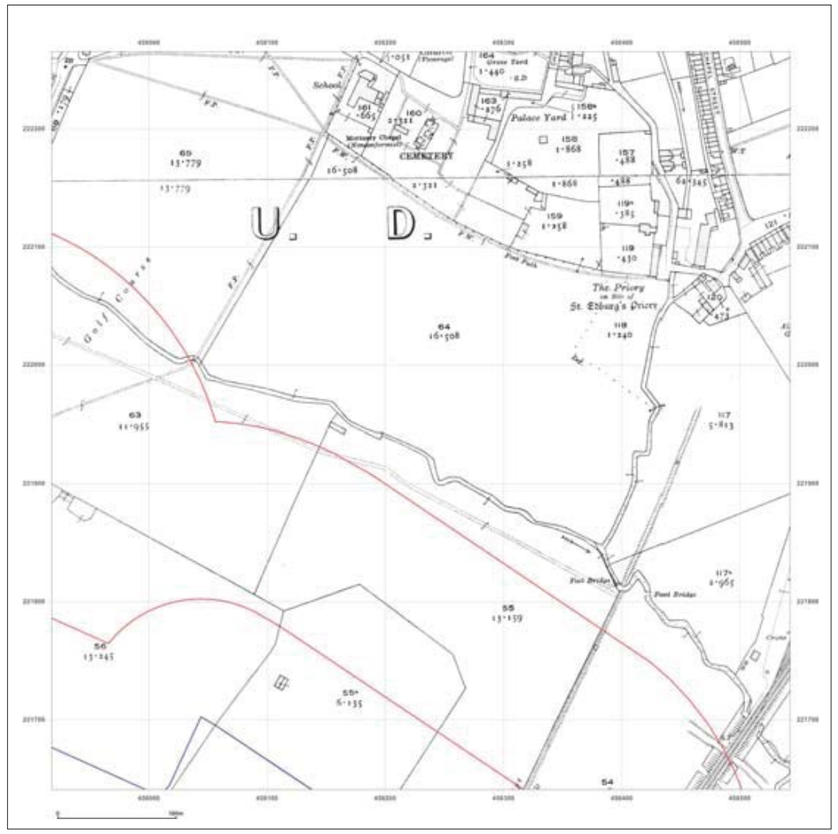
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: County Series
Map date: 1922
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

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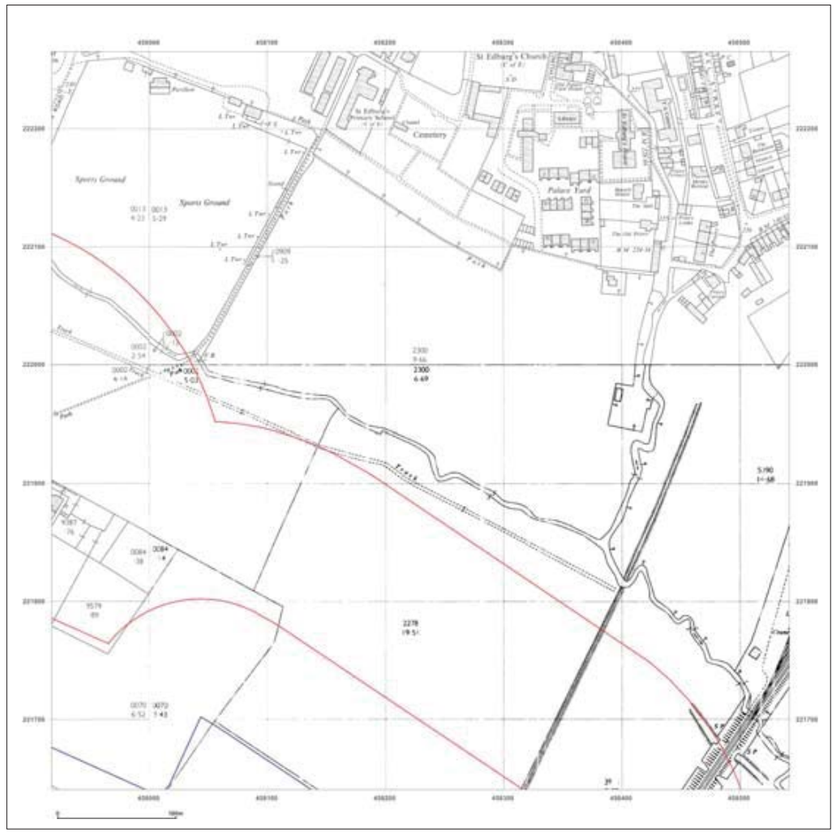
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure INSIGHTS

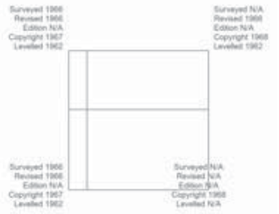
Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1966-1968**
Scale: 1:2,500
Printed at: 1:2,500

N W E S



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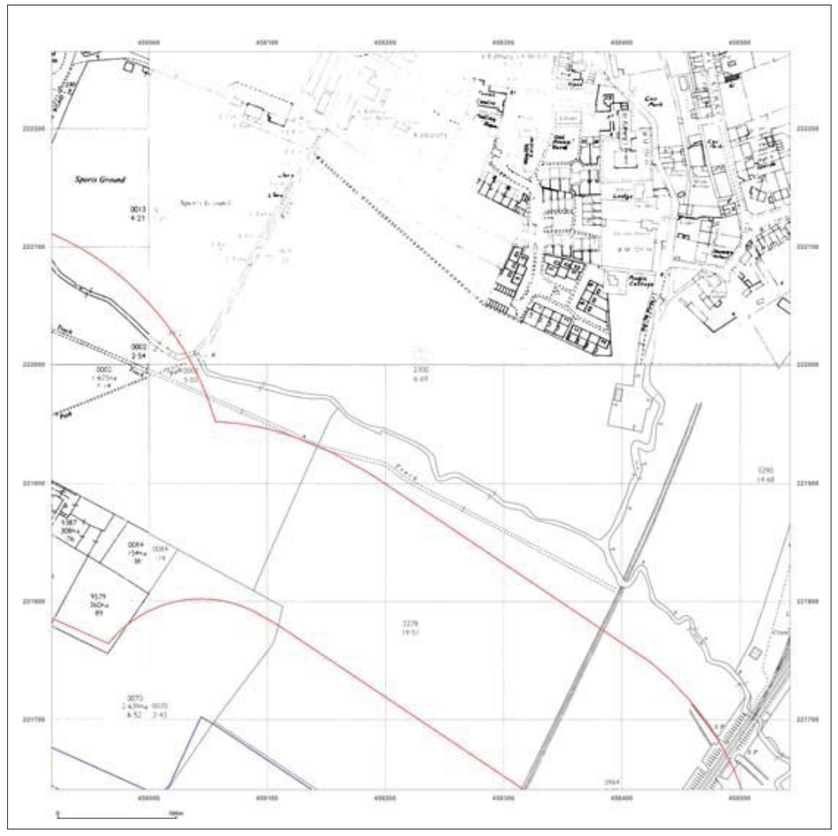
E: info@groundsure.com
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure INSIGHTS

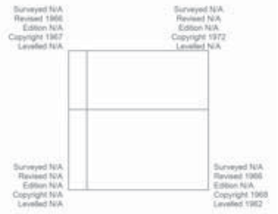
Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1967-1972**
Scale: 1:2,500
Printed at: 1:2,500

N W E S



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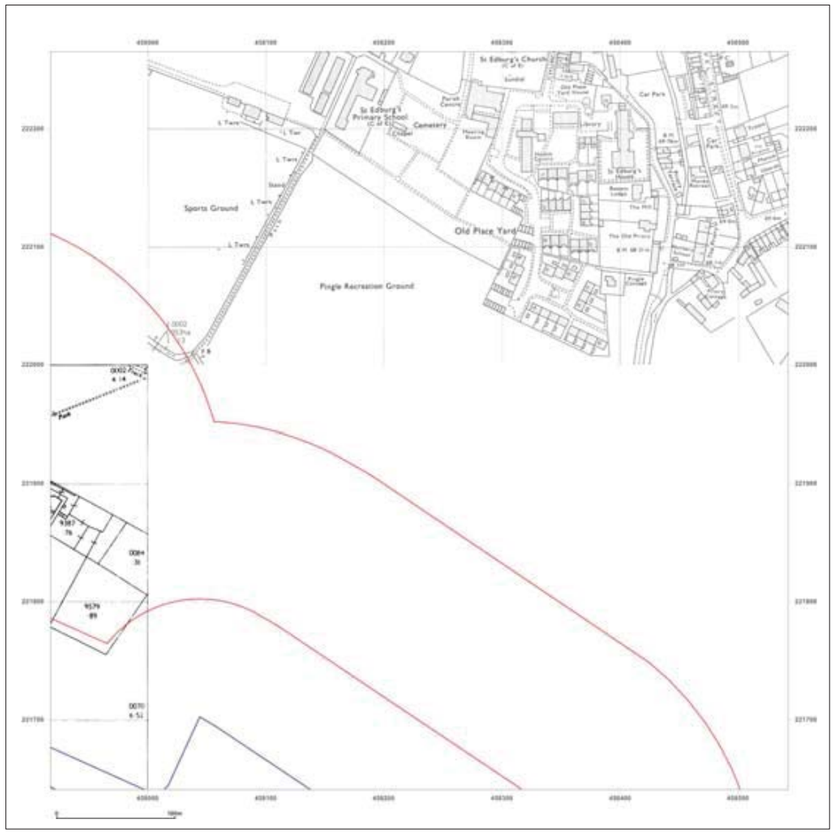
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1967-1972**
Scale: 1:2,500
Printed at: 1:2,500

N
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Surveyed 1972
Revised 1972
Edition N/A
Copyright 1973
Levelled 1971

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 13 March 2017

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Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1976-1980**
Scale: 1:2,500
Printed at: 1:2,500

N
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Surveyed 1976
Revised 1976
Edition N/A
Copyright 1977
Levelled 1970

Surveyed 1968
Revised 1980
Edition N/A
Copyright 1980
Levelled 1968

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Production date: 13 March 2017

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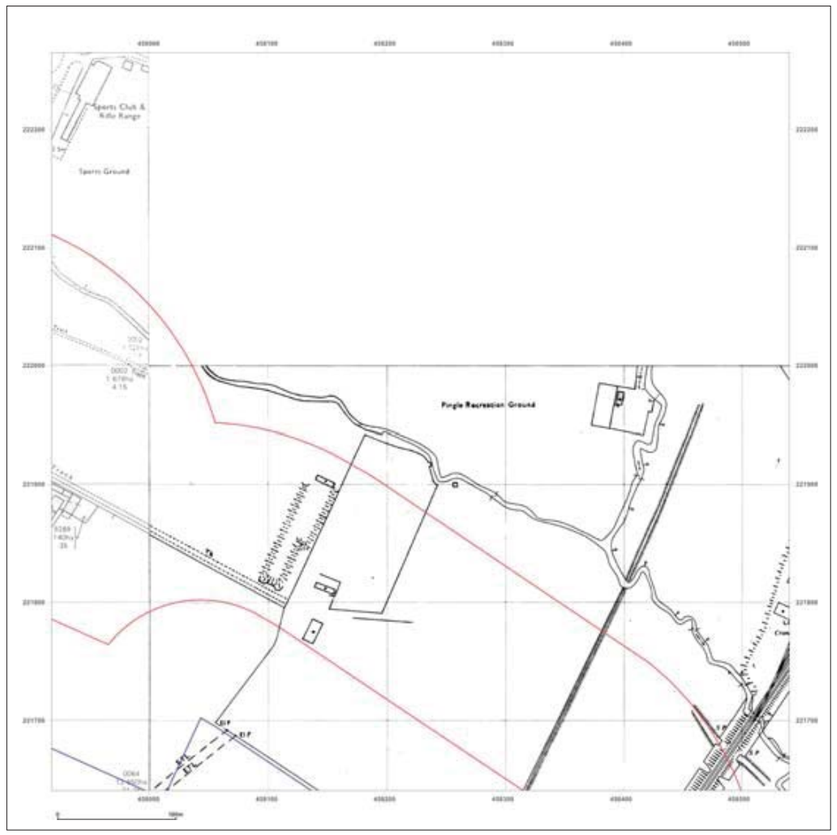

Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1981-1986**
Scale: 1:2,500
Printed at: 1:2,500

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Production date: 13 March 2017

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Groundsure INSIGHTS

Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1984-1989**
Scale: 1:2,500
Printed at: 1:2,500

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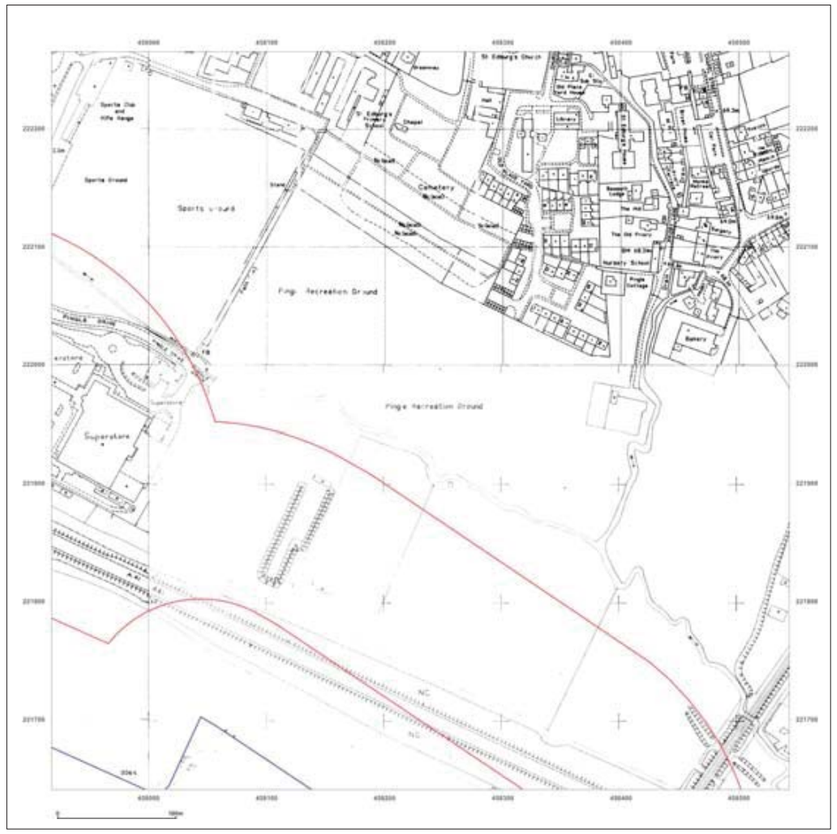
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1992-1994**
Scale: 1:2,500
Printed at: 1:2,500

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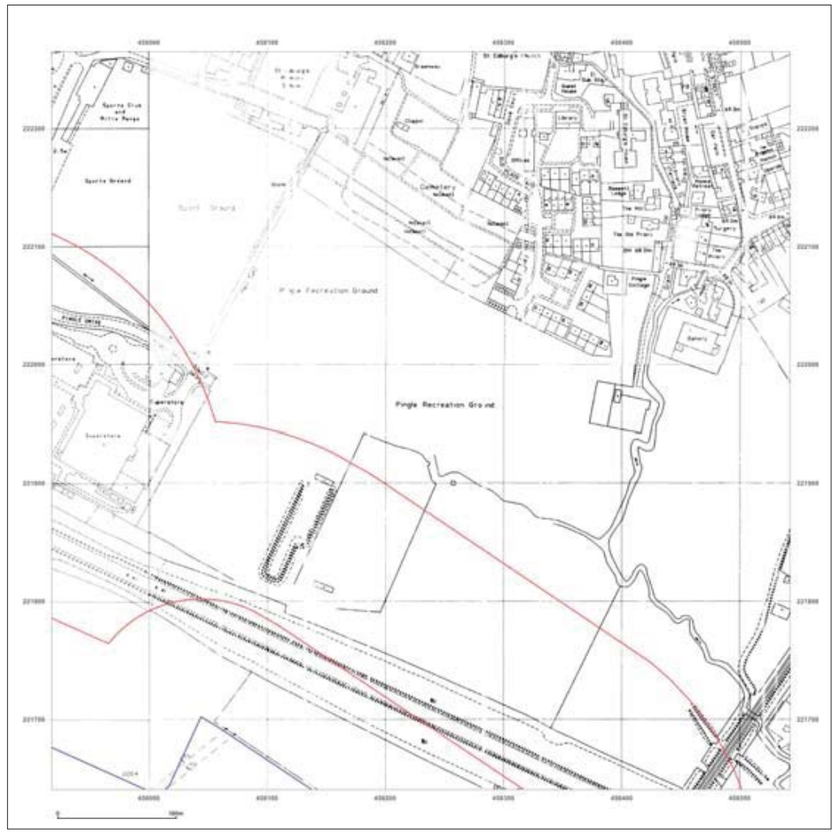
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1993-1995**
Scale: 1:2,500
Printed at: 1:2,500

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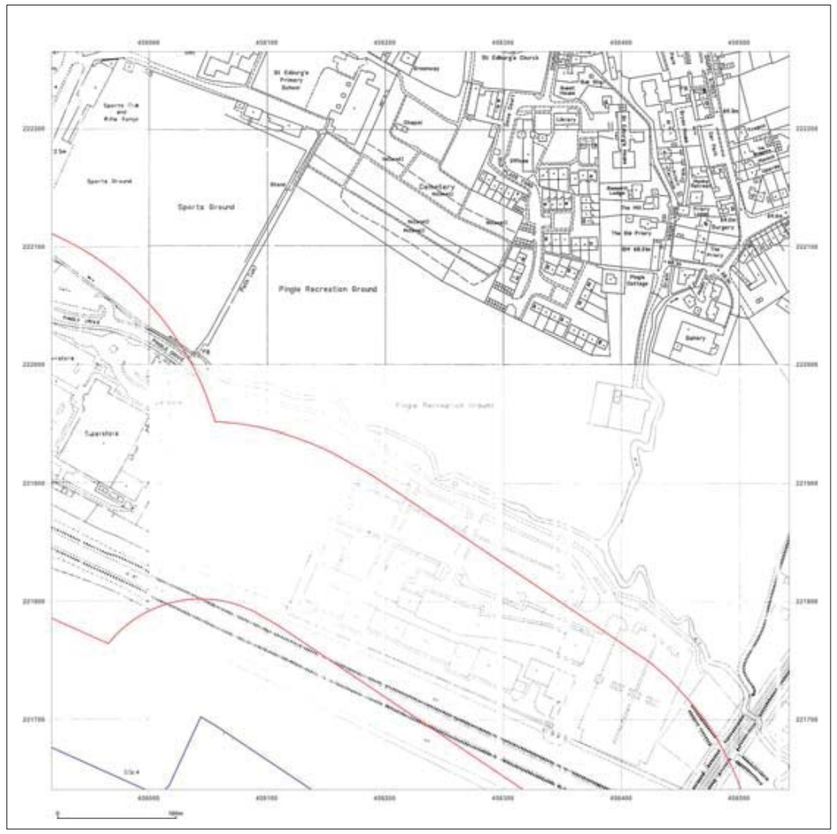
Powered by OS

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1994-1995**
Scale: 1:2,500
Printed at: 1:2,500

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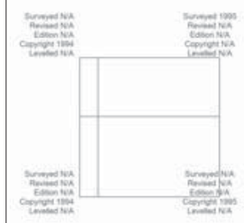

Produced by
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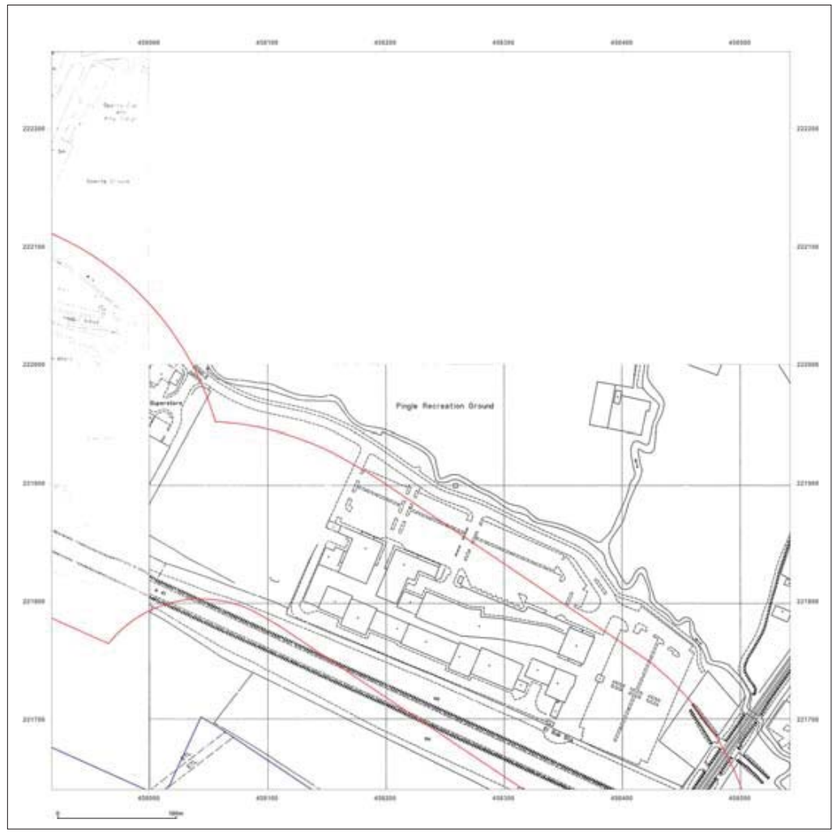
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*



Site Details:

OXFORD ROAD, BICESTER,
OX26 1BT

Client Ref: 036269
Report Ref: GS-3722222_LS_2_2
Grid Ref: 458230, 221953

Map Name: National Grid
Map date: **1995**
Scale: 1:2,500
Printed at: 1:2,500

N
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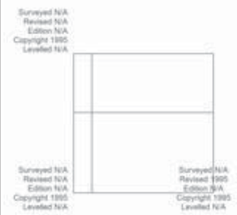

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E: info@groundsure.com
W: www.groundsure.com

Production date: 13 March 2017

To view map legend click here *Legend*

Geoffrey Perrett
Buro Happold Limited
17 Newman Street
London
W1T 1PD
UK

T: +44 (0)207 927 9700
F: +44 (0)870 787 4145
Email: Geoffrey.Perrett@burohappold.com

ES Volume II: Technical Appendices

Appendix 2.2: EIA Scoping Opinion

Public Protection & Development Management

Andy Preston – Head of Public Protection & Development Management

DISTRICT COUNCIL
NORTH OXFORDSHIRE

Mr Peter Twemlow
DP9 Ltd
100 Pall Mall
London
SW1Y 5NQ

Bodicote House
Bodicote
Banbury
Oxfordshire
OX15 4AA

www.cherwell.gov.uk

2nd August 2017

Please ask for: Matthew Parry
Email: matthew.parry@cherwell-dc.gov.uk

Direct Dial: 01295 221837
Our Ref: 17/00001/SCOP

Dear Mr Twemlow

TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) (ENGLAND AND WALES) REGULATIONS 2011 (as amended)

Request for a Scoping Opinion

Application Number: 17/00001/SCOP

Applicant: DP9 Ltd

Proposal: Construction of a business park comprising between 55,000sqm and 60,000sqm of office development (Use Class B1) up to four storeys, parking for approximately 2000 cars, associated highway, infrastructure, landscaping and earthworks.

Address: Land North Of Bicester Avenue Garden Centre, Oxford Road, Bicester

New regulations known as The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 came into force on 16th May 2017. This request for the Council to adopt an EIA scoping opinion was received prior to this date. In accordance with the transitional provisions contained within reg. 76 of the EIA Regulations 2017, the previous EIA Regulations 2011 (as amended) continue to apply in relation to development proposals where either an Environment Statement or request for a scoping opinion have been submitted prior to this date. As a result, this scoping opinion has been formed having regard to the EIA Regulations 2011 (as amended) and any Environmental Statement and planning application prepared in response to this scoping would be assessed having regard to the provisions within this previous legislation.

The Council has considered your request for it to adopt an EIA scoping opinion in relation to the abovementioned proposals. The Council has reviewed the information that you have provided in order to determine the potential for the proposed development to have significant environmental effects and those aspects of the environment likely to be affected. In doing so the Council has had regard to the provisions of reg. 13 of the EIA Regulations 2011 (as amended) as well as the criteria for determining the potential for significant environmental effects as set out in Schedules 3 and 4 to those regulations. The Council has also consulted with the relevant statutory consultation bodies as defined in the EIA Regulations 2011 (as amended) and has had regard to the representations received.

Having considered the specific characteristic of the proposed development together with its scale, nature and location both individually and cumulatively with other committed development, the Council considers those aspects of the environment set out over the following pages need to be addressed as part of an EIA and therefore included within an Environmental Statement (ES) that accompanies a planning application. Notwithstanding those environmental effects that the Council considers should be assessed through EIA, an ES needs to include all other relevant information as set out in Parts 1 and 2 of Schedule 4 to the EIA Regulations 2011 (as amended).

The Council expects to see the main environmental effects arising from the proposed development considered against the baseline conditions both during its construction and in its operational stage including, where necessary, up to a point 15 years post completion of the development. Where any potentially significant environmental impacts are identified at any stage, measures to avoid, mitigate and/or remedy them should be set out in the ES. Any resulting residual impacts should then be assessed to determine their resulting environmental significance.

The Council expects an EIA for the proposed development to not only assess the potential for significant environmental effects resulting from these proposals alone but also the potential for significant cumulative effects when considered together with other relevant major developments that are approved, allocated or proposed in the surrounding area and which are likely to progress within a similar timeframe. An ES should also include a clear and concise conclusion as well as a non-technical summary. The Council has had regard to Government guidance contained within the Planning Practice Guidance (in particular ref ID: 4-036-20170728) which states that only the main or significant potential environmental effects to which a development is likely to give rise should be addressed. The ES should therefore be proportionate and not any longer than is necessary to properly assess those effects. As a consequence, those impacts which have little or no significance for the proposed development will need only very brief treatment in an ES to indicate that their possible relevance has been considered.

Broadly speaking the Council is in general agreement with the scoping report that accompanied your scoping request. However, in the Council's view there are some specific potential impacts that need to be addressed as part of an EIA. For ease and clarity, the Council sets out as follows those aspects of the environment that it believes could be significantly adversely affected by the proposed development and which should be addressed through EIA. Those aspects of the environment not listed below are therefore considered to be unlikely to be significantly affected and can be 'scoped out' for the purposes of EIA.

<u>Transport</u>
The EIA regulations are clear that social impacts including impacts on the local population are environmental effects that may need to be addressed as part of an EIA if the impacts are potentially significant. The Council considers the impact on the local transport network to be an environmental effect that needs to be addressed. This includes both the likely individual traffic and transport implications of the proposals as well as the cumulative impact when taken together with committed development in the surrounding area.

The outline scope of assessment as suggested by the scoping report has listed a number of junctions to consider for capacity modelling which is considered to be broadly appropriate for EIA purposes. In addition to these, the Rodney House roundabout, A41 / Vendee Drive / Oxford Road (A41) roundabout and Oxford Road / Middleton Stoney Road / Kings End roundabout should also be included. It is also suggested that a future assessment year of 2026 should be considered rather than the 2022 proposed so that it more accurately assesses the environmental impacts of the proposed development closer to its completion and thus when having its full effect. The Bicester Transport Model 2026 should be used to model the traffic flows and regard should be had to planning permissions recently granted under 16/02505/OUT and 16/02586/OUT where these are not captured within the model.

Also, it is felt appropriate that subsequent applications should include impacts on all pedestrian infrastructure, connectivity and other informal access routes within the redline and in the vicinity of the development as well as the users of those resources. This includes walkers, cyclists and equestrians - some of whom may have disabilities or are accompanied by children, wheel or pushchairs and dogs. As well as mitigating impacts the proposals should also look at opportunities for enhancements.

There will be transport effects, the most notable being the increase in traffic around the junctions in close proximity to the site particularly at peak periods. Overall, these increased traffic flows will potentially make conditions less pleasant for pedestrians and cyclists in the vicinity of the development. The scale of this negative effect and therefore what will be needed to mitigate it is impossible to judge without any attempt to quantify the scale of the increase in traffic as a result of the development.

It is essential that the cumulative transport impact of the proposed development is fully addressed with due regard taken of implications of other committed development (approved, under construction, allocated or with resolutions to grant) in the surrounding area that are likely to progress within the next five years. The list of schemes for assessment in table 1 on page 9 of the scoping report is considered broadly robust but care should be taken with schemes 1 and 6 which relate to the same allocated site. It is advised that the total development provided for by Policy Bicester 12 is included within assessments rather than that proposed in the related planning application which is not committed at this stage. I also note that only planning permission 16/02586/OUT is referenced within the table rather than the total development allocated through Policy Bicester 10. This planning permission relates to a small proportion of the allocated site and there is a reasonable prospect of further development taking place on the remainder of the land within the next several years and so should be addressed.

Landscape

The approach to assessing the landscape significance of the proposed development is broadly considered to be acceptable. With this development there will be cumulative landscape and visual effects due to the existing Tesco and Bicester Avenue developments, SW Bicester urban extension and Bicester Gateway Business Park (Bicester 10) The photography location plan is slightly blurred however viewpoints 1 -10 appear to be a representative reflection of the main visual receptor experience. However there are no photography locations from the Graven Hill residential development and future residential receptors should be considered here. Measures to visually mitigate this development with landscape buffers based on existing field boundary hedgerows and trees should be set out particularly where these are necessary to prevent significant adverse effects on the landscape. It is important to ensure the A41 frontage is of a high standard, for the purposes of landscape mitigation, site users, amenity and climate amelioration.

Heritage

There are no designated or non-designated heritage assets on the site and a limited number in the immediate vicinity. Given separation distances and intervening landscape features it seems unlikely that these heritage assets would have their setting or integrity either individually or cumulatively significantly adversely affected. The scope for assessment in this respect however seems appropriate in the scoping report. Buried heritage assets at the site are more likely to be affected and potentially this impact could be significant in the absence of a more detailed archaeological desk based and field evaluation to indicate otherwise. The approach to assessment of buried heritage assets as set out in the scoping report seems to be appropriate.

Ecology and Biodiversity

There are no statutorily or locally designated ecological sites within the site area though there is the potential for impact on designated ecological sites outside the site (Bicester Wetland Reserve LWS) as well as on protected and priority species. This should be considered both during construction and operational stages as well as the overall impact on biodiversity as a result of the proposed development. The approach to assessing the significance of the ecological implications is broadly considered to be appropriate though the Council is promoting the use of the DEFRA based biodiversity metric used by Warwickshire County Council to assist in objectively determining the biodiversity impact of a proposed development and this should form part of the overall ecological assessment.

It should also be noted that as part of nearby development proposals the impact on otter, grass snakes and other reptiles has been considered. There are known records of otter within Langford Brook (including at the nearby Bicester Village Shopping Centre) and ditches on or near the site could form part of their habitat. Similarly, there are local records of grass snake and depending upon the characteristics of the habitat on the site they could be present. Surveys of these species should therefore be considered in addition to those described in the scoping report. The implications of cumulative loss of agricultural land on farmland bird priority species should also be addressed.

Noise and Vibration

It is agreed that it is appropriate to given consideration to these effects, particularly on nearby residential receptors, as part of the EIA. This should include both construction and operational impacts. The scope of these assessments as set out in the scoping report is considered to be suitable.

Air Quality

The Council has a statutory duty under the Environment Act 1995 (as amended) to review and address air quality where it reaches potentially harmful levels. It is also a material planning consideration. The Council has designated an Air Quality Management Area (AQMA) in close proximity to the site known as the Cherwell District Council Air Quality Management Area No. 4 which includes the nearby Kings End and Queens Avenue roads leading towards Bicester town centre. It is the Council's objectives to reduce harmful pollutants within this area of which road traffic is a major source. Both the individual and cumulative impact of the development on air quality should be addressed as part of the EIA both during construction and once operational. Construction vehicles are likely to emit higher levels of nitrogen oxide and particulate matter relative to the motor vehicles likely to be used by employees/visitors to the business park once operational. The air quality effects of the proposed development should be considered both in terms of the likely effect on human health as well as ecology. The scope of the assessment as set out in the scoping report is considered to be broadly appropriate. For clarity however, where it states 'Opening Year', the Council would expect this to be based on the opening of the completed development rather than partial occupation of the proposed development. Clarification of the opening year is important as if unrealistic it may not properly take account of the stages of construction of committed development. Furthermore, unlike residential development, the rate of occupation of floorspace within commercial developments of this nature can vary significantly depending on the vitality and interest within the relevant market.

Cumulative Environmental Effects

In accordance with Schedule 4 of the EIA Regulations 2011 (as amended), an ES should include a description of the likely significant effects of the proposed development on the environment including any cumulative direct and indirect effects. In order to robustly assess the environmental implications of the proposed development the Council considers that the developments set out in table 1 of the scoping report should be taken into account (including the entirety of development allocated through Policies Bicester 10 and 12 rather than the associated planning applications/permissions) when considering the overall potential for significant environment effects in comparison to the baseline.

Alternatives

In order for an EIA to be considered truly robust, it should also include a description of the alternative approaches considered as part of efforts to avoid or reduce the environmental effects identified through the EIA together with main reasons as to why the proposed approach has been taken rather than the alternatives.

I trust the contents of this letter are of assistance to you in clarifying the necessary scope of an EIA. This letter should be treated as the Council's formal scoping opinion made pursuant to reg. 13 of the EIA Regulations 2011 (as amended). A copy of this scoping opinion shall be made publicly available in accordance with reg. 23 of the EIA Regulations 2011 (as amended).

Yours sincerely

Cherwell District Council

Certified a true copy

Head of Public Protection &
Development Management

From: Tim Screen
Sent: 20 June 2017 11:37
To: Matthew Parry
Subject: 17/00001/SCOP - Land North Of Bicester Avenue Garden Centre Oxford Road Bicester

Matt

With this development there will be a cumulative of landscape and visual effects due to the existing Tesco and Avenue development – as identified in the EIA Scoping Report . Measures to visually mitigate this development with landscape buffers based of existing field boundary hedgerows and trees. It is important to ensure the A44 frontage and site interior landscaping is of a high standard, for landscape mitigation, site users, amenity and climate amelioration.

The Photography location plan is slightly blurred with the printing, however I confirm that Viewpoints 1 -10 appear to be a representative reflection of the visual receptor experience.

I notice that there are no photography locations from Graven Hill residential development. Future residential receptors should be considered here. Viewpoints should be proposed by the landscape consultant.

Regards.

Tim

Tim Screen CMLI
Landscape Architect
Cherwell District & South Northants Councils

01295 221862
01295 221878

mailto:tim.screen@cherwellandsouthnorthants.gov.uk

www.cherwell-dc.gov.uk
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This department has the following response to this application as presented:

Noise: Happy with the proposed scope for the noise assessment reports.

Contaminated Land: Conditions attached to planning permission will be required to ensure that the site investigation as required by the phase 1 Environmental Risk assessment is carried out as it has been scoped out of the EIA.

Air Quality: Happy with the proposed scope for the noise assessment reports.

Odour: Whilst not part of this scoping there is a chance that the future users of the business park could be affected by odour from the neighbouring sewage works and complaints about this could impinge on the future use of the works. The developers should be aware of this and be in discussion with Thames Water regarding the matter and possible mitigation.

Light: No comments

Kind Regards

Neil Whitton
Environmental Protection Officer
Cherwell District Council and South Northamptonshire Council
Tel - 01295 221623
Email - Neil.Whitton@cherwellandsouthnorthants.gov.uk

OXFORDSHIRE COUNTY COUNCIL

OXFORDSHIRE COUNTY COUNCIL'S RESPONSE TO CONSULTATION ON THE FOLLOWING DEVELOPMENT PROPOSAL

District: Cherwell
Application No: 17/00001/SCOP
Proposal: Scoping Opinion for the construction of a commercial scheme
Location: Land North Of Bicester Avenue Garden Centre Oxford Road Bicester

Purpose of document

This report contains officer advice in the form of technical team response(s).

District: Cherwell
Application No: 17/00001/SCOP
Proposal: Scoping Opinion for the construction of a commercial scheme
Location: Land North Of Bicester Avenue Garden Centre Oxford Road Bicester

Transport

Legal agreement required to secure:

Should planning permission be granted for this application then S106 and S278 agreements will be needed to ensure that it is acceptable in planning terms. The agreements would cover such things as new site accesses, off site transport network improvements, new and enhanced existing bus services, travel plan monitoring etc.

Detailed comments:

The applicant has requested for a Scoping Opinion under Regulation 13 of the EIA Regulations. In the Scoping Report, the applicant has identified some of the main or likely significant environmental effects, to be assessed within a range of topics which include construction and transport before a final decision is taken on design.

This EIA scoping opinion is on land which forms part of an approved outline application (Ref: 07/01106/OUT) for the construction of a 60,000sqm B1 office park comprising 53,000sqm of B1 office space and a 7,000sqm C1 hotel. Planning consennt was subsequently granted in 2013 the for construction of a Tesco foodstore of 8,135 sqm and petrol filing station on part of the consented office park site (Planning Ref: 12/01193/F).

However, OCC was consulted for pre-application advice on this development and a copy of our response dated 9th May 2017 is attached. The advise therein is considered relevant to this scoping request and the applicant is hence advised to make reference of it when writing the TA.

The outline scope of assessment as suggested by the scoping report has listed a number of junctions to consider for capacity modelling. In addition to these, we would like to see Rodney House roundabout included.

It was also suggested that a future assessment year of 2026 should be considered rather than 2022 proposed here.

Also, it is felt appropriate that subsequent applications should include impacts on all pedestrian infrastructure, connectivity and other informal access routes within the redline and in the vicinity of the development - as well as the users of those resources. These include walkers, cyclists and equestrians - some of whom may have disabilities or are accompanied by children, wheel or pushchairs and dogs. As well as mitigating impacts the proposals may also look at opportunities for enhancements.

There will be transport effects, the most notable being the increase in traffic around the junctions in close proximity to the site particularly at peak periods. Overall, these increased

traffic flows will potentially make conditions less pleasant for pedestrians and cyclists in the vicinity of the development. The scale of this negative effect and therefore what will be needed to mitigate it is impossible to judge without any attempt by the applicant to quantify the scale of increase of traffic as a result of the development.

Previous Pre-app Response below
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District: Cherwell
Application No: **17/CH0005/PREAPP**
Proposal: The construction of an office park providing up to 57,000 square metres of B1 office space.
Location: Bicester Office Park. Land To South And East Of The A41 Oxford Road, Bicester, Oxfordshire

Transport

Oxfordshire County Council is a consultee of the local planning authority and provides advice on the likely transport and highways impact of development where necessary.

It should be noted that the advice below represents the informal opinion of an officer of the council only, which is given entirely without prejudice to the formal consideration of any planning application, which may be submitted. Nevertheless the comments are given in good faith and fairly reflect an opinion at the time of drafting given the information submitted.

Key issues:

- Strategic contribution towards the South Eastern Perimeter Road

Legal agreement required to secure:

If a planning application were to be submitted and approved a S278 would be required to deliver any highway improvements that it was decided would be needed to make the development acceptable e.g. new site access junction, footway improvements.

A new S106 agreement would be needed to secure the S278 works and also a financial contribution towards

(i) Public transport improvements and
(ii) Strategic contribution towards the delivery of the South East Link Road- required to mitigate the development's impact on the A41 junctions

Travel Plan monitoring fees shall be required

Informatives:

Please note the Advance Payments Code (APC), Sections 219 -225 of the Highways Act, is in force in the county to ensure financial security from the developer to off-set the frontage owners' liability for private street works, typically in the form of a cash deposit or bond.

Should a developer wish for a street or estate to remain private then to secure exemption from the APC procedure a 'Private Road Agreement' must be entered into with the County Council to protect the interests of prospective frontage owners. For guidance and information on road adoptions etc. please email the County's Road Agreements Team at roadagreements@oxfordshire.gov.uk

Detailed comments:

The A41 from which the site is accessed is heavily trafficked and will be put under further pressure from Cherwell Local Plan growth allocations, including the allocation on this site (Bicester 4).

This was recognised by Bicester Village in their application for Phase 4 of their development, where they are now delivering major highway improvements at and between the Esso roundabout and Pingle Drive junctions, having also provided a Bicester Park and Ride facility.

The highway works which are currently underway on the A41 (and related to the expansion of Bicester Village) will deliver a new bus layby on the northbound side of the A41. The highway works which are related to the construction and use of the permitted Bicester Business Park would, once they are triggered (i.e. once construction begins), also provide a northbound and southbound bus layby. Clearly as the Bicester Village works are already underway, once construction of any permission granted for the business park begins, its corresponding remaining liability would be to provide the southbound layby (as the northbound will have by then been delivered).

Scoping Note
Having had a chance to look at the Scoping Note dated 19th April 2017 for a Transport Assessment, I wish to make the following comments.

Policy Consideration
Various Policies that should be considered relevant to this development are:

National Policies
- National Planning Policy Framework (NPPF)
- National Planning Practice Guidance (NPPG)

Local Policy Context include
- Connecting Oxfordshire 2015-2031 (LTP4)
- The Cherwell Local Plan (Adopted July 2015) from which the Policy Bicester 4 requires;
    - Layout that enables a high degree of integration and connectivity between new and existing development particularly the mixed use urban extension at South West Bicester to the west, the garden centre to the south, and, to the north, Bicester town centre and Bicester Village retail outlet.
    - Provision for safe pedestrian access from the A41 including facilitating the crossing of the A41 to the north and west, and the provision and upgrading of footpaths and cycleways that link to existing networks to improve connectivity generally and to develop links between this site, nearby development sites and the town centre.
    - Good accessibility to public transport services should be provided for, including the accommodation of new bus stops to link the development to the wider town.

- A Transport Assessment and Travel Plan to accompany development proposals.

Area of Impact and Junction Modelling
The scoping note accompanying this pre-application enquiry proposes to consider the following junctions for assessment
- Oxford Road / Pingle Drive Roundabout
- Oxford Road / A41 signalised roundabout
- Site Access (Oxford Road / A41 Lakeview Drive signalised junction)
- Oxford Road (A41) / Kingsmere signalised junction.

As previously mentioned in our telephone conversation on 26th April, in addition to the above junctions, the Transport Assessment will need to look at a wider study area to include;
- A41 / Vendee Drive / Oxford Road (A41) roundabout and
- Oxford Road / Middleton Stoney Road / Kings End roundabout
- Rodney House roundabout junction.

These junctions further afield are critical, likely to be impacted by the whole of Bicester 10 when it comes forward and Bicester 4 and the TA shall be expected to carry out capacity tests demonstrating the effect of the development on the highway network.

The scoping note under section 4.4 mentions that traffic surveys shall be undertaken during a weekday morning and evening peak period. The weekend peaks on the A41 approaching Bicester are very high. Owing to the adjacent land use particularly Bicester Village and Tesco superstore, in terms of the effect of the proposal on traffic at the Saturday and Sunday peak times, it would add to the already high volume of retail development traffic in the area. I would like to see further justification of not including a weekend assessment.

Future Years
Paragraph 4.5 of the Scoping Note sets a future year assessment to the fifth year after submission of the Transport Assessment – which puts it down to 2022. In my view, I feel this period should be extended to cover 2026 in line with the Bicester Transport Model which includes 2024 interim year and also includes the committed development expected to come forward at that time. We would like this to be the forecast year rather than 2022.

Committed development – Use of the Bicester Transport Model 2026 would include all development expected to come forward by that time. Consideration also needs to be given to two pending planning applications close by to the site, which are both proposing highway mitigation works along the A41. These are;
- 16-02505-OUT – Bicester Gateway (Kingsmere Retail)
- 16-02586-OUT – Bicester Gateway (Bicester 10)

The model includes significant committed developments expected to come forward and including the growth trips. Should the model be used, TEMPRO shall not be required in this case.

We shall however like to see the network tested using the flows from the model.

Trip Generation
The scoping note accompanying this pre-application enquiry proposes to use TRICS database to establish an estimate of the number of vehicles that the proposed development might generate when it is fully occupied.

I appreciate that the scoping note submitted attempts to estimate the likely number of trips generated that shall be generated by the development. However, the trip rates used appear rather low especially in the PM peak. I would further appreciate that a trip rates commensurate to the developments close by to be considered, such as ones used in planning ref: 16-02586-OUT.

Characteristics of business parks are likely to have very high levels of car use and very peaky demand for travel. The Oxford Business Park (Garsington Road) certainly displays these characteristics, which results in very long queues and delays when employees decide to leave at the same time (at 1705, for example). Arguably, similar characteristics could be expected on this site, especially when combined with the late Friday afternoon flow from the Tesco store. Will these characteristics be reflected in a TA – what mitigation can be provided – to spread the peak for example.

<u>Other scoping matters</u>
Public Transport - The applicant will need to robustly assess public transport accessibility between the development site and the wider network. The original application included a requirement to provide a pair of bus stops on the A41 and an agreement to provide some S106 funding to provide a bus service into the site.

The bus stops have not been fully delivered, with a new bus stop having recently been installed on the western side of the A41, to the north of the Premier Inn hotel. I guess the bus stop on the eastern side of the A41 is tied up with the Bicester Business Park Legal Agreement. In any event, it is absolutely essential that this is provided.

That being said, the walking distance to these bus stops along the A41 from some of these workplace units could be around 750 metres. I would like to see how the applicant addresses the distance in the TA.

South Eastern Perimeter Road (SEPR)
The Local Transport Plan 4 Bicester Area Strategy proposes a South East Perimeter Road in Bicester, which will ease congestion on the A41 and also mitigate the development's impact on the A41 junctions. It is partly funded, but currently requires contributions to fund the western section proposed, so contributions towards this are likely to be a consideration in terms of mitigating the Bicester Business Park proposals. Other future developments in the area would also be expected to contribute.

The cumulative impact of development in Bicester will be severe if appropriate contributions are not secured from all development sites towards the strategic transport infrastructure required to mitigate the increased transport movements.

Strategic transport modelling demonstrates the benefits that the SEPR will bring to the A41 (Oxford Road):

- The A41 Oxford Road is a key corridor in Bicester where junctions along its length are impacted significantly as a result of the growth of Bicester, including Bicester 10. The Application Site is estimated to increase the proportion of peak hour traffic at the A41/ Vendee Drive junction by between 7% and 8% in 2024.

- The SEPR has been identified as a key piece of strategic infrastructure that will bring direct relief to the A41 corridor, thereby facilitating improved operation of junctions directly impacted by Bicester 10.

- Modelling has demonstrated the benefits that the SEPR would bring to the A41. In the AM peak:
  - Over 1000 vehicles (pcu's) that would otherwise use the A41 Oxford Rd northbound through Vendee Dve would route via SEPR (eastbound)
  - Around 930 vehicles (pcu's) that would otherwise use A41 Boundary Way and turn left on A41 Oxford Rd southbound past Bic 10, would route via SEPR (westbound)
  - Therefore, over 1930 vehicles (pcu's) would use the SEPR that would otherwise route along A41 past the Bicester 10 site.

It is acknowledged however, that the capacity released on the A41 by the SEPR will itself encourage some traffic that might otherwise choose NOT to use the A41, to divert along the corridor. When taking diverted traffic into account, the net reduction in traffic on the A41 in the vicinity of the Bicester 10 site would be around 1130 pcu's.

Car parking
Sufficient car parking will need to be provided to ensure that there is no overspill onto surrounding roads or inappropriate use of the Park and Ride site. Designs and provision should take into account areas within the development that may be subject to inappropriate parking such as on green verge areas or turning heads. OCC requires 2.4m x 4.8m parking bays and 6m width of manoeuvrable space between parking rows. OCC parking standards for B1 Office developments also require 1 parking space per 30sqm GFA, to include about 6% of DDA per development unit.

Consideration of the interaction of car parking with other sites in the area e.g. acting as an overspill car parking area for Bicester Village (rather than Bicester Village visitors using the P&R) must also be made. A robust car parking management plan should be included in the Travel Plan.

Cycle parking
The county's cycle parking standards sets out how developers should provide sufficient secure and covered cycle parking for staff and visitors. Cycle parking should be easy to locate and as close to the buildings as possible, not only to make it as attractive to potential users as possible but also to allow natural surveillance from the building itself.

Drainage
A surface water drainage scheme for the site will need to be submitted with a planning application. This will be based on sustainable drainage principles and an assessment of the hydrological and hydro-geological context of the development, The scheme will need to include:

- Discharge Rates
- Discharge Volumes
- Maintenance and management of SUDS features (including details of who will be responsible maintaining the SUDS & landowner details)
- Sizing of features – attenuation volume
- Infiltration tests to be undertaken in accordance with BRE365
- Detailed drainage layout with pipe numbers (to include direction of flow)
- SUDS (list the suds features mentioned within the FRA to ensure they are carried forward into the detailed drainage strategy)
- Network drainage calculations (to prove that the proposals will work)
- Phasing plans

- Flood Risk Assessment

Travel Plan
A Travel Plan Statement meeting the requirements set out in the Oxfordshire County Council guidance document, Transport for New Developments; Transport Assessments and Travel Plans will be required for this application. It would need to be produced and agreed prior to first occupation.

Additionally, a Travel Information Pack would need to be submitted to and approved by the Local Planning Authority prior to first occupation. The first occupants of each development unit shall be provided with a copy of the approved Travel Information Pack.

Officer's Name: Rashid Bbosa
Officer's Title: Transport Engineer
Date: 09 May 2017

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Having considered the proposal's impact against criteria set out in National Planning Practice Guidance (EIA) it is concluded that the proposed development, as submitted, would only amount to an increase in GFA to the previously approved scheme and would not trigger the requirement for an EIA from a county council perspective. Any impacts on transport and county council services can be assessed at the full application stage.

Officer's Name: Rashid Bbosa
Officer's Title: Transport Engineer
Date: 03 July 2017

District: Cherwell
Application No: 17/00001/SCOP
Proposal: Scoping Opinion for the construction of a commercial scheme
Location: Land North Of Bicester Avenue Garden Centre Oxford Road Bicester

Archaeology

Key issues:

The applicant's documentation states that a desk based assessment (DBA) will be prepared assessing the archaeological potential of the site. If an EIA is required then this DBA should be included within it. If an EIA is not required then the DBA will need to be submitted along with any planning application.

Legal agreement required to secure:

Conditions:

Informatives:

Detailed comments:

The applicant's documentation states that a desk based assessment (DBA) will be prepared assessing the archaeological potential of the site. If an EIA is required then this DBA should be included within it. If an EIA is not required then the DBA will need to be submitted along with any planning application.

This desk based assessment should be undertaken in line with the Chartered Institute for Archaeology standards and guidance including the submission of a written scheme of investigation to ensure that the scope of the assessment has been agreed.

It is likely that a programme of archaeological investigation will need to be undertaken ahead of the determination of any planning application for the site.

Officer's Name: Richard Oram
Officer's Title: Planning Archaeologist
Date: 26 June 2017

District: Cherwell
Application No: 17/00001/SCOP
Proposal: Scoping Opinion for the construction of a commercial scheme
Location: Land North Of Bicester Avenue Garden Centre Oxford Road Bicester

Economy and Skills

The socio-economic assessment should include all the main elements contained in the outline scope:

An assessment of the temporary socio-economic effects to include:
• Temporary employment created during the construction phase of the redevelopment;
• Gross value added to the local economy by the temporary construction employment; and
• Construction training opportunities.

An assessment of the permanent socio-economic effects to include:
• Employment generation, including direct jobs created on site and associated indirect/induced employment created through multiplier effects;
• Gross value added to the local economy by the net additional employment created;
• Training and skills development opportunities;
• Additional local spending by office workers; and
• The provision of amenity space for office users.

It would also be useful to see an assessment of apprenticeship opportunities both in the temporary and permanent socio-economic effects as well as the skills levels of employment opportunities.

Officer's Name: Sarah Beal
Officer's Title: Economic Development Coordinator
Date: 29 June 2017

Date: 23 June 2017
Our ref: 218555
Your ref: 17/00001/SCOP

NATURAL ENGLAND

Mr Matthew Parry
Cherwell District Council
Bodicote House
Bodicote
Banbury
Oxfordshire
OX15 4AA

Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
C W1 6GJ

T 0300 060 3900

BY EMAIL ONLY
Planning@cherwell-dc.gov.uk

Dear Mr Parry

Environmental Impact Assessment Scoping consultation (Regulation 15 (3) (i) of the EIA Regulations 2011 as amended): Scoping Opinion for the construction of a commercial scheme
Location: Land North Of Bicester Avenue Garden Centre Oxford Road Bicester

Thank you for your consultation dated and received by Natural England on 15th June 2017.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

The scoping request is for a proposal that does not appear, from the information provided, to affect any nationally designated geological or ecological sites (Ramsar, SPA, SAC, SSSI, NNR) or landscapes (National Parks, AONBs, Heritage Coasts, National Trails), or have significant impacts on the protection of soils (particularly of sites over 20ha of best or most versatile land), nor is the development for a mineral or waste site of over 5ha.

At present therefore it is not a priority for Natural England to advise on the detail of this EIA. We would, however, like to draw your attention to some key points of advice, presented in annex to this letter, and we would expect the final Environmental Statement (ES) to include all necessary information as outlined in Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2011. If you believe that the development does affect one of the features listed in paragraph 3 above, please contact Natural England at consultations@naturalengland.org.uk, and we may be able to provide further information.

Yours sincerely

Kathryn Davies
Consultations Team

Annex A – Advice related to EIA Scoping Requirements

1. **General Principles**

Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended), sets out the necessary information to assess impacts on the natural environment to be included in an ES, specifically:

- A description of the development – including physical characteristics and the full land use requirements of the site during construction and operational phases.
- Expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed development.
- An assessment of alternatives and clear reasoning as to why the preferred option has been chosen.
- A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.
- A description of the likely significant effects of the development on the environment – this should cover direct effects but also any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects. Effects should relate to the existence of the development, the use of natural resources and the emissions from pollutants. This should also include a description of the forecasting methods to predict the likely effects on the environment
- A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.
- A non-technical summary of the information.
- An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

It will be important for any assessment to consider the potential cumulative effects of this proposal, including all supporting infrastructure, with other similar proposals and a thorough assessment of the 'in combination' effects of the proposed development with any existing developments and current applications. A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

2. **Biodiversity and Geology**

2.1. Ecological Aspects of an Environmental Statement

Natural England advises that the potential impact of the proposal upon features of nature conservation interest and opportunities for habitat creation/enhancement should be included within this assessment in accordance with appropriate guidance on such matters. Guidelines for Ecological Impact Assessment (EcIA) have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) and are available on their website.

EcIA is the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components. EcIA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal.

The National Planning Policy Framework (NPPF) sets out guidance in S.118 on how to take account of biodiversity interests in planning decisions and the framework that local authorities should provide to assist developers.

2.2. Internationally and Nationally Designated Sites

Natural England undertakes an initial assessment of all development consultations, by determining whether the location to which they relate falls within geographical 'buffer' areas within which development is likely to affect designated sites. The proposal is located outside these buffer areas and therefore appears unlikely to affect an Internationally or Nationally designated site.

However, it should be recognised that the specific nature of a proposal may have the potential to lead to significant impacts arising at a greater distance than is encompassed by Natural England's buffers for designated sites. The ES should therefore thoroughly assess the potential for the proposal to affect designated sites, including Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites and Sites of Special Scientific Interest (SSSI). Should the proposal result in an emission to air or discharge to the ground or surface water catchment of a designated site then the potential effects and impact of this would need to be considered in the Environmental Statement

Local Planning Authorities, as competent authorities under the provisions of the Conservation of Habitats and Species Regulations 2010 (the 'Habitats Regulations), should have regard to the Habitats Regulations Assessment process set out in Regulation 61 of the Habitats Regulations in their determination of a planning application. Should a Likely Significant Effect on a European/Internationally designated site be identified or be uncertain, the competent authority (in this case the Local Planning Authority) may need to prepare an Appropriate Assessment, in addition to consideration of impacts through the EIA process.

Statutory site locations can be found at www.magic.gov.uk. Further information concerning particular statutory sites can be found on the Natural England website.

2.3. Protected Species

The ES should assess the impact of all phases of the proposal on protected species. Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, groups and individuals; and consideration should be given to the wider context of the site for example in terms of habitat linkages and protected species populations in the wider area, to assist in the impact assessment.

The conservation of species protected by law is explained in Part IV and Annex A of Government Circular 06/2005 *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System*. The area likely to be affected by the proposal should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES.

Natural England has adopted standing advice for protected species. It provides a consistent level of basic advice which can be applied to any planning application that could affect protected species. It also includes links to guidance on survey and mitigation.

Natural England does not hold comprehensive information regarding the locations of species protected by law, but advises on the procedures and legislation relevant to such species.

2.4. Regionally and Locally Important Sites

The ES should thoroughly assess the impact of the proposals on non-statutory sites, for example Local Wildlife Sites (LoWS), Local Nature Reserves (LNR) and Regionally Important Geological and Geomorphological Sites (RIGS). Natural England does not hold comprehensive information on these sites. We therefore advise that the appropriate local biological record centres, nature conservation organisations, Local Planning Authority and local RIGS group should be contacted with respect to this matter.

2.5. Biodiversity Action Plan Habitats and Species

The ES should thoroughly assess the impact of the proposals on habitats and/or species listed in the UK Biodiversity Action Plan (BAP). These Priority Habitats and Species are listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, recently published under the requirements of S14 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act 2006 places a general duty on all public authorities, including local planning authorities, to conserve and enhance biodiversity. Further information on this duty is available in the Defra publication 'Guidance for Local Authorities on Implementing the Biodiversity Duty'.

Government Circular 06/2005 states that BAP species and habitats, 'are capable of being a material consideration…in the making of planning decisions'. Natural England therefore advises that survey, impact assessment and mitigation proposals for Habitats and Species of Principal Importance should be included in the ES. Consideration should also be given to those species and habitats included in the relevant Local BAP.

The record centre for the relevant Local Authorities should be able to provide the relevant information on the location and type of BAP habitat for the area under consideration.

3. **Landscape, Access and Recreation**

3.1. Landscape and Visual Impacts

The consideration of landscape impacts should reflect the approach set out in the *Guidelines for Landscape and Visual Impact Assessment* (Landscape Institute and the Institute of Environmental Assessment and Management, 2013, 3rd edition), the *Landscape Character Assessment Guidance for England and Scotland* (Scottish Natural Heritage and The Countryside Agency, 2002) and good practice. The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England would expect the cumulative impact assessment to include those proposals currently at Scoping stage. Due to the overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.

The assessment should refer to the relevant National Character Areas which can be found on our website. Links for Landscape Character Assessment at a local level are also available on the same page.

3.2. Access and Recreation

The ES should include a thorough assessment of the development's effects upon public rights of way and access to the countryside and its enjoyment through recreation. With this in mind and in addition to consideration of public rights of way, the landscape and visual effects on Open Access land, whether direct or indirect, should be included in the ES.

Natural England would also expect to see consideration of opportunities for improved or new public access provision on the site, to include linking existing public rights of way and/or providing new circular routes and interpretation. We also recommend reference to relevant Right of Way Improvement Plans (ROWIP) to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced.

4. **Land use and soils**

Impacts from the development should be considered in light of the Government's policy for the protection of the best and most versatile (BMV) agricultural land as set out in paragraph 112 of the NPPF. We also recommend that soils should be considered under a more general heading of sustainable use of land and the valuing of the ecosystem services they provide as a natural resource in line with paragraph 109 of the NPPF.

Soil is a finite resource that fulfils many important functions and services (ecosystem services) for society; for instance as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution. It is therefore important that the soil resources are protected and used sustainably. The Natural Environment White Paper (NEWP) *'The Natural Choice: securing the value of nature'* (Defra, June 2011), emphasises the importance of natural resource protection, including the conservation and sustainable management of soils and the protection of BMV agricultural land.

Development of buildings and infrastructure prevents alternative uses for those soils that are permanently covered, and also often results in degradation of soils around the development as result of construction activities.

This affects their functionality as wildlife habitat, and reduces their ability to support landscape works and green infrastructure. Sealing and compaction can also contribute to increased surface run-off, ponding of water and localised erosion, flooding and pollution.

Defra published a Construction Code of Practice for the sustainable use of soils on construction sites (2009). The purpose of the Code of Practice is to provide a practical guide to assist anyone involved in the construction industry to protect the soil resources with which they work.

As identified in the NPPF new sites or extensions to new sites for Peat extraction should not be granted permission by Local Planning Authorities or proposed in development plans.

General advice on the agricultural aspects of site working and reclamation can be found in the Defra Guidance for successful reclamation of mineral and waste sites.

5. Air Quality

Air quality in the UK has improved over recent decades but air pollution remains a significant issue; for example over 97% of sensitive habitat area in England is predicted to exceed the critical loads for ecosystem protection from atmospheric nitrogen deposition (England Biodiversity Strategy, Defra 2011). A priority action in the England Biodiversity Strategy is to reduce air pollution impacts on biodiversity. The planning system plays a key role in determining the location of developments which may give rise to pollution, either directly or from traffic generation, and hence planning decisions can have a significant impact on the quality of air, water and land. The assessment should take account of the risks of air pollution and how these can be managed or reduced. Further information on air pollution impacts and the sensitivity of different habitats/designated sites can be found on the Air Pollution Information System (www.apis.ac.uk). Further information on air pollution modelling and assessment can be found on the Environment Agency website.

6. Climate Change Adaptation

The England Biodiversity Strategy published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. The ES should reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained. The NPPF requires that the planning system should contribute to the enhancement of the natural environment "by establishing coherent ecological networks that are more resilient to current and future pressures" (NPPF Para 109), which should be demonstrated through the ES.

ES Volume II: Technical Appendices

Appendix 6.1: Legislative and Planning Policy Context

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Legislative and Planning Policy Context

6.1 This policy review considers the relevant local, sub-regional and national planning policies, helping to form a clear understanding of the strategic regeneration aspiration for Cherwell and the wider sub-regional area.

National Planning Policy

National Planning Policy Framework (2012)

6.2 The NPPF (2012) is an important material consideration in the determination of planning applications. At the heart of the NPPF is a presumption in favour of sustainable development and paragraph 14 states that development proposals that accord with the development plan should be approved without delay. Where the development plan is absent, silent or relevant policies are out-of-date, permission should be granted unless *'any adverse impacts of doing so would significantly and demonstrably outweigh the benefits'*.

6.3 Paragraph 17 identifies a set of core land-use planning principles which should underpin plan-making and decision-taking, including:

- Proactively drive and support sustainable economic development to deliver homes, business and industrial units, infrastructure and thriving local places that the country needs; and
- Always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings.

Local Planning Policy

Cherwell Local Plan Part 1 (2015)

6.4 The vision for Cherwell District over the plan period is:

> *"By 2031, Cherwell District will be an area where all residents enjoy a good quality of life. It will be more prosperous than it is today. Those who live and work here will be happier, healthier and feel safer."*

6.5 As part of this key focus include creating a sustainable economy including through supporting sustainable rural economy, maintaining and improving town centres and creating sustainable communities. The plan identifies key challenges to achieving a sustainable local economy in Cherwell, these include:

- The 'knowledge economy' needs to grow;
- New employment sites are needed to meet modern business needs;
- Urban centres and existing employment areas need improving to retain and attract business;
- There is insufficient diversity in the local economy; and
- An overdependence on a declining number of manufacturing jobs exists.

6.6 Five Strategic Objectives (SO) are identified for developing a sustainable local economy. The most relevant of these includes SO1, which seeks to facilitate economic growth and employment, in addition to a more diverse local economy with emphasis on higher technology industries. SO3 aims to help disadvantaged areas, support an increase in skills and innovation, improve the built environment and make Cherwell more attractive to businesses by supporting regeneration.

6.7 Section B of the Cherwell Local Plan sets out policies for development in Cherwell across three themes. Theme one outlines five polices for developing a sustainable local economy. Policy SLE 1 provides guidance on economic development in Cherwell and seeks to retain and protect existing employment sites, directing employment proposals to Bicester, Banbury and Kidlington,

6.8 Policy SLE 2 directs retail and other main town centre uses towards Banbury, Bicester and the village centre of Kidlington to support dynamic town centres. Policy SLE 3 supports growth in Tourism, whilst Policy SLE 4 and Policy SLE 5 seek to improve transport and connections and provide guidance on High Speed Rail 2, respectively.

6.9 These policies directly address the Strategic Objectives and identified key challenges to achieving a sustainable local economy in Cherwell.

Local Plan Saved Policies (2007)

- The Cherwell Local Plan Saved Policies document is significantly dated, covering the period up to 2001. There is noticeably less focus on sustainable development, with the principle objective of the plan to ensure the "maintenance of a strong local economy and the creation of jobs to ensure full employment of the residents of the district".
- Three of the five original employment policies remain saved which focus on employment allocations and employment in the smaller Cherwell villages and rural areas.

South East Midlands Local Enterprise Partnership Strategic Economic Plan (2014)

6.10 The Plan provides the Strategic Economic Plan for the South East Midlands (SEM), a national growth area spanning 11 local authorities and comprising around 1.7m people.

6.11 The vision for this plan is

> *"To reinforce and develop the South East Midlands as one of the most innovative, successful and high performing economies in England by 2020."*

6.12 Eight strategic objectives are set out, with a focus on business productivity, skills, domestic and internal markets and infrastructure. The plan seeks to create economic success through combining the resources of social, private and public sector partners.

6.13 The Strategic Economic Plan (SEP) outlines that the key focus of the SEP is to reinforce and develop the SEM as one of the most innovative, successful and high performing economies in England by 2020. Additionally, SEMLEP seeks to accommodate a population increase of 151,400 through housing and employment delivery, resulting in gross value added rising by an estimated £10.8 billion above the current level of £38.6 billion by 2020/21.

6.14 The SEMLEP has a number of key aims that it seeks to achieve by 2020, as outlined at page three of the SEP Summary Document, namely:

- Build 24,400 new homes;
- Deliver 41,500 net new jobs;
- Attract and create 9,700 new businesses;
- Grow existing businesses;
- Increase inward investment from overseas and expand foreign trade;
- Increase the number of apprenticeships by 94,000 by 2020;
- Invest around £260m of public and private money in key strategic infrastructure projects; and

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- Raise the economic profile of SEMLEP, both nationally and internationally.

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Appendix 6.2: Baseline Conditions

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Socio-economic Baseline Conditions

6.1 The baseline assessment has been prepared through a desktop analysis of economic and social conditions, across a wide range of socio-economic indicators. The main thematic areas considered within the baseline assessment are as follows:

- Population and demographic change;
- Economic activity;
- Education and skills;
- Housing;
- Health conditions; and
- Deprivation and poverty.

Population and demographic change

6.2 The latest 2017 population estimates for the local impact area is 31,429, comprising 15,881 females and 15,546 males[1].

6.3 The 2017 population estimate district impact area of Cherwell (district impact area) is around 147,900[1]. This is an increase of 2,300 from the 2015 Cherwell mid-year population estimate, which stood at 145,600[2].

6.4 59.72% of Cherwell population are of working age (16 to 64 years). This is notably lower than the figure for the local impact area of 63.11%, but more comparable to the regional impact area (60.31%) and the national average of 60.21%.

6.5 As well as a higher than average proportion of working age people, the local impact area has a significantly lower proportion of the population who are of retirement age (15.45%), over 5% lower than the figure for Cherwell (20.52%) and the national average (20.89%)[1].

6.6 In line with national trends, the population of Cherwell has been increasing steadily over the past 12 years. The population in Cherwell increased by 6,600 in the period 2010-2017[1] [2].

6.7 The estimated 2017 population for Cherwell is approximately 147,900, this is up from the 2015 of 145,600 and the 2010 figure of 141,300[2], as outlined in Table 6B.1 below.

Table 6B.1 Population trends in Cherwell and the UK 2000 – 2017[1]

Year	Cherwell population	UK population
2005	135,000	58,685,500
2010	141,300	60,954,600
2015	145,600	63,258,400
2017	147,900	66,031,700

6.8 Between 2006 and 2010, it is estimated that 5,619 people migrated into Cherwell. Of these, 53% were workers and a further 18% were internal migrants from within the UK. This is a low level of migration when compared to other local authorities within the SEMLEP (regional impact area). For example, during the same period, Luton Borough Council had an influx of migrants more than four times as high as Cherwell (a total of 24,000). However, 41% of Luton's migrants were students compared to 13% of those migrating into Cherwell. The lower levels of migration into Cherwell may reflect there not being a university within the local authority[3].

6.9 The population of Cherwell is predicted to increase to 153,000 by 2021, representing an increase of 7,400, or 4.8%, from the 2015 figure of 145,600[4].

Economic activity

6.10 In 2011, 75.68% of Cherwell's working age population was economically active. This is comparable to the regional impact area figure of 73.91% (4.07% of which were unemployed), but considerably higher than the national average of 69.53%[1].

6.11 In 2011, only 2.64% of the local impact area's economically active population were unemployed and 0.91% long-term unemployed, which is comparable to the Cherwell (2.84% and 0.91% respectively). These figures are notably lower than in the regional impact area, where 4.07% of the economically active population were unemployed (1.54% long-term) and across England and Wales, where 4.43% were unemployed, of which 1.74% were long-term[1].

6.12 In 2017, 0.6% of Cherwell's population were claiming out of work benefits, which is significantly lower than the regional impact area (1.6%) and the Great Britain average (2%)[5].

6.13 In 2015, across Cherwell, there was 82,000 jobs, at a density of 0.89 which is slightly higher than the rate across the UK of 0.83[5]. Jobs density represents the ratio of total jobs to the working population aged 16-64 years. For example, a job density of 1.0 would mean that there is one job for every resident aged 16 to 64, meaning there is a better job density at the district impact level than the national average.

6.14 Within Cherwell, the following sectors/clusters are particularly important for the local economy: low carbon, green technologies, automotive manufacturing and motor-sport, nanotechnology, bio-medical and bio-tech.[6]

6.15 This is also demonstrated by the 2011 Census, which showed that 16.66% of the population were engaged in professional occupations, 13.11% in associate professional and technical occupations and 11.76% in skilled trades in Cherwell[7]. In comparison, the local impact area had only 15.53% of the population working in professional occupation, compared to the national average of 17.34%. However, the local impact area has a higher than average proportion of the population working in sales and service occupations (10.35%) compared to district (8.78%), regional (8.07%) and national average (8.56%)[7].

[1] Pitney Bowes (2017) GeoInsight,
[2] Office for National Statistics (2015) Mid-year Population Estimates
[3] East of England Local Government Association (EELGA) (2011) Migrant Labour in the South East Midlands Local Enterprise Partnership Area
[4] Office for National Statistics (2016) Population Predictions for Local Authorities
[5] National Online Manpower Information Service (NOMIS) (2017) Labour Market Profile – Cherwell
[6] SEMLEP (2014) Evidence Base for the Strategic Economic Plan
[7] Office for National Statistics (2011) 2011 Census

6.16 In 2016, the average gross weekly pay for full time workers in Cherwell was £582, which is 7% higher than the national average of £541 per week[5].

6.17 However, the gender-wage gap in Cherwell is significantly worse than the national average with females earning an average full time weekly wage of £476.90, which is 24% less than the average earning of a male in Cherwell (£627.80). In comparison, females earn on average 17% less than males across the UK[5].

6.18 The average weekly wage for part time workers in Cherwell is also higher than the national average, with a weekly wage of £184.20 compared to £177.40 across the UK[5].

Education and skills

6.19 Table 6B.2 below outlines the qualification levels for people across all the impact areas. The proportion of those with no qualifications is lowest at the local impact area (17.51%), but both the district and regional impact areas also have a lower proportion of people with no qualifications (19.69% and 20.35% respectively) compared to the national average of 23.19%[1].

6.20 The district impact area has the highest proportion of those with higher qualifications (level 4 and above) at 28.06%, with the local (26.24%) and regional (26.6%) both lower than the national average of 27.02%[1].

6.21 Therefore, although the local impact area has the lowest level of those with no qualifications, it also has a lower proportion of people with higher qualification, with a higher proportion of people with level 1, 2 and 3 qualification than the wider geographies[1].

Table 6B.2 Qualifications levels across the impact areas (2011 Census)[1]

Qualification level	Local Impact Area	District Impact Area	Regional Impact Area	National Level
No qualifications	17.51%	19.69%	20.35%	23.19%
Low – Level 1	16.97%	15.17%	14.89%	14.08%
Level 2	12.75%	11.65%	11.90%	12.12%
Level 3	16.79%	15.82%	16.19%	15.16%
High – Level 4 and above	26.24%	28.06%	26.60%	27.02%
Other qualification	5.59%	5.49%	6.16%	5.13%

Housing

6.22 The 2011 Census revealed that the most common housing tenure at all the impact area geographies was for people to own their properties, with a mortgage or a loan. All three impact areas had a higher proportion of the population who own their own home with a mortgage or loan than the national average of 32.87%, with the highest proportion in the local impact area (47.13%)[1].

6.23 Conversely, the local impact area had the fewest number of households which owned their property outright at 24.22%, this is 6.65% lower than the district impact areas and 6.39% lower than the national average[1].

6.24 Although there is a comparable level of households privately rented from a landlord or letting agency across all geographies, there is a significantly lower proportion of people socially renting from the local authority at the local and district impact areas, both over 7% lower than the national average of 9.84%[1]. However, there was a higher proportion of households in other social rented accommodation at these impact areas (9.6%) compared to the national picture (8.31%)[1].

Table 6B.3 Housing tenure proportions across all impact areas[1]

Housing tenure	Local Impact Area (%)	District Impact Area (%)	Regional Impact Area (%)	National Level (%)
Owned outright	24.22	30.87	28.35	30.61
Owned with a mortgage or loan	47.13	38.41	38.05	32.87
Private landlord or letting agency	14.31	14.64	14.42	14.84
Private rented: Other	0.94	1.59	1.36	1.42
Shared ownership	0.55	0.78	1.61	0.73
Social rented: Other	9.60	9.55	7.63	8.31
Social rented: Rented from council	2.26	2.56	7.37	9.84

6.25 In Cherwell in 2014, the medium house price was £245,000 this was up £25,000 (or 10.2%) from the 2013 average price of £220,000[8]. In comparison, the average house price across England in 2014 was £198,000[9]. As such, the average house price in Cherwell was 19.2% higher than the national average in 2014[8].

6.26 The ratio of median house prices to gross annual workplace based earnings for Cherwell in 2015 was 8.92. This means the average house price was 8.92 times than the average annual earnings[9].

6.27 The Strategic Housing Market Assessment for Cherwell and surrounding authorities was undertaken in 2007 and a further review and update was undertaken in 2012. This updates previous assessments and helps identify the correct level of future housing provision.

6.28 The SHMA sets out that there were 58,690 households in Cherwell in 2006, and this is expected to increase to 74,712 households in 2031[10]. This is a net increase of 1.1% households, or an annual average change of 641 households over the 25 year period[10] .

Health conditions

6.29 Overall, the health of people in Cherwell is varied in computation to the England average.

6.30 Figure 6B.1 below shows the life expectancy for both men and women in Cherwell for 2012-2014. Each chart is divided into deciles by deprivation with the most deprived decile being on the left and the least deprived decile on the right. The steepness of the slope represents the inequality in life expectancy that is related to deprivation in Cherwell. If there were no inequality as a result of deprivation, the line would be horizontal.

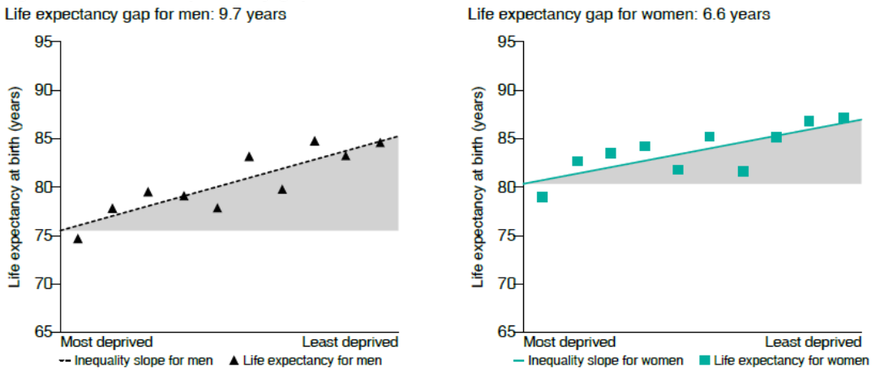
6.31 For adults, life expectancy for both men and woman is slightly higher than the England average, male life expectancy in Cherwell is 80.2 years compared to 79.5 across England[11]. However, there is still a significant inequality in life expectancy for men and women in the most deprived areas of the local authority compared to

[8] Office for National Statistics (2015) House Price Statistics for Small Areas, 1995 to 2014

[9] Office for National Statistics (2015) Ratio of House Prices to Earnings by Local Authority District
[10] Cherwell District Council (2012) Strategic Housing Market Assessment
[11] Public Health England (2016) Cherwell Health Profile, 2016

the least deprived areas. Life expectancy for men is 9.7 years longer in the least deprived areas compared to the most deprived. This gap is slightly lower for women but still stands at a 6.6 year difference[11].

Figure 6B.1 – Life expectancy gaps in Cherwell 2011-2013[11]



6.32 Rates of infant mordantly in Cherwell are significantly lower than the national average with rates of deaths in infants aged under one year at 2.2 per 1,000 live births in Cherwell between 2012 and 2014 compared to 4.0 across England[11].

6.33 The 2011 Census included a question that asked people to describe their general health over the preceding 12 months, by ranking their health from 'very good' to 'very bad'. Although a subjective method, this helps to identify the perceived health of the population of the local area in which the site is located.

6.34 The 2011 Census self-assessment results illustrate that just over half of residents in both the local (52%) and district (50.3%) impact areas consider themselves to be in very good health[7]. The figure for the regional impact area is not as high at 48.5%, but is still higher than the national average of 46.6%[7].

6.35 Additionally, only 3.4% of people at the local and 3.8% at the district impact areas considered their health to be bad or very bad in 2011 compared to 5.6% across the nation as a whole[7]. Further information is provided below in Table 6B.4.

Table 6B.4 2011 Census self-assessment of general health[7]

Self-assessment of health	Local Impact Area (%)	District Impact Area (%)	Regional Impact Area (%)	National Level (%)
Very good health	52.0	50.3	48.5	47.6
Good health	34.7	34.7	35.4	33.6
Fair health	10	11.2	11.8	13.2
Bad health	2.7	3.0	3.3	4.3
Very bad health	0.7	0.8	0.96	1.3

Deprivation and poverty

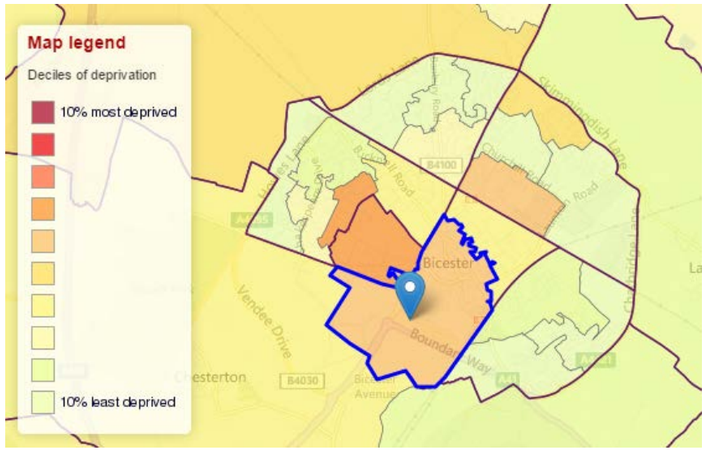
6.36 The English Indices of Deprivation (EID 2015) enable comparisons to be made for a range of deprivation indicators at the small area level. The small areas, or neighbourhoods, are known as lower level super output areas (LSOAs) which on average contain around 1,500 people. There are 32,844 of these neighbourhoods across England as a whole[12].

6.37 The EID 2015 provides an overall index of multiple deprivation which is based on seven separate deprivation domains. Each deprivation domain is weighted, as shown below:

- **Income deprivation** – with a weighting of 22.5%;
- **Employment deprivation** – with a weighting of 22.5%;
- **Health deprivation and disability** – with a weighting of 13.5%;
- **Education, skills and training deprivation** – with a weighting of 13.5%;
- **Barriers to housing and services** – with a weighting of 9.3%;
- **Crime** – with a weighting of 9.3%; and
- **Living environment deprivation** – with a weighting of 9.3%.

6.38 There are 19 of these LSOAs within the local impact area and 93 within the district impact area of Cherwell. The application site falls within Cherwell 015D which is ranked 15,783 out of 32,844 LSOAs in England (where 1 is the most deprived) on the IMD[12]. This makes it amongst the 50% most deprived neighbourhoods in England (see Figure 6B.2 below).

Figure 6B.2 – Index of Multiple Deprivation[13]



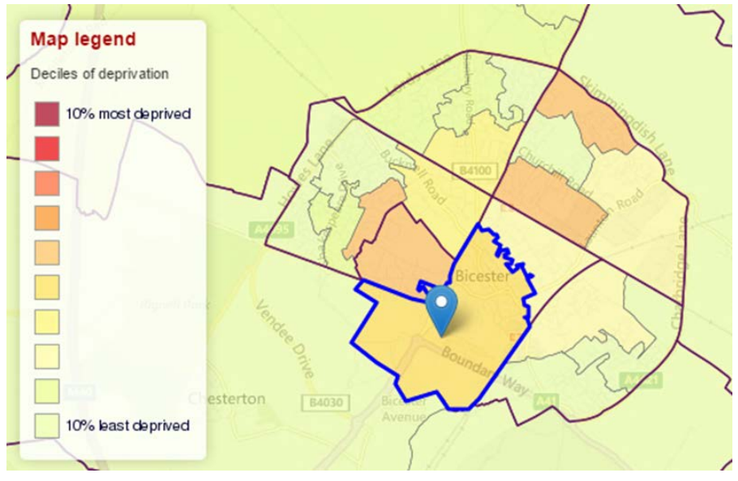
6.39 In general, within the local impact area levels of income deprivation are around average compared to the

[12] Department for Communities and Local Government (2015) English Indices of Deprivation

[13] Department for Communities and Local Government (2015) Indices of Deprivation Explorer

national picture. Four LSOAs are within the 50% most deprived range and the remaining 15 LSOAs in the local impact area in the 50% least deprived or better.

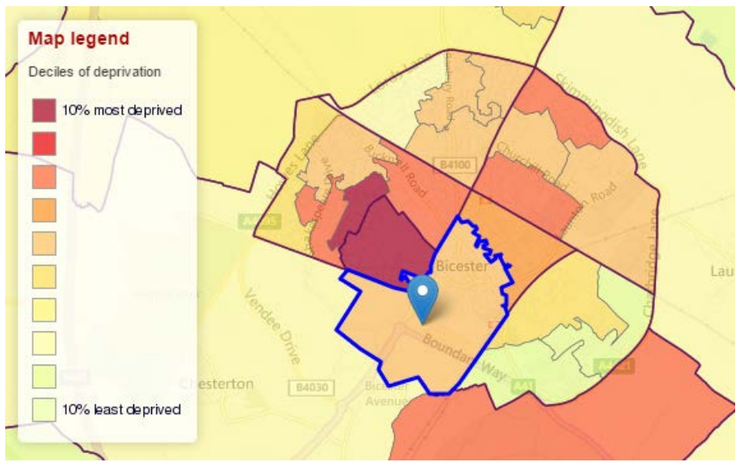
Figure 6B.3 Income Deprivation Domain Results for Bicester[13]



6.40 There is a similar picture for employment deprivation in Bicester, with all but three LSOAs being among the 50% least deprived areas in England or better[12].

6.41 Levels of education, skills and training deprivation are, on average worse in the local impact area LSOAs compared to the national average, with two LSOAs being among the 10% most deprived areas in England[12].

Figure 6B.4 Education, Skills and Training Domain Results for Bicester[13]



Key messages

6.42 The key messages from the assessment of baseline conditions are as follows:

- **Population** – There is a higher proportion of working age people and a lower proportion of people of retirement age within the local impact area compared to the national average. However, the same figures for Cherwell are more comparable to the national average;
- **Housing** – Average house prices are significantly higher within the district impact area compared to the national average, yet more people still own their own home either outright or with a mortgage than the national average;
- **Employment** – A high proportion of the working age population in Cherwell are economically active, with good levels of job density and lower levels of unemployment and benefit claimants compared to the national average;
- **Health conditions** – Although health in Cherwell is generally better than the national average, there is a large gap between the life expectancy of people living in the most deprived and the least deprived parts of the local authority; and
- **Deprivation** – The local impact area is mixed with regard to deprivation, with a predominately better than average picture for employment and income deprivation but worse than average representation for education and skills deprivation.

ES Volume II: Technical Appendices

Appendix 7.1: Transport Assessment (TA)

Bicester Office Park,
Bicester

Transport Assessment

For

Scenic Land Developments Ltd

Document Control Sheet

Transport Assessment

Bicester Office Park, Bicester

Scenic Land Developments Ltd

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
23/08/2017	Draft	KL	DL
13/09/2017	Final	KL	DL
27/09/2017	Final Rev A	KL	DL
09/10/2017	Final Rev B	KL	DL
15/12/2017	Final Rev C	KL	DL

Motion
8 Duncannon Street
London
WC2N 4JF
T 020 7031 8141
F 020 7031 8101
E info@motion.co.uk
W www.motion.co.uk

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Figures

Appendices

1.0 Introduction

1.1 Motion has been appointed by Scenic Land Developments Ltd to prepare this Transport Assessment in relation to development proposals on land to the east of the A41 Oxford Road, Bicester within the administrative boundary of Cherwell District Council (CDC).

1.2 The site is currently undeveloped and is bound by the A41 Oxford Road to the west and Lakeview Drive to the north whilst Wyevale Garden Centre is located to the immediate south. The Bicester – Oxford railway line operates to the east and is separated from the site by undeveloped land.

1.3 The proposals comprise the redevelopment of the site to form up to 60,000 square metres (GEA) of B1(a)/B1(b) office space along with associated parking and landscaping. Vehicle access to the site would be via the two existing roundabout junctions on Lakeview Drive.

Site History

1.4 Outline planning permission was granted in 2010 for the construction of a 60,000-square metre office park comprising 53,000 square metres of B1(a)/B1(b) office space and a 7,000-square metre C1 hotel, served by circa 1,837 car parking spaces (Planning Ref: 07/01106/OUT).

1.5 Detailed planning consent was subsequently granted in November 2013 for the construction of a Tesco food store of 8,135 square metres and petrol filling station on part of the consented office park site (Planning Ref: 12/01193/F). That planning application was supported by a Transport Assessment which considered the effect of the development proposals on the highway network local to the site. The Tesco store has since been constructed and opened in April 2016.

1.6 The S106 Deed of Variation in relation to the consented Tesco store and office park allows for the construction of up to 45,000 square metres of the B1(a)/B1(b) office space being delivered on the remainder of the site, as part of the previous outline planning consent for an office park.

Development Proposals

1.7 The current planning application seeks outline planning consent, with all matters reserved except access, for the development of up to 60,000 square metres (GEA) of B1(a)/B1(b) office space. The development would be accessed from Lakeview Drive via two existing roundabout junctions.

1.8 The current development proposals would supersede and replace the previous outline consent for an office park on the site. In comparison with the previous outline planning consent for an office park on the site, the current site area excludes the portion of the site, north of Lakeview Drive, which has since been developed for a Tesco store. However, the site area now includes a parcel of land along the frontage of the A41 Oxford Road, south of Lakeview Drive, which was previously not within the applicant's ownership and was not part of the previous outline planning consent for an office park.

Report Structure

1.9 This Transport Assessment has been prepared in accordance with national and local guidance and considers the highways and transport matters associated with the current development proposals and, in particular, the effect of the development proposals on the highway network local to the site.

1.10 A formal pre-application submission was made to Oxfordshire County Council (OCC) in April 2017 and a pre-application response was received from OCC in May 2017. A copy of the pre-application response is attached at **Appendix A**.

1.11 This Transport Assessment has been prepared with reference to the pre-application response received from OCC and addresses the matters identified within that response.

1.12 A Framework Travel Plan has been prepared in association with the development proposals and this is submitted alongside the planning application, under separate cover.

1.13 Following this introduction, the remainder of this report comprises the following:

- Section 2 outlines the transport planning policies that are considered pertinent to this application;
- Section 3 considers the existing use of the site and reviews the accessibility by all modes of transport;
- Section 4 provides an overview of the proposed development;
- Section 5 details the assessment methodology and the trip attraction of the development proposals;
- Section 6 outlines the results of the junction modelling undertaken; and,
- Section 7 summarises the key findings and conclusions of the report.

2.0 Policy Context

2.1 This section summarises the relevant transport policy documents against which the development proposals would be considered at a national, regional and local level. The most relevant policy documents relating to this study are detailed below:

- National Planning Policy Framework (March 2012);
- Oxfordshire Local Transport Plan 2015-2031 (July 2015); and,
- Cherwell Local Plan 2011-2031 (re-adopted December 2016).

National Planning Policy

National Planning Policy Framework (March 2012)

2.2 The National Planning Policy Framework (NPPF) was published in March 2012, and replaces the previous national planning policies that were set out in the various Planning Policy Guidance Notes / Statements. With regard to transport, the NPPF replaces policy contained within PPG13 (Transport).

2.3 The NPPF sets out a presumption in favour of sustainable development that recognises the importance of transport policies in facilitating sustainable development, and that planning decisions should have regard to local circumstances. In this regard, paragraph 29 of the NPPF states that:

2.4 "*The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.*"

2.5 Paragraph 32 states that:

"Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."

2.6 In order to promote opportunities for the use of sustainable travel, the NPPF advises that:

- *"..developments should be located and designed where practical to accommodate the efficient delivery of goods and supplies;*
- *give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;*
- *create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;*
- *Incorporate facilities for charging plug-in and other ultra-low emission vehicles; and consider the needs of people with disabilities by all modes of transport."*

Local Planning Policy

Cherwell Local Plan 2011-2031 (December 2016)

2.7 The Cherwell Local Plan is the key planning policy document within the district and sets out the overarching planning policies upon which planning applications will be determined.

2.8 Policy SLE 4 considers transport and connections and states:

"*All development where reasonable to do so, should facilitate the use of sustainable modes of transport to make the fullest possible use of public transport, walking and cycling. Encouragement will be given to solutions which support reductions in greenhouse gas emissions and reduce congestion. Development which is not suitable for the roads that serve the development and which have a severe traffic impact will not be supported.*"

2.9 The current application site is allocated within the Cherwell Local Plan under Policy Bicester 4 which sets out:

"*… This site to the south west of Bicester, bounded by the A41 to the north and west, is proposed for employment generating development in the form of a high-quality office scheme.*

2.10 It is further stated in paragraph C.65 that:

"There is a sustainable opportunity for the provision of strategic employment space to the south of Bicester Town Centre and adjoining the A41. The Bicester Business Park site has planning permission for a 60,000m2 business park incorporating offices (B1) and hotel (C1) use. This development area is located immediately to the east of the South West Bicester (Kingsmere) urban extension, less than 1 km from Bicester Village Railway Station and close to major retail uses and town centre facilities. The site has immediate access to the strategic highway network (Oxford-Aylesbury) with Junction 9 of the M40 motorway situated about 3 km to the south. Major growth is planned nearby with the redevelopment of Graven Hill (Policy Bicester 2: Graven Hill, phase 2 of the South West Bicester extension (Policy Bicester 3: South West Bicester Phase 2 and the expansion of the centre of the town."

Summary

2.11 It is evident that the policies set out within the NPPF and the Cherwell Local Plan focus on a presumption in favour of sustainable development and that development should only be resisted or refused on transport grounds where residual impacts of development are severe.

2.12 Furthermore, the application site is allocated for office use within the Cherwell Local Plan, confirming that the principle of office development is appropriate and in accordance with local planning policies.

3.0 Baseline Conditions

3.1 The site is located to the east of the A41, Oxford Road, and to the west of the Bicester – Oxford railway line. Both Bicester Village and town centre are located to the north of the site. The surrounding land uses comprise predominantly residential and retail uses with undeveloped land located to the east of the site.

3.2 The site location in relation to the surrounding area is shown in **Figure 3.1**.

Local Highway Network

3.3 Lakeview Drive forms the northern boundary of the site and the site would be accessed from Lakeview Drive via two existing roundabout junctions. The two existing roundabouts on Lakeview Drive, at the eastern end of Lakeview Drive and centrally on Lakeview Drive, currently include a southern arm on each roundabout which would form the vehicle accesses to the site. The roundabout at the eastern end of Lakeview Drive also provides access to the Tesco service yard while the central roundabout on Lakeview Drive also provides customer access to the existing Tesco store. At its western end, Lakeview Drive connects via the signalled controlled junction with the A41 Oxford Road. The A41 Oxford Road runs on a broadly north-south alignment and connects north to Bicester town and south to the M40.

3.4 North-east of the application site the A41 Oxford Road connects with the A41 at a junction known as the Esso roundabout. From the Esso roundabout, the A41 connects east towards Aylesbury. North of the Esso roundabout, Oxford Road connects north towards Bicester town centre.

3.5 As part of the consented development proposals for Bicester Village Phase 4 and the constructed Tesco store a significant package of highway works was approved and is currently under construction. The highway works included improvements to the Oxford Road junctions with Pingle Drive, Esso roundabout and Lakeview Drive.

3.6 Planning consent has recently been granted for a retail park scheme, known as 'Bicester Gateway Retail Park' on a site to the west of the A41 Oxford Road (Planning Ref: 16/02505/OUT). The consented development proposals at Bicester Gateway Retail Park include further improvements to the A41 junctions with Lakeview Drive and the Kingsmere development. The consented highway improvements associated with Bicester Gateway Retail Park also include the provision of a new bus stop and lay-by on the A41 Oxford Road just south of Lakeview Drive, directly adjacent to the current application site.

3.7 In addition, planning consent has recently been granted for a business park scheme known as 'Bicester Gateway Business Park' to the south of the current application site (Planning Ref: 16/02586/OUT). The consented development proposals at Bicester Gateway Business Park included improvements to the conventional roundabout junction between the A41 and Vendee Drive.

3.8 The Rodney House roundabout is situated to the north-east of the application site at the junction between the A41, the A4421 and London Road and currently forms a conventional roundabout. As part of consented development proposals at Graven Hill it is proposed that the Rodney House roundabout is upgraded to a signal controlled roundabout and it is understood that these works are scheduled to commence later this year.

Sustainable Transport Accessibility

3.9 It is generally accepted that walking and cycling provide important alternatives to the private car, and should also be encouraged to form part of longer journeys via public transport. Indeed, it is noteworthy that the Institution of Highways and Transportation (IHT) has prepared several guidance documents that provide advice with respect to the provision of sustainable travel in conjunction with new developments. Within these documents it is suggested that:

- Most people will walk to a destination that is less than one mile (Planning for Walking, 2015);

- The bicycle is a potential mode of transport for all journeys under five miles (approximately 8 kilometres) (Planning for Cycling, 2015); and,
- Walking distances to bus stops should not exceed 400 metres, whilst people are prepared to walk twice as far to rail stations (Planning for Walking, 2015).

3.10 The Institution of Highways and Transportation (IHT) 'Guidelines for Providing Journeys on Foot' (2000) suggests acceptable, desirable and preferred maximum walking distances ('acceptable' walking distances would vary between individuals). Table 3.1 summarises the suggested walking distances for pedestrians without mobility impairment for some common trip purposes.

	Town Centres	Commuting / Schools	Elsewhere
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200
Source: 'Providing for Journeys on Foot', IHT, 2000			

Table 3.1 Suggested Walking Distances (metres)

3.11 The following sections consider the opportunities for sustainable travel that are available in the vicinity of the site.

Pedestrian and Cycle Network

3.12 Footways are provided along both sides of Lakeview Drive adjacent to the site and these connect with footway along both sides of the A41 Oxford Road. Signalised pedestrian crossing facilities are provided at the junction between the A41 Oxford Road and Lakeview Drive and these provide a convenient crossing opportunity across both Lakeview Drive and the A41 Oxford Road.

3.13 The highway improvements currently under construction at the A41 Esso roundabout and the A41 junctions with Pingle Drive and the Kingsmere access include signal controlled pedestrian crossing facilities which connect to the wider pedestrian network in the vicinity.

3.14 In addition, the site is well located with regard to local footpaths which offer off-road connections to between the site and local villages including Wendlebury and Chesterton.

3.15 National Cycle Network Route 51 (NCN51), runs alongside the A41 Oxford Road directly past the application site. NCN51 provides a signed cycle route connecting south towards Wendlebury, Kidlington and Oxford. North of the application site, NCN51 connects to Bicester Village and Bicester Town Centre.

3.16 There are further signed cycle routes in the vicinity of the site which operate throughout Bicester as well as connecting to Audley, Poundon and Langford Village.

3.17 **Figure 3.2** summarises the local footpaths and cycle routes in the vicinity of the site.

3.18 It is evident that the pedestrian and cycle facilities in the vicinity of the application site provide connections to local retail opportunities, residential areas and public transport facilities in the vicinity of the site. It is therefore evident that the application site is well placed for future employees and visitors to undertake journeys to and from the site on foot or by cycle.

Public Transport Network

3.19 The nearest bus stop to the site is situated on the A41 Oxford Road northbound, just north of the junction between the A41 Oxford Road and Lakeview Drive. The northbound bus stop is an approximately 120 metre walk from the north-western corner of the application site and is accessible via the existing signal controlled pedestrian crossing facilities at the junction between A41 Oxford Road and Lakeview Drive. The bus stop is served by the S5 and X5 services. The S5 operates every 15 minutes Monday to Friday and every 30 minutes on Saturdays and Sundays between Oxford City Centre and Launton, as well as the Bicester Park & Ride facility. The X5 operates twice an hour on weekdays and hourly on weekends between Cambridge Parkside Bus Station and Oxford City Centre via Milton Keynes Railway Station.

3.20 There is not currently a southbound bus stop directly adjacent to the site. However, as part of highways works associated with the consented development proposals at Bicester Gateway Retail Park a new southbound bus stop and lay-by on the A41 Oxford Road would be provided. The new bus stop would be directly adjacent to the application site on the eastern side of the A41 Oxford Road. It is envisaged that the additional southbound bus stop would also be served by the S5 and X5 services

3.21 Additional bus stops are situated north of the Pingle Drive roundabout, approximately 500 metres north on Oxford Road and these are also served by the S5 and X5 services as well as the No. 26 bus service which provides a circular bus service between Bicester Town Centre, Kingsmere and Oxford Road.

3.22 A further bus stop is located on Pringle Drive approximately 800 metres to the north east and is served by the Bicester Village Shuttle operating towards Bicester North Railway Station.

3.23 The nearest station is Bicester Village Railway Station located approximately 1.4 kilometres to the north east of the site. Bicester Village Station is located on the Oxford to London Marylebone line with services operating in each direction every 30 minutes.

3.24 Bicester North Railway Station is located approximately 1.8 kilometres to the north of the site and offers connections to London Marylebone, Banbury and Birmingham Moor Street and Snow Hill. Services run up to twice per hour in each direction.

3.25 It is evident that the application site is well placed for access to public transport facilities and provides future employees and visitors to the site to undertake journeys by public transport.

Personal Injury Accident Data

3.26 Personal Injury Accident (PIA) data recorded in the immediate vicinity of the site has been obtained for the most recent five-year period available covering 01/07/2012 to 01/07/2017. Full details of the study area and accident records are attached at **Appendix B**. Over his period there were 47 incidents recorded of which 40 resulted in slight injury, 5 in serious injury and 2 resulted in fatality.

3.27 The incident reports in relation to the two incidents which result in a fatality, identify that they were as a result of a failure to judge other vehicle speeds and distraction within the vehicle. As such it is considered that the local highway layout was not a factor in either of these incidents.

3.28 It is noted that only one incident occurred at the junction between the A41 Oxford Road and Lakeview Drive. The report indicates that this incident resulted in slight injury and was caused by a driver disobeying automated traffic signals.

3.29 A review of the remaining accidents indicates that the identified causation factors were predominantly driver error or poor driver behaviour and, as such, are unrelated to the existing design or layout of the highway. As such, it is considered that there are no inherent safety issues associated with the existing highway in the vicinity of the site.

4.0 Development Proposals

4.1 The current planning application seeks outline planning consent, with all matters reserved except access, for the development of up to 60,000 square metres (GEA) of B1(a)/B1(b) office space. Vehicle access to the site would be via the two existing roundabout junctions on Lakeview Drive. The parameters plan of the current outline application is attached at **Appendix C.**

Site History

4.2 As previously highlighted, outline planning permission was granted in 2010 for the construction of a 60,000-square metre office park comprising 53,000 square metres of B1(a)/B1(b) office space and a 7,000-square metre C1 hotel, served by circa 1,837 car parking spaces (Planning Ref: 07/01106/OUT).

4.3 Detailed planning consent was subsequently granted in November 2013 for the construction of a Tesco food store of 8,135 square metres and petrol filing station on part of the consented office park site (Planning Ref: 12/01193/F). That planning application was supported by a Transport Assessment which considered the effect of the development proposals on the highway network local to the site. The Tesco store has since been constructed and opened in April 2016.

4.4 The S106 Deed of Variation in relation to the consented Tesco store and office park allows for the construction of up to 45,000 square metres of the B1(a)/B1(b) office space being delivered on the remainder of the site, as part of the previous outline planning consent for an office park.

Current Planning Application

4.5 The current development proposals seek outline planning consent for the construction of an office park providing up to 60,000 square metres of B1(a)/B1(b) office space.

4.6 The current development proposals would supersede and replace the previous outline consent for an office park on the site. In comparison with the previous outline planning consent for an office park on the site, the current site area excludes the portion of the site, north of Lakeview Drive, which has since been developed for a Tesco store. However, the site area now includes a parcel of land along the frontage of the A41 Oxford Road, south of Lakeview Drive, which was previously not within the applicant's ownership and was not part of the previous outline planning consent for an office park.

Access

4.7 Lakeview Drive forms the northern boundary of the site and vehicle access to the site would be taken from Lakeview Drive via two existing roundabout junctions. The two existing roundabouts on Lakeview Drive, at the eastern end of Lakeview Drive and centrally on Lakeview Drive, currently include a southern arm on each roundabout which would form the vehicle accesses to the site. The roundabout at the eastern end of Lakeview Drive also provides access to the Tesco service yard while the central roundabout on Lakeview Drive also provides customer access to the existing Tesco store.

4.8 Pedestrian footway is currently provided along both sides of Lakeview Drive adjacent to the application site and this extends along the exiting southern arms of the existing roundabout junctions. This footway would provide the main pedestrian access to the site and connects west to existing signal controlled pedestrian crossing facilities at the junction between Lakeview Drive at the A41 Oxford Road. In addition, it is proposed that a further pedestrian access is provided on the western boundary of the site with A41 Oxford Road. The additional pedestrian access would be positioned to coincide with the existing pedestrian crossing facilities on the A41 Oxford Road at its junction with the Kingsmere access, with materials to match with existing, subject to agreement with the local highway authority.

4.9 The proposed access arrangements to the site are summarised at the Highways Access Plan, attached at **Appendix D**.

4.10 Given that the current application is outline, the internal site layout has not been designed at this stage. A parameters plan is attached at **Appendix C**. Full details of the internal site layout including internal road layout and internal pedestrian network will be provided at the reserved matters stage and with consideration of local design guidance.

Parking

4.11 Car parking will be provided in accordance with OCC maximum parking standards. OCC parking standards allow the provision 1 space per 30 square metres of B1 office floor space. The proposed office park will therefore provide 2,000 car parking spaces to serve the development. The proposed car parking provision is in accordance with OCC parking standards and is considered appropriate to meet the needs of the development.

4.12 Traffic Advisory Leaflet 5/95 'Parking for Disabled People' advises that for employment uses providing over 200 car parking spaces, disabled parking should be provided at a ratio of 6 bays plus 2% of total capacity. Disabled parking will be provided in accordance with this guidance and based on the provision of 2,000 car parking spaces it is envisaged that 46 disabled car parking spaces will be provided.

4.13 Cycle parking will be provided in accordance with OCC standards and will provide a mixture of long-stay parking for employees and short stay parking for visitors. For B1 employment use, OCC standards require the provision of 1 cycle parking space per 150 square metres for long stay employee cycle parking and 1 space per 500 square metres for short stay visitor parking. On that basis, a total of 520 cycle parking spaces would be provided on site, comprising 400 long stay spaces and 120 short stay cycle parking spaces.

Servicing and Deliveries

4.14 Servicing and deliveries associated with the development, including refuse collection, will be undertaken on site and off the public highway.

4.15 Given that the current application is outline, the internal site layout has not been designed at this stage. A parameters plan is attached at **Appendix C**. Full details of the internal site layout including internal road layout will be provided at the reserved matters stage and with consideration of local design guidance, vehicle requirements and with swept path analysis where required.

Proposed Highways Works

4.16 Following an assessment of the effect of the development proposals on the highway network local to the site, highway mitigation works have been identified at two junctions, namely; the A41 Oxford Road/ Lakeview Drive junction and the Oxford Road/ Middleton Stoney Road junction.

4.17 Further details of the assessment of the development proposals on the local highway network and the proposed off-site highways works are detailed at Section 6 of this Transport Assessment and drawings showing the proposed highway mitigation works are provided at **Appendix G**.

4.18 The assessment has concluded that, subject to the identified highway mitigation works, the development proposals would not result in a material effect on the operation of the highway network local to the site. As such, no further mitigation measures or Section 106 obligation towards further transport schemes, such as the South Eastern Perimeter Road (SEPR), are considered necessary or justified in planning terms.

5.0 Assessment Methodology and Trip Attraction

5.1 This section of the report considers the expected trip attraction of the development proposals and the methodology for assessing the effect of the development proposals on the highway network local to the site.

Scope of Assessment

5.2 As part of pre-application scoping discussions, Officers at OCC have requested that the following junctions be assessed as part of the Transport Assessment:

- Oxford Road (A41) / Lakeview Drive signalised junction;
- Oxford Road / A41 signalised roundabout;
- Oxford Road / Pingle Drive roundabout;
- Oxford Road / Middleton Stoney Road mini-roundabout;
- Oxford Road (A41) / Kingsmere signalised junction;
- A41 Oxford Road/ Vendee Drive; and
- A41/ A4421 Rodney House Roundabout.

5.3 As previously identified, highway improvement works are currently under construction at a number of the junctions listed above. In addition, further highway improvement works are consented at some junctions listed above in association with recently consented development proposals. The highway capacity assessment undertaken within this Transport Assessment considers the consented junction improvements at the junctions listed above.

Baseline Traffic Flows, Consented Developments & Assessment Periods

5.4 As part of the pre-application scoping discussions Officers at OCC have requested that the assessment of the highway network local to the site be undertaken using traffic flow information provided from the Bicester Transport Model (BTM).

5.5 The BTM is based on a future assessment of 2026, 9 years in advance of the current application submission date. The assessment of a future baseline year 9 years after the submission of a planning application is considered a robust assessment of the local highway network. OCC have confirmed that the outputs from the BTM include all development expected to come forward in that period.

5.6 OCC have provided outputs from the BTM for the weekday morning and evening peak hours. BTM outputs provided by OCC are attached at **Appendix E**. In addition, **Figures 5.1 and 5.2**, attached, summarises the 2026 baseline traffic flows for the weekday morning and evening peak hours which will form the base for the assessment.

5.7 The current planning application is for a B1(a)/B1(b) office park and, as such, the primary effect of the development proposals on the highway network local to the site will be during the weekday morning and evening peak periods. Given the proposed office use of the site it is considered that outside these periods and, in particular during the weekend Saturday and Sunday peak periods, the development will attract negligible vehicle trips and, as such, would not have a material effect on the operation of the highway network at these times. As such, this Transport Assessment will consider the effect of the development proposals on the highway network during the weekday morning and evening peaks.

Trip Attraction

5.8 The pre-application response from OCC requested that the expected trip attraction of the current development proposals be considered with reference to trip rates presented within the Transport Assessment supporting the recently consented development proposals at Bicester Gateway Business Park (Planning Ref: 16/02586/OUT).

5.9 Table 5.1 below summarises the vehicle trip rates and expected vehicle trips associated with the proposed 60,000 square metres of B1(a)/B1(b) office floorspace during the weekday morning and evening peak periods.

	Trip Rate (per 100sqm)			Total Trips (60,000sqm)		
	In	Out	Total	In	Out	Total
Morning Peak Hour	1.533	0.141	1.674	920	85	1,004
Evening Peak Hour	0.111	1.602	1.713	67	961	1,028

Table 5.1: Trip Rates and Vehicle Trips - Office Park

5.10 Table 5.1 demonstrates that the proposed development is expected to result in 1,004 vehicle trips during the morning peak hour and 1,028 vehicle trips during the evening peak hour.

5.11 As previously highlighted the application site has previously been subject to a planning application for an office park development with outline planning permission granted in 2010 for the construction of a 60,000-square metre office park comprising 53,000 square metres of B1(a)/B1(b) office space and a 7,000-square metre C1 hotel, served by circa 1,837 car parking spaces (Planning Ref: 07/01106/OUT). Detailed planning consent was subsequently granted in November 2013 for the construction of a Tesco food store of 8,135 square metres and petrol filing station on part of the consented office park site (Planning Ref: 12/01193/F). The Tesco store has since been constructed and opened in April 2016.

5.12 The planning application for the Tesco development was supported by a Transport Assessment which considered the effect of the Tesco development proposals on the highway network local to the site. The S106 Deed of Variation in relation to the consented Tesco store and office park allows for the construction of up to 45,000 square metres of the B1(a)/B1(b) office space being delivered on the remainder of the site, as part of the previous outline planning consent for an office park.

5.13 The Transport Assessment supporting the Tesco development proposals assessed the effect of 45,000 square metres of office park development coming forward on the current application site. To this extent, the junction between Lakeview Drive and the A41 Oxford Road has been designed and was previously assessed to accommodate traffic associated with up to 45,000 square metres of the B1(a)/B1(b) office space in addition to the constructed Tesco store. Furthermore, the Tesco Transport Assessment assessed the effect of up to 45,000 square metres of the B1(a)/B1(b) office space, in addition to the constructed Tesco store, on the highway network local to site. As such the highway improvements designed and under construction in relation to the Tesco development included consideration of 45,000 square metres of B1(a)/B1(b) office space on the application site.

5.14 It is therefore evident that the current outline planning application for 60,000 square metres of B1(a)/B1(b) office space comprise an additional 15,000 square metres of office space in comparison with that previous assessed on the local highway network as part of recently consented planning applications. Based on the vehicle trip rates provided a Table 5.1, Table 5.2 below summarises the additional trip generation of the current proposals over that previously assessed on the local highway network.

	Trip Rate (per 100sqm)			Total Trips (15,000sqm)		
	In	Out	Total	In	Out	Total
Morning Peak Hour	1.533	0.141	1.674	230	21	251
Evening Peak Hour	0.111	1.602	1.713	17	240	257

Table 5.2: Trip Rates and Vehicle – Additional 15,000 sqm Office Space

5.15 Table 5.2 demonstrates that, in comparison with the 45,000 square metres of B1(a)/B1(b) office space, previously assesses on the highway network as part of previous applications, the current proposals for 60,000 square metres of B1(a)/B1(b) office space would result in an additional 251 vehicle trips during the morning peak hour and 257 vehicle trips during the evening peak hour.

Trip Distribution

5.16 In order to determine the likely distribution of vehicle trips on the local road network, reference has been made to journey to work data from the 2011 Census for the Cherwell 015 output area in which the application site is located.

5.17 **Figure 5.3**, attached, details the expected distribution of vehicle trips on the local highway network and this is summarised below:

- A41 South 27%
- Vendee Drive 12%
- Kingsmere 3%
- A41 East 23%
- A41 North 35%

5.18 Vehicle trips associated with the development proposals, as set out in Table 5.1, have been assigned on the local road network based on the distribution set out at **Figure 5.3**. **Figures 5.4 and 5.5** show the expected distribution of vehicle trips during the weekday morning and evening peak hours, respectively.

'With Development' Assessment

5.19 As set out above, **Figures 5.1 and 5.2**, attached, present 2026 baseline traffic flows from the BTM for the weekday morning and evening peak hours, respectively.

5.20 Traffic flows associated with the development proposals, as shown on **Figures 5.4 and 5.5**, have been added to the baseline traffic flows in order to determine the 2026 traffic flows with the development proposals in place. **Figures 5.6 and 5.7**, attached, show the expected traffic flows on the local road network in 2026 with the development proposals in place.

6.0 Effect of Development

6.1 This section of the report considers the effect of the development on the highway network local to the site based on junction capacity modelling of the junctions agreed with Officers at OCC during pre-application scoping discussions.

6.2 As part of pre-application scoping discussions, Officers at OCC have requested that the following junctions be assessed as part of the Transport Assessment:

- Oxford Road (A41) / Lakeview Drive signalised junction;
- Oxford Road / A41 signalised roundabout;
- Oxford Road / Pingle Drive roundabout;
- Oxford Road / Middleton Stoney Road mini-roundabout;
- Oxford Road (A41) / Kingsmere signalised junction;
- A41 Oxford Road/ Vendee Drive; and
- A41/ A4421 Rodney House Roundabout.

6.3 As previously identified, highway improvement works are currently under construction at a number of the junctions listed above. In addition, further highway improvement works are consented at some junctions listed above in association with recently consented development proposals. The highway capacity assessment undertaken within this Transport Assessment considers the operation of the junctions with these improvements in place. Junction capacity modelling has been undertaken using the industry standard modelling package for each junction type i.e. ARCADY for conventional roundabouts and mini-roundabouts and LinSig for signal controlled junctions and signal controlled roundabouts.

Oxford Road/ Middleton Stoney Road/ Kings End

6.4 The mini-roundabout junction between Oxford Road, Middleton Stoney Road and Kings End has been modelled using ARCADY. It is noted that ARCADY is subject to limitations when assessing the operation of mini-roundabouts and can be unrepresentative of observed operation. To this extent it is considered more appropriate to assess the operation of the junction as a conventional roundabout within ARCADY.

6.5 Table 6.1 shows the operation of the junction in the 2026 baseline scenario based on the traffic flows provided by OCC from the BTM. Model output files are attached at **Appendix F**.

Approach	AM Peak		PM Peak	
	RFC	Queue (veh)	RFC	Queue (veh)
Middleton Stoney Road	0.729	3	0.801	4
Kings End	1.075	40	0.971	15
Oxford Road	0.528	1	0.808	4

Table 6.1: Oxford Road/ Middleton Stoney Road/ Kings End – 2026 Baseline Operation

6.6 The analysis shows that the junction is expected to operate slightly over theoretical capacity during the morning peak period in the baseline scenario with a maximum queue of 40 vehicles expected. During the evening peak period, the junction operates within capacity, with a maximum queue of 15 vehicles expected.

6.7 The analysis of the scenario with the development proposals in place identified that the development proposals would have an effect on the operation of the mini-roundabout junction between Oxford Road, Middleton Stoney Road and Kings End. As such, a highway improvement scheme has been designed to mitigate the effect of the development at this junction. The proposed highway improvement scheme is detailed at **Appendix G**.

6.8 Table 6.2 shows the operation of the junction in the 2026 scenario with the proposed development and the proposed highway works in place. Model output files are attached at **Appendix F**.

Approach	AM Peak		PM Peak	
	RFC	Queue (veh)	RFC	Queue (veh)
Middleton Stoney Road	0.825	5	0.845	5
Kings End	0.900	8	0.725	3
Oxford Road	0.535	1	0.881	7

Table 6.2: Oxford Road/ Middleton Stoney Road/ Kings End – 2026 With Development Operation

6.9 The result of the analysis demonstrate that the proposed highway works mitigate the effect of the development proposals and that the junction would operate within capacity during both the morning and evening peak periods. To this extent, the mitigation works provide a betterment to the operation of the junction, in comparison with the baseline operation of the junction.

A41 Highway Network

6.10 As part of the consented development proposals for Bicester Village Phase 4 and the constructed Tesco store, a package of highway works is under construction covering the following junctions:

- Oxford Road / Pingle Drive roundabout;
- A41 Oxford Road / Oxford Road signalised roundabout (Esso roundabout);
- A41 Oxford Road (A41) / Lakeview Drive signalised junction;
- A41 Oxford Road (A41) / Kingsmere signalised junction;

6.11 In addition, further highway improvements have been consented at the A41 Oxford Road junctions with Kingsmere and Lakeview Drive as part of the recently consented development proposals at Bicester Gateway Retail Park (Planning Ref: 16/02505/OUT).

6.12 The operation of the above junctions has been assessed using the industry standard package for signal controlled junctions, LinSig. In line with assessments undertaken from the consented Bicester Village Phase 4, Tesco and Bicester Gateway retail Park Schemes the four junctions have been modelled within a single LinSig model. LinSig model parameters have been based on the most recently approved LinSig model for the Bicester Gateway Retail Park development and, as such, include the consented highway works.

6.13 Table 6.3 provides a summary of the operation of the junctions in the 2026 baseline scenario based on the traffic flows provided by OCC from the BTM. Given the extent of model and the number of links, the below Table provides a summary of the operation of each junction and full link details for the A41/ Lakeview Drive junction. Full model output files are attached at **Appendix F**.

Junction	AM Peak		PM Peak	
	DoS	MMQ	DoS	MMQ
Oxford Road/ Pingle Drive	44.7%	-	53.2%	-
Esso Roundabout	92.7%	-	99.0%	-
Oxford Road/ Kingsmere	69.3%	-	72.3%	-
Oxford Road/ Lakeview Drive	77.2%	-	86.5%	-
Oxford Road n/b (Ahead)	24.1%	1	44.4%	8
Oxford Road n/b (Ahead)	49.3%	4	48.5%	8
Oxford Road n/b (Ahead/ Right)	77.2%	29	62.1%	31
Oxford Road s/b (Ahead)	15.3%	1	26.3%	4
Oxford Road s/b (Ahead)	69.0%	18	74.6%	19
Oxford Road s/b (Left)	73.7%	16	81.4%	17
Lakeview Drive (Left/ Right)	38.2%	5	86.5%	16
Lakeview Drive (Right)	40.7%	2	46.3%	3
Overall PRC	-3.0%		-10.0%	

Table 6.3 – Oxford Road Corridor – 2026 Baseline Operation

6.14 The results of the analysis demonstrate that the junction is expected to operate within theoretical capacity although with negative Practical Reserve Capacity during both the morning and evening peak periods in the 2026 baseline scenario.

6.15 The analysis of the scenario with the development proposals in place identified that the development proposals would have an effect on the operation of the junction between the A41 Oxford Road and Lakeview Drive. As such, a highway improvement scheme has been designed to mitigate the effect of the development at this junction and is shown at **Appendix G**.

6.16 Table 6.4 shows the operation of the junctions along the Oxford Road corridor in the 2026 scenario with the proposed development and the proposed highway works in place. Model output files are attached at **Appendix F**.

Junction	AM Peak		PM Peak	
	DoS	MMQ	DoS	MMQ
Oxford Road/ Pingle Drive	52.4%	-	60.8%	-
Esso Roundabout	87.1%	-	91.7%	-
Oxford Road/ Kingsmere	75.1%	-	84.9%	-
Oxford Road/ Lakeview Drive	90.3%	-	90.7%	-
Oxford Road n/b (Ahead)	32.6%	3	76.3%	15
Oxford Road n/b (Ahead)	33.4%	5	76.9%	15
Oxford Road n/b (Ahead)	56.9%	11	77.2%	20
Oxford Road n/b (Right)	90.3%	16	46.4%	4
Oxford Road s/b (Left/ Ahead)	89.9%	26	85.4%	25
Oxford Road s/b (Ahead)	67.2%	18	73.6%	15
Oxford Road s/b (Ahead)	76.0%	9	72.5%	11
Lakeview Drive (Left/ Right)	44.3%	5	90.7%	29
Lakeview Drive (Right)	52.7%	3	84.6%	18
Overall PRC	-0.3%		-1.9%	

Table 6.4 – Oxford Road Corridor – 2026 With Development

6.17 The results of the analysis demonstrate that the junction is expected to operate within theoretical capacity, although with negative Practical Reserve Capacity, during both the morning and evening peak periods in the 2026 with the proposed development in place. To this extent, the analysis demonstrates that the proposed highways works mitigate the effect of the development proposals and provide a slight betterment to the operation of the junction between the A41 Oxford Road during both peak periods. As such, it is concluded that, subject to the mitigation works identified, the development would not have a material effect on the operation of this junction and no further assessment or mitigation is considered necessary.

A41 / Bicester Park & Ride / Vendee Drive

6.18 The conventional roundabout junction between the A41, Vendee Drive and Bicester Park and Ride has been assessed using the industry standard software package for roundabout junctions, ARCADY.

6.19 The consented development proposals at Bicester Gateway Business Park (Planning Ref: 16/02586/OUT) include highway improvement works to the A41, Vendee Drive junction. The operation of the junction has been modelled inclusive of the consented junction improvements.

6.20 Table 6.5 below shows the operation of the junction in the 2026 baseline scenario based on the traffic flows provided by OCC from the BTM. Model output files are attached at **Appendix F**.

Approach	AM Peak		PM Peak	
	RFC	Queue (veh)	RFC	Queue (veh)
Vendee Drive	0.266	0	0.293	0
A41 (North)	0.739	3	0.844	5
Unnamed Road	0.175	0	0.416	1
A41 (South)	0.729	3	0.854	6
Bicester Park and Ride	0.026	0	0.212	0

Table 6.5 – A41/ Vendee Drive – 2026 Baseline Operation

6.21 The analysis demonstrates that the junction is expected to operate within theoretical capacity during both the morning and evening peak periods in the 2026 baseline scenario.

6.22 Table 6.6 below shows the operation of the junction in the 2026 with the proposed development in place. Model output files are attached at **Appendix F**.

Approach	AM Peak		PM Peak	
	RFC	Queue (veh)	RFC	Queue (veh)
Vendee Drive	0.421	1	0.307	0
A41 (North)	0.751	3	0.966	21
Unnamed Road	0.180	0	0.725	2
A41 (South)	0.801	4	0.892	8
Bicester Park and Ride	0.034	0	0.337	1

Table 6.5 – A41/ Vendee Drive – 2026 With Development Operation

6.23 The analysis demonstrates that the junction is expected to operate within theoretical capacity during both the morning and evening peak periods in 2026 with the proposed development in place.

6.24 It is acknowledged that, based on the scenario assessed, the additional traffic associated with the development would result in an increase in queuing on some arms of the junctions. However, as previously highlighted the analysis is based a future year assessment, 9 years in advance of the submission of the planning application submission and this is considered a robust assessment of the operation of the highway network. On the basis that the junction is shown to operate within theoretical capacity under this robust assessment, no mitigation or further assessment is considered necessary.

A41/ A4421 – Rodney House Roundabout

6.25 The Rodney House roundabout is currently a conventional roundabout. As part of consented development proposals at Graven Hill, highway improvement works are proposed at the Rodney House roundabout which include the signalisation of the junction. Officers at OCC have provided Motion with plans of the consented highway works at the junction.

6.26 Capacity modelling for the Rodney House roundabout has therefore been undertaken using the industry standard package for signal controlled roundabouts, LinSig. Junction geometries and parameters have been based on the consented highways works drawing provided by OCC.

6.27 Table 6.7 below shows the operation of the junctions in the 2026 baseline scenario based on the traffic flows provided by OCC from the BTM. Model output files are attached at **Appendix F**.

Approach	AM Peak		PM Peak	
	DoS	MMQ	DoS	MMQ
A41 (Left/ Ahead)	70.9%	7	82.2%	10
A41 (Ahead)	6.4%	1	22.2%	2
Graven Hill Road (Left)	67.3%	5	70.9%	4
Graven Hill Road (Ahead)	36.2%	2	41.8%	2
A41 (Left/ Ahead)	54.4%	5	63.6%	7
A41 (Ahead)	47.5%	6	52.3%	7
B4100 (Left/ Ahead)	38.9%	2	44.0%	3
B4100 (Ahead)	42.3%	2	59.9%	4
A4421 (Left/ Ahead)	59.5%	5	61.1%	5
A4421 (Ahead)	42.8%	4	50.7%	4
Overall PRC	+26.9%		+7.5%	

Table 6.7: Rodney House Roundabout – 2026 Baseline Operation

6.28 The results of the analysis demonstrate that the junction is expected to operate within capacity during both the morning and evening peak periods in the 2026 baseline scenario.

6.29 Table 6.8 below shows the operation of the junction in the 2026 with the proposed development tin place. Model output files are attached at **Appendix F**.

Approach	AM Peak		PM Peak	
	DoS	MMQ	DoS	MMQ
A41 (Left/ Ahead)	79.3%	9	82.9%	10
A41 (Ahead)	8.7%	1	22.2%	2
Graven Hill Road (Left)	67.1%	5	70.9%	4
Graven Hill Road (Ahead)	38.2%	3	42.2%	2
A41 (Left/ Ahead)	56.3%	6	70.1%	8
A41 (Ahead)	46.8%	6	60.1%	8
B4100 (Left/ Ahead)	38.9%	2	44.0%	3
B4100 (Ahead)	56.1%	3	60.7%	4
A4421 (Left/ Ahead)	57.8%	5	62.8%	5
A4421 (Ahead)	51.4%	4	58.2%	4
Overall PRC	+12.9%		+7.5%	

Table 6.8: Rodney House Roundabout – 2026 Baseline with Development Operation

6.30 The results of the analysis demonstrate that the junction is expected to operate within capacity during both the morning and evening peak periods in the 2026 with the proposed development in place. On that basis, it is evident that the proposed development would not have a material effect on the operation of this junction and no further assessment or mitigation measures is considered necessary.

Summary

6.31 The effect of the development proposals on the local highway network has been assessed at the following junctions, as agreed with OCC:

- A41 Oxford Road / Lakeview Drive signalised junction;
- Oxford Road / A41 signalised roundabout;
- Oxford Road / Pingle Drive roundabout;
- Oxford Road / Middleton Stoney Road mini-roundabout;
- A41 Oxford Road / Kingsmere signalised junction;
- A41 Oxford Road/ Vendee Drive; and
- A41/ A4421 Rodney House Roundabout.

6.32 The results of detailed junction capacity analysis demonstrate that, subject to the highway mitigation works identified at the junctions between A41 Oxford Road/ Lakeview Drive and at the junction between Oxford Road and Middleton Stoney Road, the development proposals would not result in a material effect in the operation of the highway network local to the site.

6.33 As such it concluded that the proposed highway works, as shown in drawings presented at **Appendix G**, are sufficient to mitigate the effect of the development on the local highway network. To this extent no further assessment, mitigation measures or Section 106 obligation towards further transport schemes, such as the South-Eastern Perimeter Rad (SEPR), are considered necessary or justified in planning terms.

6.34 The highway mitigation works presented at **Appendix G**, are to mitigate for the effect of traffic associated with the full development proposals of 60,000 square metres (GEA) of B1(a)/B1(b) office space. It is evident that a proportion of the full development proposals could come forward without significant effect on the highway network and in advance of the delivery of the proposed highway works. To this extent a threshold analysis will be undertaken separately to establish the level of B1(a)/B1(b) office space that can come forward in advance of the delivery of the highway mitigation works and without material effect on the highway network.

7.0 Summary and Conclusions

7.1 Motion has been appointed by Scenic Land Developments Ltd to prepare this Transport Assessment in relation to development proposals on land to the east of the A41 Oxford Road, Bicester within the administrative boundary of Cherwell District Council (CDC).

7.2 The site is currently undeveloped and is bound by the A41 Oxford Road to the west and Lakeview Drive to the north whilst Wyevale Garden Centre is located to the immediate south. The Bicester – Oxford railway line operates to the east and is separated from the site by undeveloped land.

7.3 Outline planning permission was granted in 2010 for the construction of a 60,000-square metre office park comprising 53,000 square metres of B1(a)/B1(b) office space and a 7,000-square metre C1 hotel, served by circa 1,837 car parking spaces (Planning Ref: 07/01106/OUT).

7.4 Detailed planning consent was subsequently granted in November 2013 for the construction of a Tesco food store of 8,135 square metres and petrol filling station on part of the consented office park site (Planning Ref: 12/01193/F). That planning application was supported by a Transport Assessment which considered the effect of the development proposals on the highway network local to the site. The Tesco store has since been constructed and opened in April 2016.

7.5 The S106 Deed of Variation in relation to the consented Tesco store and office park allows for the construction of up to 45,000 square metres of the B1(a)/B1(b) office space being delivered on the remainder of the site, as part of the previous outline planning consent for an office park.

7.6 The current planning application seeks outline planning consent, with all matters reserved except access, for the development of up to 60,000 square metres (GEA) of B1(a)/B1(b) office space. Vehicle access to the site would be via the two existing roundabout junctions on Lakeview Drive.

7.7 The current development proposals would supersede and replace the previous outline consent for an office park on the site. In comparison with the previous outline planning consent for an office park on the site, the current site area excludes the portion of the site, north of Lakeview Drive, which has since been developed for a Tesco store. However, the site area now includes a parcel of land along the frontage of the A41 Oxford Road, south of Lakeview Drive, which was previously not within the applicant's ownership and was not part of the previous outline planning consent for an office park.

7.8 This Transport Assessment has been prepared in accordance with national and local guidance and has considered the highways and transport matters associated with the current development proposals and, in particular, the effect of the development proposals on the highway network local to the site.

7.9 This Transport Assessment has demonstrated that:

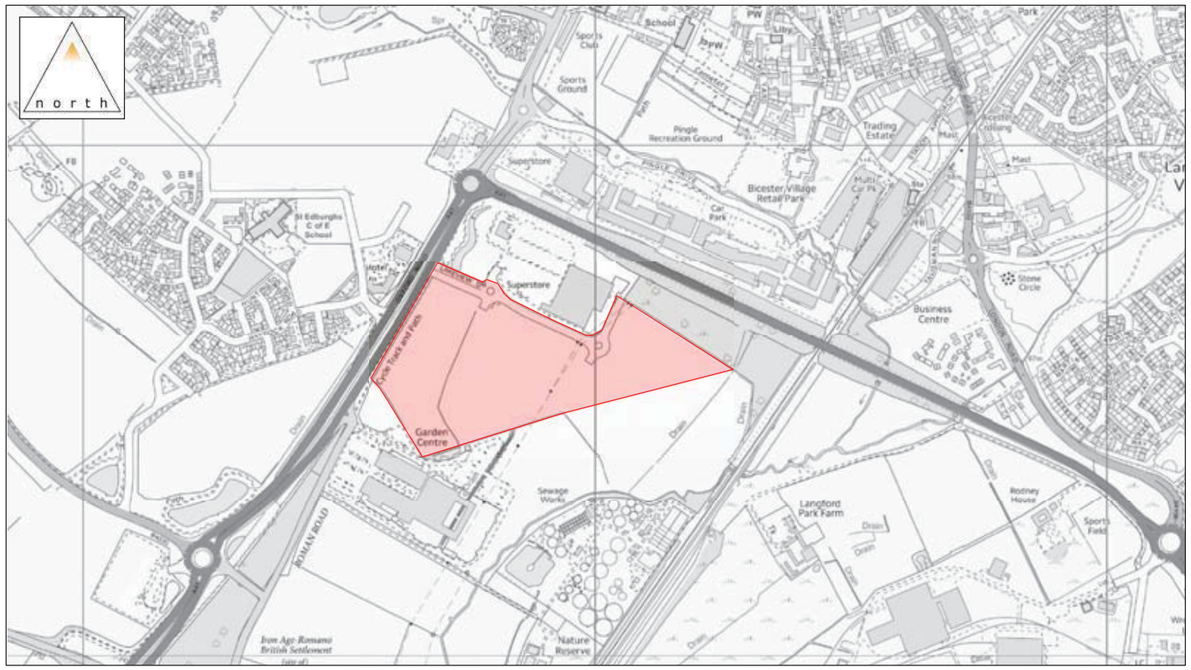
- The application site is accessible by foot, cycle and by public transport;
- The application is allocated under Bicester Policy 4 of the Cherwell Local Plan for development of a high-quality office park;
- Outline planning permission was previously granted in 2010 for the construction of a 60,000-square metre office park comprising 53,000 square metres of B1(a)/B1(b) office space and a 7,000-square metre C1 hotel, served by circa 1,837 car parking spaces (Planning Ref: 07/01106/OUT).
- The development proposals would be accessed from Lakeview Drive via two existing roundabout junctions;
- Car parking and cycle parking will be provided in accordance with local parking standards;
- The effect of the development proposals on the local highway network has been assessed based on parameters agreed with OCC.
- Highway mitigation works have been identified at the junction between the A41 Oxford Road/ Lakeview drive and at the junction between Oxford Road/ Middleton Stoney Road.

- The results of detailed junction capacity analysis demonstrate that, subject to highway mitigation works identified, the development proposals would not result in a material effect in the operation of the highway network local to the site; and
- A Framework Workplace Travel Plan has been developed in order to promote sustainable travel choices amongst staff and visitors to the proposed development and is submitted under separate cover.

7.10 It is concluded that the proposed highway works, as presented within this Transport Assessment, are sufficient to mitigate the effect of the development on the local highway network. To this extent no further assessment, mitigation measures or Section 106 obligation towards further transport schemes, such as the South Eastern Perimeter Rad (SEPR), are considered necessary or justified in planning terms.

7.11 On that basis, it is concluded that the development proposals would not result in a material effect on the operation of the highway network local to the site. The development proposals are in accordance with national and local transport related planning policy and, as such, should not be resisted on highways or transportation grounds.

Figures



Legend:

Site Location

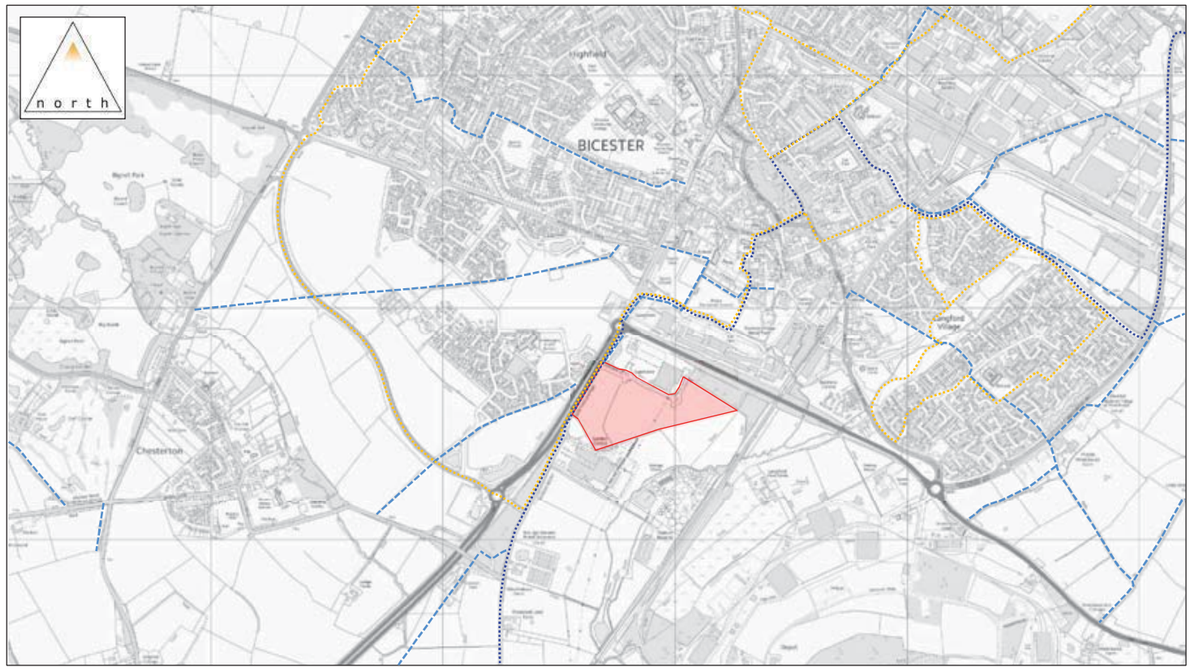
Bicester Office Park,

Bicester

Figure 3.1 Site Location Plan

Not to Scale

motion



Legend:

Local Footpath

Local Signed Cycle Route

National Cycle Network Route 51

Site Location

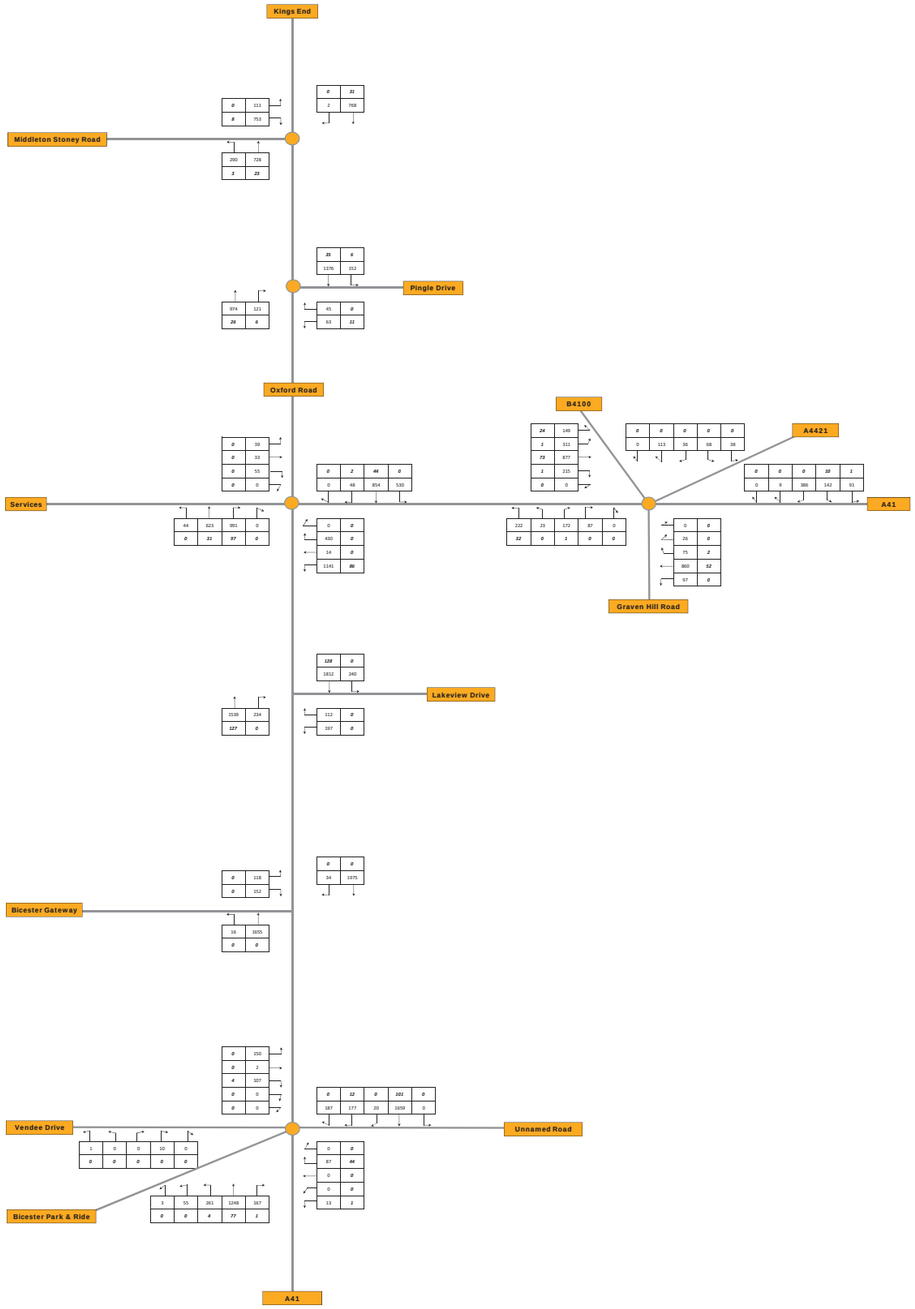
Bicester Office Park,

Bicester

Figure 3.2 Local Footpaths and Cycle Routes

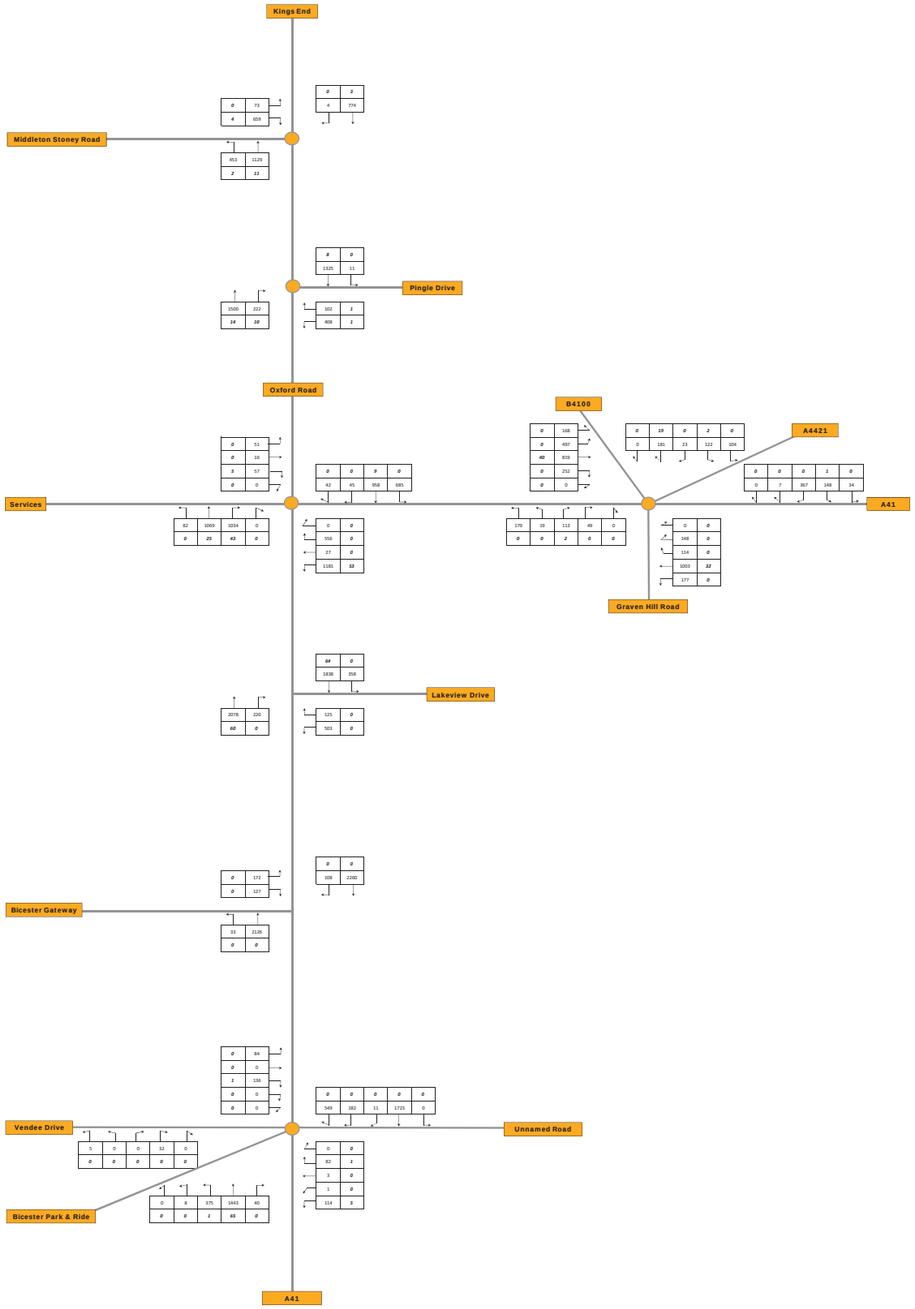
Not to Scale

motion



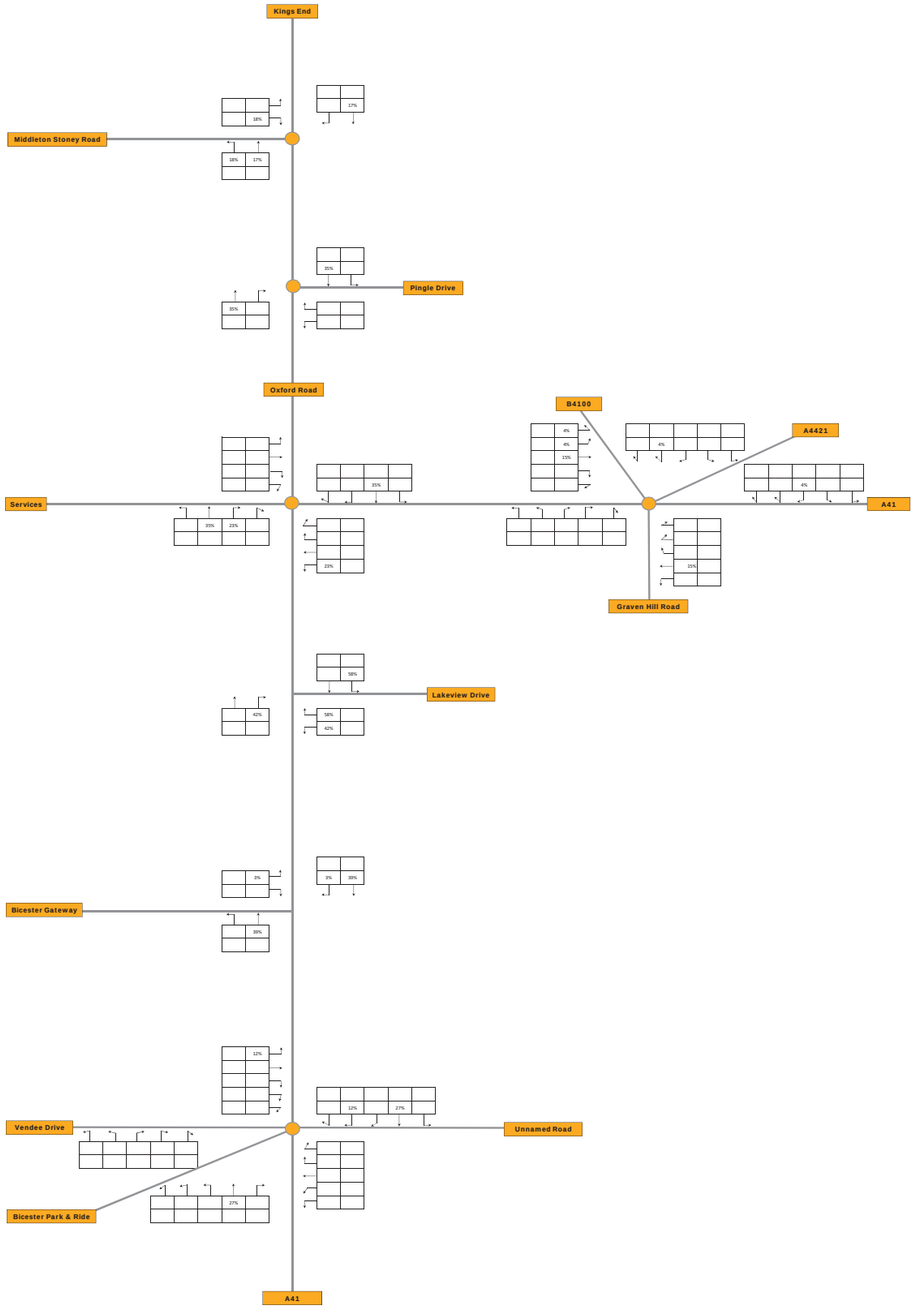
motion

Bicester Office Park
2026 Bicester Traffic Model Baseline Flows - AM Peak
Figure 5.1



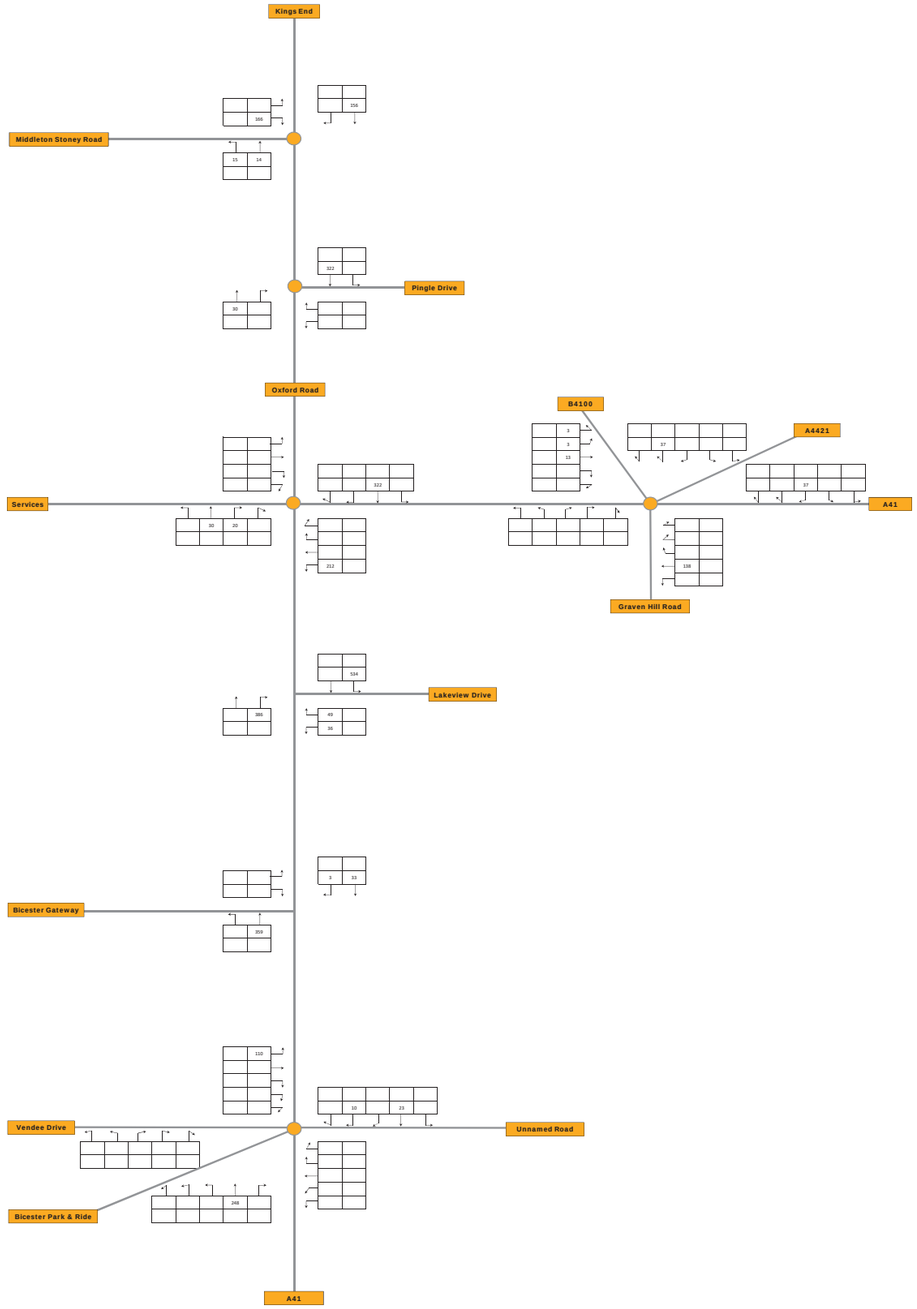
motion

Bicester Office Park
2026 Bicester Traffic Model Baseline Flows - PM Peak
Figure 5.2



motion

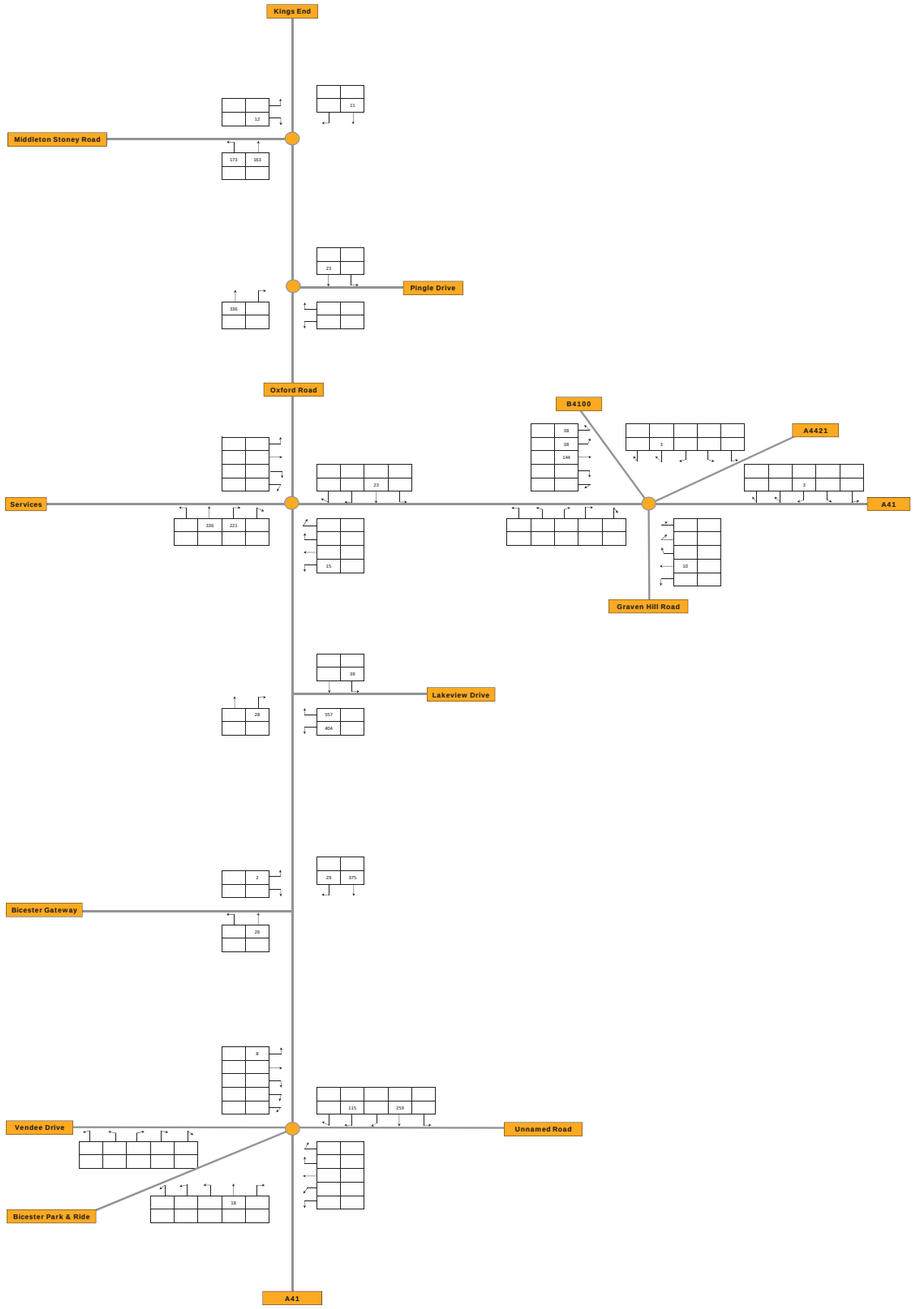
Bicester Office Park
Vehicle Trip Distribution
Figure 5.3



in	920
out	85

motion

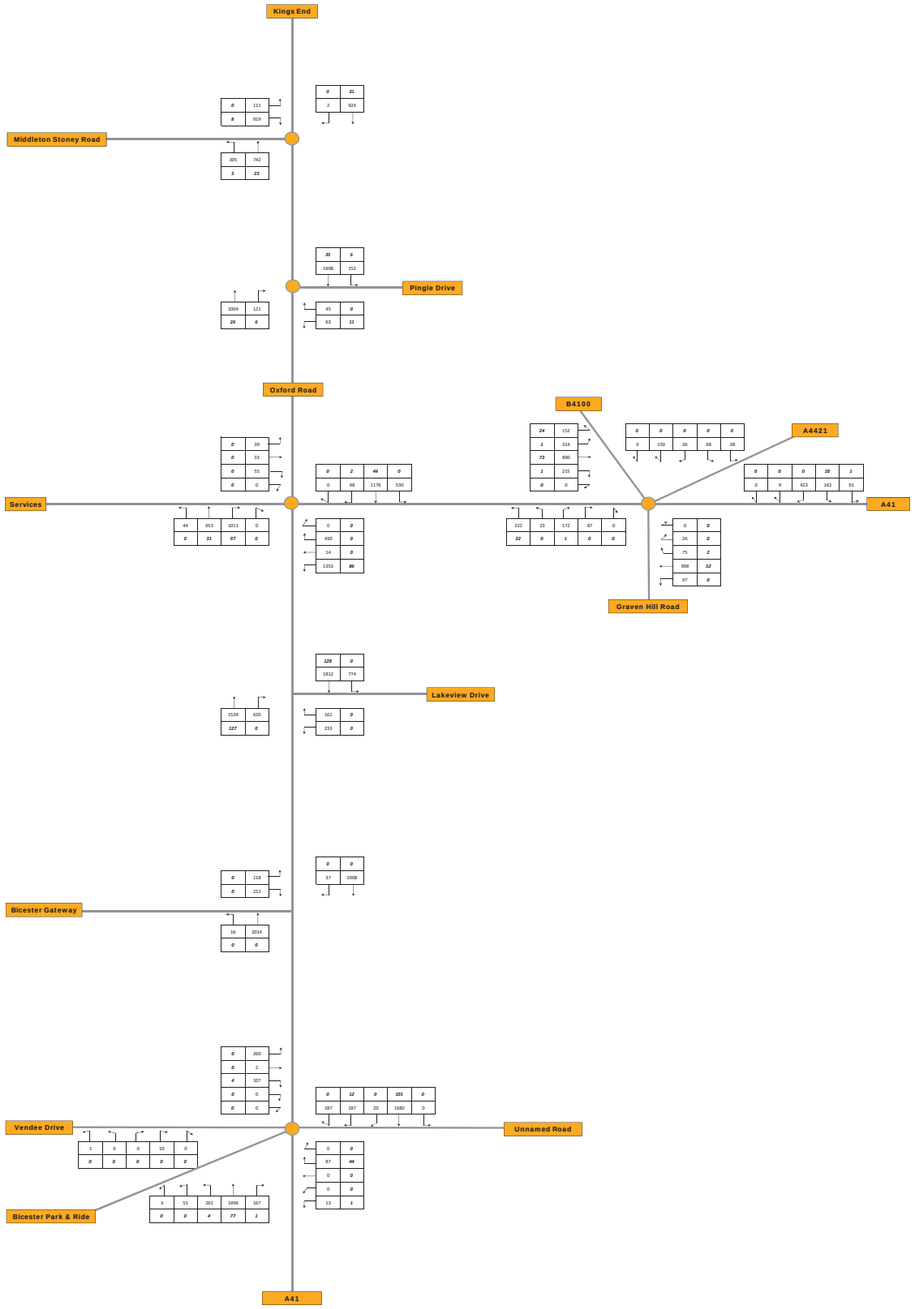
Bicester Office Park
Development Vehicle Trips - AM Peak Period
Figure 5.4



In 67
out 961

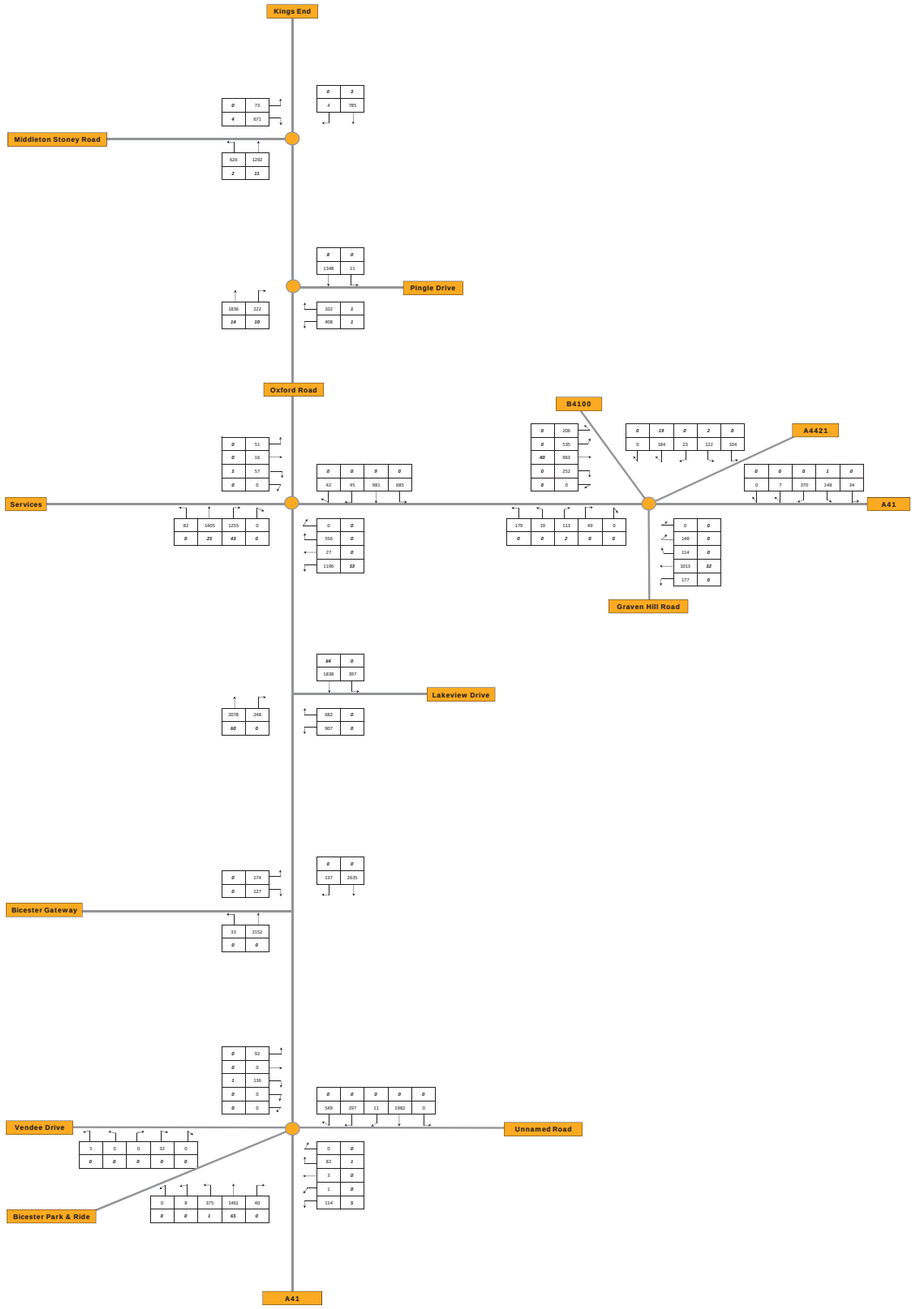
motion

Bicester Office Park
Development Vehicle Trips - PM Peak Period
Figure 5.5



motion

Bicester Office Park
2026 With Development - AM Peak Period
Figure 5.6



motion

Bicester Office Park
2026 With Development - PM Peak Period
Figure 5.7

Appendix A

Oxfordshire County Council Pre-Application Response

District: Cherwell
Application No: **17/CH0005/PREAPP**
Proposal: The construction of an office park providing up to 57,000 square metres of B1 office space.
Location: Bicester Office Park. Land To South And East Of The A41 Oxford Road, Bicester, Oxfordshire

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Transport

Oxfordshire County Council is a consultee of the local planning authority and provides advice on the likely transport and highways impact of development where necessary.

It should be noted that the advice below represents the informal opinion of an officer of the council only, which is given entirely without prejudice to the formal consideration of any planning application, which may be submitted. Nevertheless the comments are given in good faith and fairly reflect an opinion at the time of drafting given the information submitted.

Key issues:

- Strategic contribution towards the South Eastern Perimeter Road

Legal agreement required to secure:

If a planning application were to be submitted and approved a S278 would be required to deliver any highway improvements that it was decided would be needed to make the development acceptable e.g. new site access junction, footway improvements.

A new S106 agreement would be needed to secure the S278 works and also a financial contribution towards

(i) Public transport improvements and
(ii) Strategic contribution towards the delivery of the South East Link Road- required to mitigate the development's impact on the A41 junctions

Travel Plan monitoring fees shall be required

Informatives:

Please note the Advance Payments Code (APC), Sections 219 -225 of the Highways Act, is in force in the county to ensure financial security from the developer to off-set the frontage owners' liability for private street works, typically in the form of a cash deposit or bond. Should a developer wish for a street or estate to remain private then to secure exemption from the APC procedure a 'Private Road Agreement' must be entered into with the County Council to protect the interests of prospective frontage owners. For guidance and information on road adoptions etc. please email the County's Road Agreements Team at roadagreements@oxfordshire.gov.uk

Detailed comments:

The A41 from which the site is accessed is heavily trafficked and will be put under further pressure from Cherwell Local Plan growth allocations, including the allocation on this site (Bicester 4).

This was recognised by Bicester Village in their application for Phase 4 of their development, where they are now delivering major highway improvements at and between the Esso roundabout and Pingle Drive junctions, having also provided a Bicester Park and Ride facility.

The highway works which are currently underway on the A41 (and related to the expansion of Bicester Village) will deliver a new bus layby on the northbound side of the A41. The highway works which are related to the construction and use of the permitted Bicester Business Park would, once they are triggered (i.e. once construction begins), also provide a northbound and southbound bus layby. Clearly as the Bicester Village works are already underway, once construction of any permission granted for the business park begins, its corresponding remaining liability would be to provide the southbound layby (as the northbound will have by then been delivered).

Scoping Note
Having had a chance to look at the Scoping Note dated 19th April 2017 for a Transport Assessment, I wish to make the following comments.

Policy Consideration
Various Policies that should be considered relevant to this development are:

National Policies
- National Planning Policy Framework (NPPF)
- National Planning Practice Guidance (NPPG)

Local Policy Context include
- Connecting Oxfordshire 2015-2031 (LTP4)
- The Cherwell Local Plan (Adopted July 2015) from which the Policy Bicester 4 requires;
  - Layout that enables a high degree of integration and connectivity between new and existing development particularly the mixed use urban extension at South West Bicester to the west, the garden centre to the south, and, to the north, Bicester town centre and Bicester Village retail outlet.
  - Provision for safe pedestrian access from the A41 including facilitating the crossing of the A41 to the north and west, and the provision and upgrading of footpaths and cycleways that link to existing networks to improve connectivity generally and to develop

links between this site, nearby development sites and the town centre.
- Good accessibility to public transport services should be provided for, including the accommodation of new bus stops to link the development to the wider town.
- A Transport Assessment and Travel Plan to accompany development proposals.

Area of Impact and Junction Modelling
The scoping note accompanying this pre-application enquiry proposes to consider the following junctions for assessment
- Oxford Road / Pingle Drive Roundabout
- Oxford Road / A41 signalised roundabout
- Site Access (Oxford Road / A41 Lakeview Drive signalised junction)
- Oxford Road (A41) / Kingsmere signalised junction.

As previously mentioned in our telephone conversation on 26th April, in addition to the above junctions, the Transport Assessment will need to look at a wider study area to include;
- A41 / Vendee Drive / Oxford Road (A41) roundabout and
- Oxford Road / Middleton Stoney Road / Kings End roundabout
- Rodney House roundabout junction.

These junctions further afield are critical, likely to be impacted by the whole of Bicester 10 when it comes forward and Bicester 4 and the TA shall be expected to carry out capacity tests demonstrating the effect of the development on the highway network.

The scoping note under section 4.4 mentions that traffic surveys shall be undertaken during a weekday morning and evening peak period. The weekend peaks on the A41 approaching Bicester are very high. Owing to the adjacent land use particularly Bicester Village and Tesco superstore, in terms of the effect of the proposal on traffic at the Saturday and Sunday peak times, it would add to the already high volume of retail development traffic in the area. I would like to see further justification of not including a weekend assessment.

Future Years
Paragraph 4.5 of the Scoping Note sets a future year assessment to the fifth year after submission of the Transport Assessment – which puts it down to 2022. In my view, I feel this period should be extended to cover 2026 in line with the Bicester Transport Model which includes 2024 interim year and also includes the committed development expected to come forward at that time. We would like this to be the forecast year rather than 2022.

Committed development – Use of the Bicester Transport Model 2026 would include all development expected to come forward by that time. Consideration also needs to be given to two pending planning applications close by to the site, which are both proposing highway mitigation works along the A41. These are;
- 16-02505-OUT – Bicester Gateway (Kingsmere Retail)
- 16-02586-OUT – Bicester Gateway (Bicester 10)

The model includes significant committed developments expected to come forward and including the growth trips. Should the model be used, TEMPRO shall not be required in this case.

We shall however like to see the network tested using the flows from the model.

Trip Generation
The scoping note accompanying this pre-application enquiry proposes to use TRICS database to establish an estimate of the number of vehicles that the proposed development might generate when it is fully occupied.

I appreciate that the scoping note submitted attempts to estimate the likely number of trips generated that shall be generated by the development. However, the trip rates used appear rather low especially in the PM peak. I would further appreciate that a trip rates commensurate to the developments close by to be considered, such as ones used in planning ref: 16-02586-OUT.

Characteristics of business parks are likely to have very high levels of car use and very peaky demand for travel. The Oxford Business Park (Garsington Road) certainly displays these characteristics, which results in very long queues and delays when employees decide to leave at the same time (at 1705, for example). Arguably, similar characteristics could be expected on this site, especially when combined with the late Friday afternoon flow from the Tesco store. Will these characteristics be reflected in a TA – what mitigation can be provided – to spread the peak for example.

Other scoping matters
Public Transport - The applicant will need to robustly assess public transport accessibility between the development site and the wider network. The original application included a requirement to provide a pair of bus stops on the A41 and an agreement to provide some S106 funding to provide a bus service into the site.

The bus stops have not been fully delivered, with a new bus stop having recently been installed on the western side of the A41, to the north of the Premier Inn hotel. I guess the bus stop on the eastern side of the A41 is tied up with the Bicester Business Park Legal Agreement. In any event, it is absolutely essential that this is provided.

That being said, the walking distance to these bus stops along the A41 from some of these workplace units could be around 750 metres. I would like to see how the applicant addresses the distance in the TA.

South Eastern Perimeter Road (SEPR)
The Local Transport Plan 4 Bicester Area Strategy proposes a South East Perimeter Road in Bicester, which will ease congestion on the A41 and also mitigate the development's impact on the A41 junctions. It is partly funded, but currently requires contributions to fund the western section proposed, so contributions towards this are likely to be a consideration in terms of mitigating the Bicester Business Park

proposals. Other future developments in the area would also be expected to contribute.

The cumulative impact of development in Bicester will be severe if appropriate contributions are not secured from all development sites towards the strategic transport infrastructure required to mitigate the increased transport movements.

Strategic transport modelling demonstrates the benefits that the SEPR will bring to the A41 (Oxford Road):

- The A41 Oxford Road is a key corridor in Bicester where junctions along its length are impacted significantly as a result of the growth of Bicester, including Bicester 10. The Application Site is estimated to increase the proportion of peak hour traffic at the A41/ Vendee Drive junction by between 7% and 8% in 2024.

- The SEPR has been identified as a key piece of strategic infrastructure that will bring direct relief to the A41 corridor, thereby facilitating improved operation of junctions directly impacted by Bicester 10.

- Modelling has demonstrated the benefits that the SEPR would bring to the A41. In the AM peak:
  - Over 1000 vehicles (pcu's) that would otherwise use the A41 Oxford Rd northbound through Vendee Dve would route via SEPR (eastbound)
  - Around 930 vehicles (pcu's) that would otherwise use A41 Boundary Way and turn left on A41 Oxford Rd southbound past Bic 10, would route via SEPR (westbound)
  - Therefore, over 1930 vehicles (pcu's) would use the SEPR that would otherwise route along A41 past the Bicester 10 site.

It is acknowledged however, that the capacity released on the A41 by the SEPR will itself encourage some traffic that might otherwise choose NOT to use the A41, to divert along the corridor. When taking diverted traffic into account, the net reduction in traffic on the A41 in the vicinity of the Bicester 10 site would be around 1130 pcu's.

Car parking
Sufficient car parking will need to be provided to ensure that there is no overspill onto surrounding roads or inappropriate use of the Park and Ride site. Designs and provision should take into account areas within the development that may be subject to inappropriate parking such as on green verge areas or turning heads. OCC requires 2.4m x 4.8m parking bays and 6m width of manoeuvrable space between parking rows. OCC parking standards for B1 Office developments also require 1 parking space per 30sqm GFA, to include about 6% of DDA per development unit.

Consideration of the interaction of car parking with other sites in the area e.g. acting as an overspill car parking area for Bicester Village (rather than Bicester Village visitors using the P&R) must also be made. A robust car parking management plan should be included in the Travel Plan.

Cycle parking
The county's cycle parking standards sets out how developers should provide sufficient secure and covered cycle parking for staff and visitors. Cycle parking should be easy to locate and as close to the buildings as possible, not only to make it as attractive to potential users as possible but also to allow natural surveillance from the building itself.

Drainage
A surface water drainage scheme for the site will need to be submitted with a planning application. This will be based on sustainable drainage principles and an assessment of the hydrological and hydro-geological context of the development, The scheme will need to include:

- Discharge Rates
- Discharge Volumes
- Maintenance and management of SUDS features (including details of who will be responsible maintaining the SUDS & landowner details)
- Sizing of features – attenuation volume
- Infiltration tests to be undertaken in accordance with BRE365
- Detailed drainage layout with pipe numbers (to include direction of flow)
- SUDS (list the suds features mentioned within the FRA to ensure they are carried forward into the detailed drainage strategy)
- Network drainage calculations (to prove that the proposals will work)
- Phasing plans
- Flood Risk Assessment

Travel Plan
A Travel Plan Statement meeting the requirements set out in the Oxfordshire County Council guidance document, Transport for New Developments; Transport Assessments and Travel Plans will be required for this application. It would need to be produced and agreed prior to first occupation.

Additionally, a Travel Information Pack would need to be submitted to and approved by the Local Planning Authority prior to first occupation. The first occupants of each development unit shall be provided with a copy of the approved Travel Information Pack.

Officer's Name: Rashid Bbosa
Officer's Title: Transport Engineer
Date: 09 May 2017

motion

Appendix B

Traffic Accident Data

Thames Valley Police
Chief Constable Francis Habgood QPM

Headquarters
Oxford Road
Kidlington
Oxfordshire
OX5 2NX

Ms K Lewis
motion
8 Duncannon Street,
LONDON
WC2N 4JF

Telephone: 101
Direct dial: 01865 542051
Email: publicaccess@thamesvalley.pnn.police.uk

Our ref: HQ/PA/001870/17
Your ref:

7 July 2017

Dear Ms Lewis

I write in response to the above-referenced Freedom of Information Act (FOIA) request submitted on 5 July 2017. Thames Valley Police has now considered this request, which for clarity, has been repeated below:

Request	**Response**
I am after the total number of slight, serious and fatal accidents over the most recent five year period to include causation factors. The area I require this for is as follows: Oxford Road between the Park & Ride/Vendee Drive roundabout and the Kings End/Middleton Stoney roundabout; A41 between the Esso Roundabout and Rodney House Roundabout; and, Lakeview Drive.	Slight – 40 Serious – 5 Fatal – 2 Please see the attached data sheet for causation factors. The causation factors listed are the initial opinion of attending officers. These may be disproven in following investigations.

Complaint Rights

If you are dissatisfied with the handling procedures or the decision made by Thames Valley Police, you can lodge a complaint with the force to have the decision reviewed within two months of the date of this response. Complaints should be made in writing to the FOI inbox; publicaccess@thamesvalley.pnn.police.uk.

If, after lodging a complaint with Thames Valley Police, you are still unhappy with the outcome, you may make application to the Information Commissioner at the Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF.

Thames Valley Police
Chief Constable Francis Habgood QPM

If you require any further assistance, please do not hesitate to contact this office.

Yours sincerely

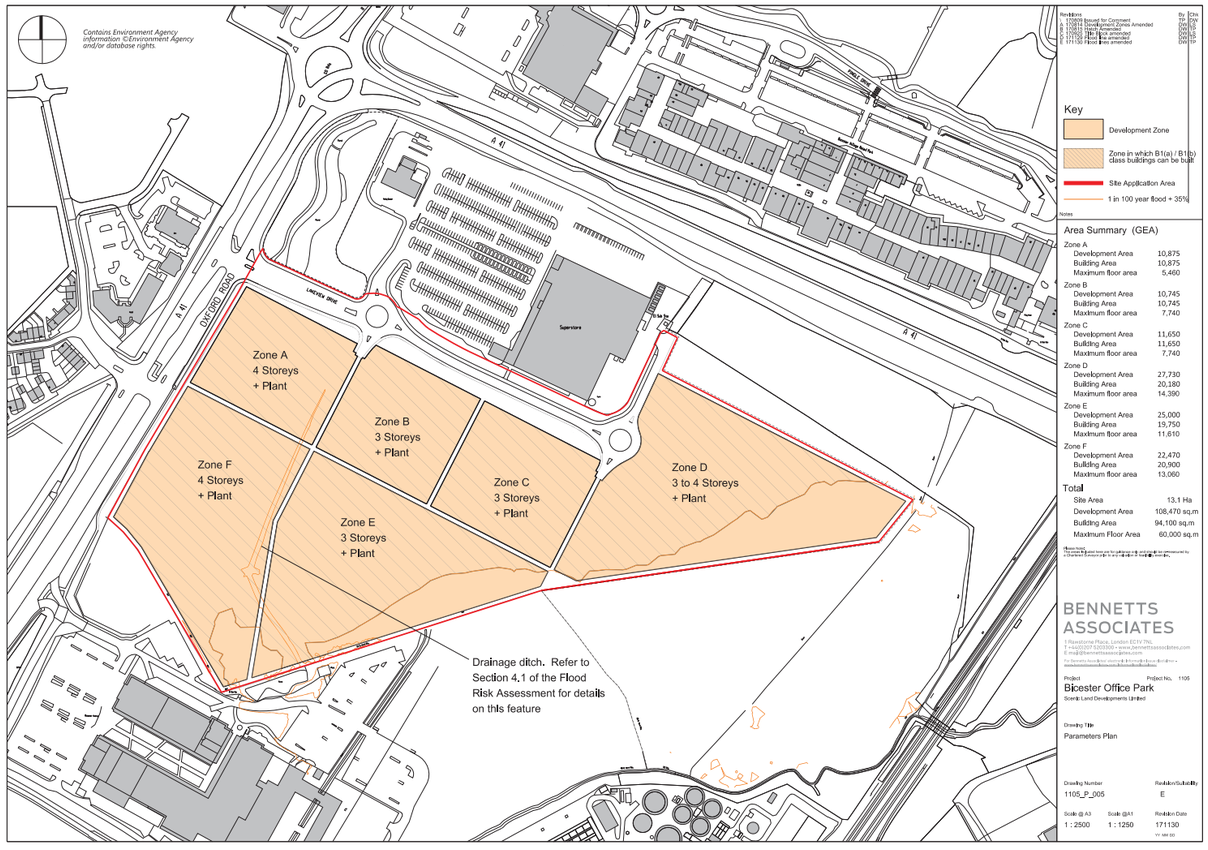
Darren Humphries
Public Access
Joint Information Management Unit

CF1	CF2	CF3	CF4	CF5	CF6
405. Failed to look properly	509. Distraction in vehicle	. Not coded	. Not coded	. Not coded	. Not coded
501. Impaired by alcohol	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
406. Failed to judge other persons path or speed	310. Cyclist entering road from pavement	. Not coded	. Not coded	. Not coded	. Not coded
410. Loss of control	103. Slippery road (due to weather)	503. Fatigue	. Not coded	. Not coded	. Not coded
405. Failed to look properly	406. Failed to judge other persons path or speed	. Not coded	. Not coded	. Not coded	. Not coded
602. Careless/Reckless/In a hurry	707. Rain, sleet, snow, or fog	509. Distraction in vehicle	306. Exceeding speed limit	. Not coded	. Not coded
405. Failed to look properly	509. Distraction in vehicle	602. Careless/Reckless/In a hurry	306. Exceeding speed limit	. Not coded	. Not coded
406. Failed to judge other persons path or speed	602. Careless/Reckless/In a hurry	405. Failed to look properly	308. Following too close	. Not coded	. Not coded
307. Travelling too fast for conditions	406. Failed to judge other persons path or speed	. Not coded	. Not coded	. Not coded	. Not coded
306. Exceeding speed limit	408. Sudden braking	401. Junction overshoot	. Not coded	. Not coded	. Not coded
505. Illness or disability, mental or physical	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
405. Failed to look properly	308. Following too close	. Not coded	. Not coded	. Not coded	. Not coded
405. Failed to look properly	406. Failed to judge other persons path or speed	308. Following too close	. Not coded	. Not coded	. Not coded
406. Failed to judge other persons path or speed	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
103. Slippery road (due to weather)	405. Failed to look properly	406. Failed to judge other persons path or spe	308. Following too close	. Not coded	. Not coded
405. Failed to look properly	406. Failed to judge other persons path or speed	402. Junction restart	509. Distraction in vehicle	. Not coded	. Not coded
308. Following too close	308. Following too close	406. Failed to judge other persons path or spe	406. Failed to judge other persons pat	. Not coded	. Not coded
999. Other	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
308. Following too close	406. Failed to judge other persons path or speed	707. Rain, sleet, snow, or fog	103. Slippery road (due to weather)	607. Inexperience with type of vehicl	408. Sudden braking
308. Following too close	408. Sudden braking	602. Careless/Reckless/In a hurry	406. Failed to judge other persons pat	. Not coded	. Not coded
902. Vehicle in course of crime	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
407. Too close to cyclist, horse or pedestrian	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
501. Impaired by alcohol	410. Loss of control	408. Sudden braking	. Not coded	. Not coded	. Not coded
408. Sudden braking	406. Failed to judge other persons path or speed	405. Failed to look properly	. Not coded	. Not coded	. Not coded
405. Failed to look properly	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
405. Failed to look properly	406. Failed to judge other persons path or speed	308. Following too close	. Not coded	. Not coded	. Not coded
606. Inexperience of driving on the left	403. Poor turn or manoeuvre	. Not coded	. Not coded	. Not coded	. Not coded
109. Animal or object in carriageway	306. Exceeding speed limit	409. Swerved	503. Fatigue	. Not coded	. Not coded
405. Failed to look properly	406. Failed to judge other persons path or speed	308. Following too close	. Not coded	. Not coded	. Not coded
407. Too close to cyclist, horse or pedestrian	602. Careless/Reckless/In a hurry	. Not coded	. Not coded	. Not coded	. Not coded
405. Failed to look properly	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
501. Impaired by alcohol	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
405. Failed to look properly	406. Failed to judge other persons path or speed	308. Following too close	602. Careless/Reckless/In a hurry	509. Distraction in vehicle	306. Exceeding speed limit
505. Illness or disability, mental or physical	410. Loss of control	. Not coded	. Not coded	. Not coded	. Not coded
203. Defective brakes	202. Defective lights or indicators	405. Failed to look properly	406. Failed to judge other persons pat	506. Not displaying lights at night or i	310. Cyclist entering road from pavement
508. Driver using mobile phone	. Not coded	. Not coded	. Not coded	. Not coded	. Not coded
602. Careless/Reckless/In a hurry	503. Fatigue	. Not coded	. Not coded	. Not coded	. Not coded
503. Fatigue	509. Distraction in vehicle	405. Failed to look properly	. Not coded	. Not coded	. Not coded
405. Failed to look properly	406. Failed to judge other persons path or speed	509. Distraction in vehicle	. Not coded	. Not coded	. Not coded
405. Failed to look properly	403. Poor turn or manoeuvre	710. Vehicle blind spot	. Not coded	. Not coded	. Not coded
403. Poor turn or manoeuvre	410. Loss of control	. Not coded	. Not coded	. Not coded	. Not coded
302. Disobeyed Give Way or Stop sign or markings	601. Aggressive driving	602. Careless/Reckless/In a hurry	. Not coded	. Not coded	. Not coded
301. Disobeyed automatic traffic signal	406. Failed to judge other persons path or speed	403. Poor turn or manoeuvre	. Not coded	. Not coded	. Not coded
405. Failed to look properly	403. Poor turn or manoeuvre	. Not coded	. Not coded	. Not coded	. Not coded
302. Disobeyed Give Way or Stop sign or markings	405. Failed to look properly	406. Failed to judge other persons path or spe	408. Sudden braking	602. Careless/Reckless/In a hurry	. Not coded
405. Failed to look properly	403. Poor turn or manoeuvre	603. Nervous/Uncertain/Panic	308. Following too close	. Not coded	. Not coded
502. Impaired by drugs (illicit or medicinal)	602. Careless/Reckless/In a hurry	. Not coded	. Not coded	. Not coded	. Not coded

motion

Appendix C

Parameters Plan



Revisions	By	Chk
A 170809 Issued for Comment	TP	DW
B 170911 Flood Zone Extents Amended	DW	TP
C 170913 Hatch Amended	DW	TP
D 170925 Title block amended	DW	TP
E 171130 Flood Zone Amended	DW	TP

Key

- Development Zone
- Zone in which B1(a) / B1(b) class buildings can be built
- Site Application Area
- 1 in 100 year flood + 35%

Notes

Area Summary (GEA)

Zone A	
Development Area	10,875
Building Area	10,875
Maximum floor area	5,460
Zone B	
Development Area	10,745
Building Area	10,745
Maximum floor area	7,740
Zone C	
Development Area	11,650
Building Area	11,650
Maximum floor area	7,740
Zone D	
Development Area	27,730
Building Area	20,180
Maximum floor area	14,390
Zone E	
Development Area	25,000
Building Area	19,750
Maximum floor area	11,810
Zone F	
Development Area	22,470
Building Area	20,900
Maximum floor area	13,060
Total	
Site Area	13.1 Ha
Development Area	108,470 sq.m
Building Area	94,100 sq.m
Maximum Floor Area	60,000 sq.m

*Basis Note:
The areas in the above table are for planning purposes only and might be remeasured by individual purchasers prior to any detailed or reserved matters.

BENNETTS ASSOCIATES
1 Riverstone Place, London EC1V 7NL
T: +44 (0)20 7336 8030 W: www.bennettsassociates.com
E: mail@bennettsassociates.com

Project: Bicester Office Park
Project No.: 1105
Client: Land Developments Limited

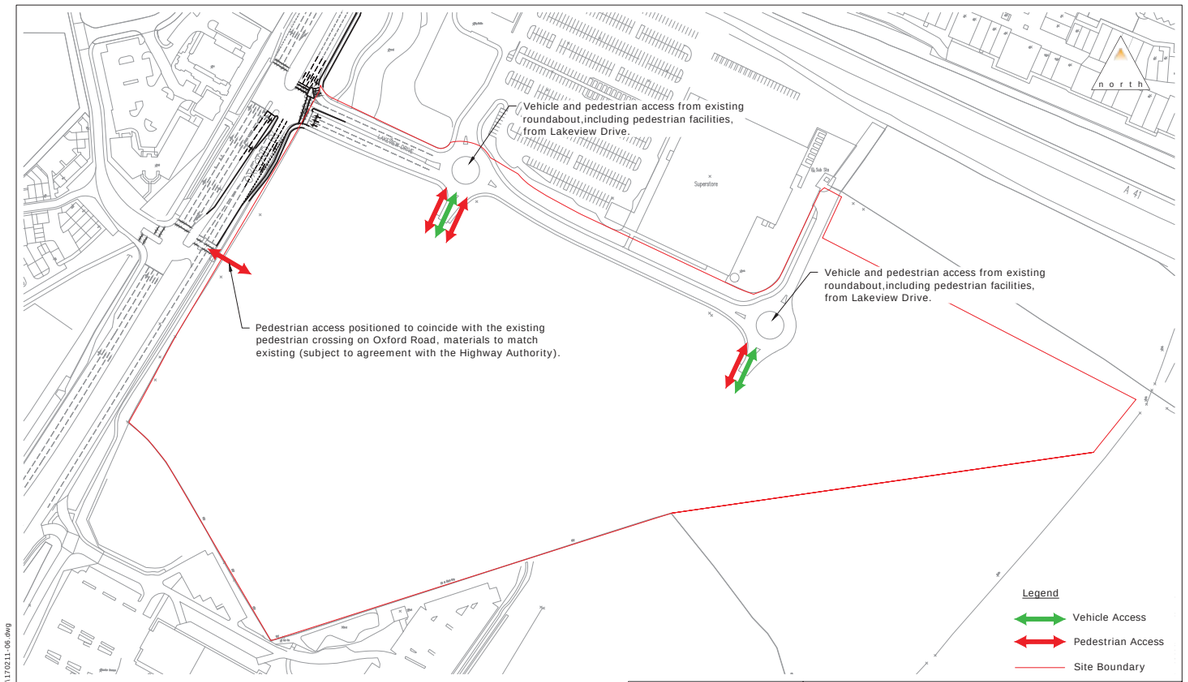
Drawing Title: Parameters Plan

Drawing Number: 1105_P_005
Revision/Suitability: E

Scale @ A3: 1 : 2500
Scale @ A1: 1 : 1250
Revision Date: 171130

Appendix D

Highways Access Plan



N:\Projects\motion2 170211\Drawings\170211-06.dwg

motion

84 North Street
Guildford
Surrey
GU1 4AU

T: 01483 531 300

Golden Cross House
8 Duncannon Street
London
WC2N 4JF

T: 020 7031 8141

www.motion.co.uk

Project:
Bicester Office Park

Title:
Highway Access Plan

Scale: 1:2000 (@ A3)

Notes:

Drawing:
170211-06

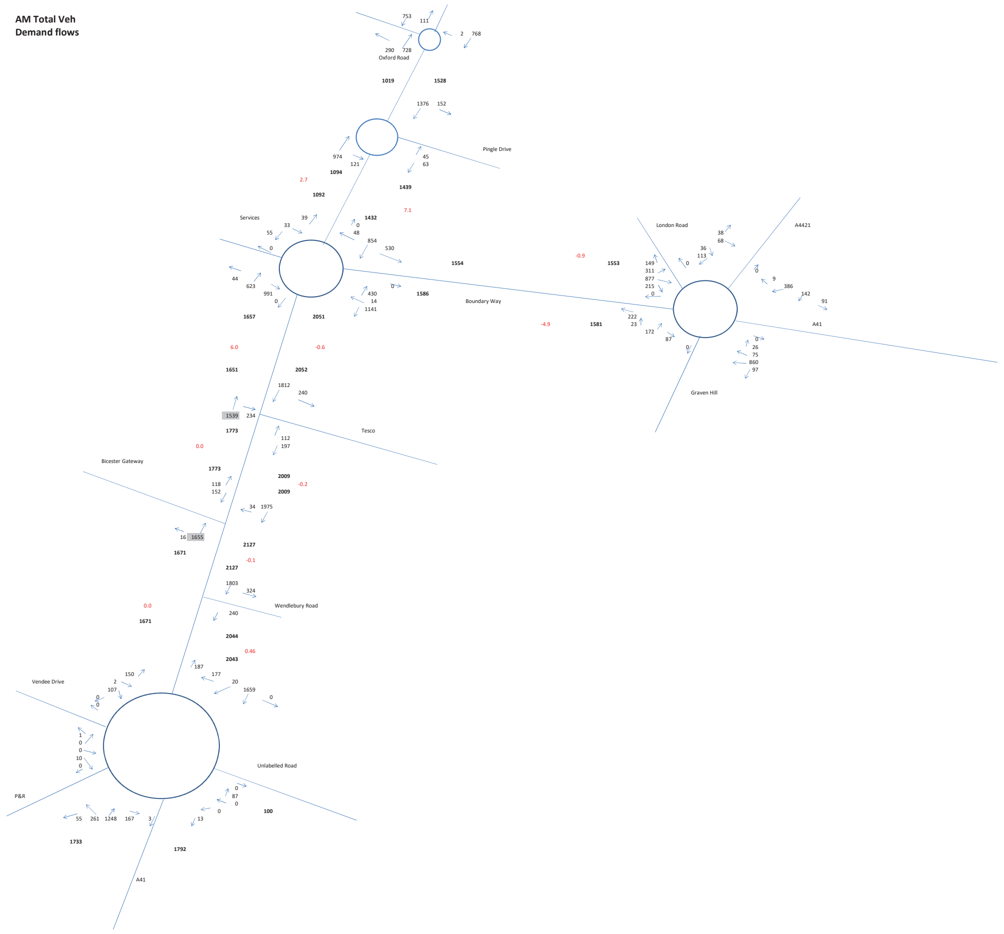
Revision:
-

motion

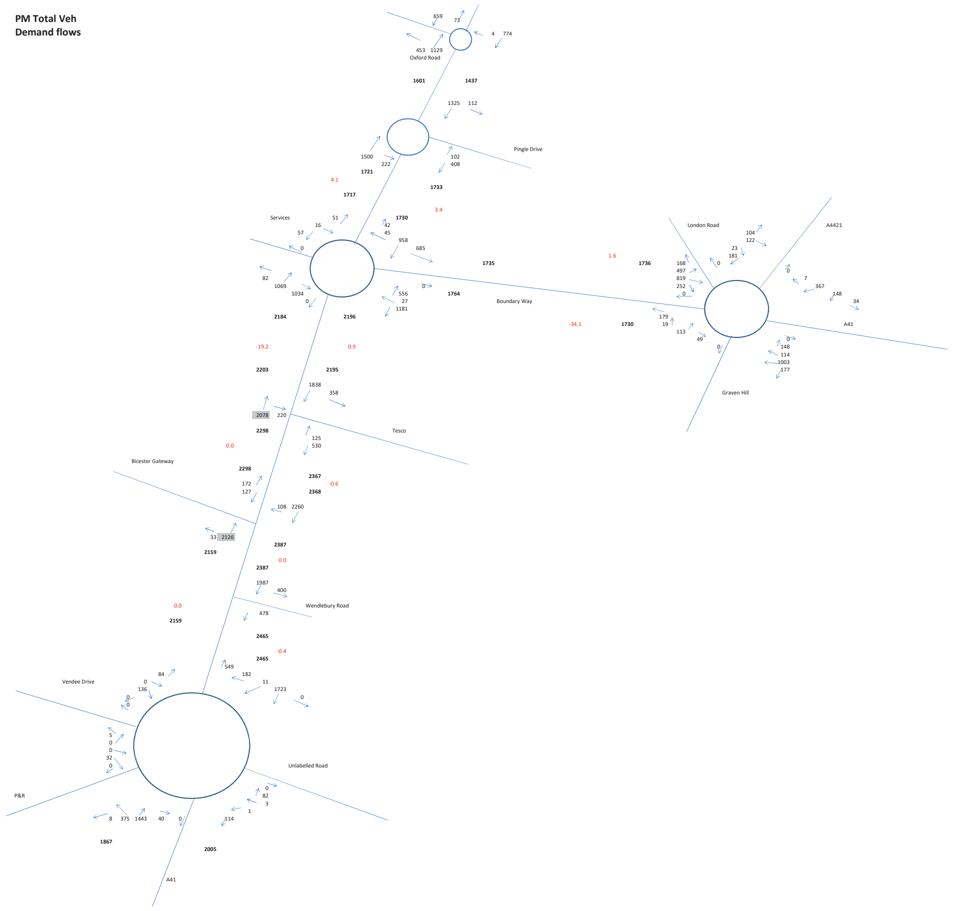
Appendix E

Bicester Traffic Model Outputs

AM Total Veh
Demand flows



PM Total Veh
Demand flows



motion

Appendix F

Model Output Files

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Middleton Stoney - Kings End - Oxford Road - 2017-08-01 (Base).j9
Path: N:\Projects\lmbic2 170211\Analysis\Modelling\Middleton Stoney
Report generation date: 23/08/2017 09:46:21

Summary of junction performance

	AM							PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2026 BTM													
Arm 1	2.6	10.18	0.73	B	50.90	F	-12 % [Arm 2]	3.8	17.76	0.80	C	24.86	C	-5 % [Arm 2]
Arm 2	39.9	156.81	1.08	F				14.8	64.74	0.97	F			
Arm 3	1.1	3.60	0.53	A				4.1	8.67	0.81	A			

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Middleton Stoney - Kings End - Oxford Road
Location	Bicester
Site number	
Date	15/06/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MOTION\klewis
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 BTM	AM	ONE HOUR	07:45	09:15	15	✓
D8	2026 BTM	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2026 BTM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3	50.90	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-12	Arm 2

Arms

Arms

Arm	Name	Description
1	Middleton Stoney	
2	Kings End	
3	Oxford Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.50	7.50	32.0	20.0	19.0	35.0	
2	3.50	4.50	10.0	80.0	19.0	35.0	
3	7.50	7.50	0.0	17.0	19.0	40.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.699	1893
2	0.591	1315
3	0.749	2174

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 BTM	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	864	100.000
2		ONE HOUR	✓	770	100.000
3		ONE HOUR	✓	1018	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	111	753
	2	2	0	768
	3	290	728	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	1
	2	0	0	4
	3	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.73	10.18	2.6	B	793	1189
2	1.08	156.81	39.9	F	707	1060
3	0.53	3.60	1.1	A	934	1401

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	650	163	546	1486	0.438	647	219	0.0	0.8	4.276	A
2	580	145	564	941	0.616	573	630	0.0	1.6	9.651	A
3	766	192	1	2121	0.361	764	1136	0.0	0.6	2.648	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	777	194	654	1410	0.551	775	262	0.8	1.2	5.657	A
2	692	173	675	877	0.790	685	753	1.6	3.4	18.076	C
3	915	229	2	2121	0.431	914	1358	0.6	0.8	2.982	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	951	238	801	1305	0.729	946	321	1.2	2.6	9.877	A

2	848	212	824	791	1.072	767	922	3.4	23.5	78.498	F
3	1121	280	2	2121	0.528	1119	1590	0.8	1.1	3.590	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	951	238	802	1304	0.729	951	321	2.6	2.6	10.180	B
2	848	212	829	789	1.075	782	924	23.5	39.9	156.806	F
3	1121	280	2	2121	0.528	1121	1609	1.1	1.1	3.598	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	777	194	655	1408	0.551	782	263	2.6	1.2	5.801	A
2	692	173	682	873	0.793	832	756	39.9	5.0	94.847	F
3	915	229	2	2121	0.432	917	1511	1.1	0.8	2.994	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	650	163	549	1485	0.438	652	220	1.2	0.8	4.335	A
2	580	145	569	938	0.618	593	632	5.0	1.7	10.808	B
3	766	192	2	2121	0.361	767	1160	0.8	0.6	2.659	A

2026 BTM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3	24.86	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-5	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 BTM	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	732	100.000
2		ONE HOUR	✓	778	100.000
3		ONE HOUR	✓	1582	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	73	659
	2	4	0	774
	3	453	1129	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	1
	2	0	0	0
	3	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.80	17.76	3.8	C	672	1008
2	0.97	64.74	14.8	F	714	1071
3	0.81	8.67	4.1	A	1452	2177

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	551	138	846	1283	0.429	548	343	0.0	0.7	4.877	A
2	586	146	493	1020	0.574	580	901	0.0	1.3	8.091	A
3	1191	298	3	2156	0.552	1186	1071	0.0	1.2	3.693	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	658	165	1013	1167	0.564	656	410	0.7	1.3	7.016	A
2	699	175	591	962	0.727	695	1078	1.3	2.5	13.207	B
3	1422	356	4	2156	0.660	1419	1282	1.2	1.9	4.869	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	806	201	1237	1010	0.798	797	501	1.3	3.6	16.197	C
2	857	214	717	887	0.966	822	1316	2.5	11.2	42.258	E
3	1742	435	4	2155	0.808	1733	1535	1.9	4.0	8.363	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	806	201	1243	1006	0.801	805	503	3.6	3.8	17.757	C
2	857	214	725	882	0.971	842	1323	11.2	14.8	64.744	F
3	1742	435	4	2155	0.808	1741	1563	4.0	4.1	8.674	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	658	165	1021	1161	0.567	668	414	3.8	1.3	7.441	A
2	699	175	601	956	0.732	747	1088	14.8	2.9	20.691	C
3	1422	356	4	2156	0.660	1431	1345	4.1	2.0	5.024	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	551	138	852	1280	0.431	553	345	1.3	0.8	4.974	A
2	586	146	498	1017	0.576	592	907	2.9	1.4	8.572	A
3	1191	298	3	2156	0.552	1194	1087	2.0	1.2	3.753	A