

1 INTRODUCTION

1.1 INTRODUCTION

1.1.1 Velocity Transport Planning (VTP) has been appointed by Firethorn Trust (the Applicant) to provide highways and transport planning advice for an outline planning application relating to the development of up to 530 dwellings on land which forms part of the North West Bicester Eco Town development, located in Oxfordshire.

1.1.2 The Application Site falls within the administrative area of Cherwell District Council (CDC) and within the authority of Oxfordshire County Council (OCC) who are the local highway authority.

1.1.3 The Proposed Firethorn Development description for the outline planning application (planning ref 21/01630/OUT), is as follows:

Outline planning application for residential development (within Use Class C3), open space provision, access, drainage and all associated works and operations including but not limited to demolition, earthworks, and engineering operations, with the details of appearance, landscaping, layout and scale reserved for later determination.

1.2 APPLICATION CONTEXT

1.2.1 CDC validated the outline planning application on the 06th of May 2021. In terms of highways and transport evidence, the application was supported by a Transport Assessment (TA) dated April 2021, Version 0.4, a Framework Residential Travel Plan (FRTP) dated April 2021, Version 0.3, and the Technical Chapters that formed part of the Environmental Statement (ES) dated April 2021.

1.2.2 Following the submission of the planning application, a number of consultation responses have been received from consultees and stakeholders, including the following:

- ⦿ Cherwell District Council
- ⦿ Oxfordshire County Council
- ⦿ National Highways
- ⦿ Bicester Bike Users Group; and
- ⦿ Elmsbrook Community Organisation

1.3 DOCUMENT PURPOSE AND STRUCTURE

1.3.1 This TN has been prepared to provide comprehensive responses to those consultees identified above and to provide further clarity and/or additional information that has been identified through the review of these consultation responses and following post-submission meetings.

1.3.2 Following this introduction, each consultation response has been addressed in the following sections of this TN in line with the above identified order.



2 RESPONSE TO CDC COMMENTS

2.1 INTRODUCTION

- 2.1.1 The CDC consultation response is dated the 21st of September 2021, and a copy of this is included at **ATTACHMENT 1** of this TN. This response includes a number of matters that CDC notes require further consideration and does draw on some of the comments received from other consultees.
- 2.1.2 In addition, a number of post-submission meetings have been held with various consultees, which have also informed the position set out within the CDC consultation response.
- 2.1.3 The CDC comments that relate to transport matters are set out on page 3 of the response. Whilst these are relatively limited in relation to highways and transport matters, CDC does acknowledge that OCC has raised comments on the application, which are addressed within the following section of this TN.

2.2 SCOPE OF CONSULTATION COMMENTS

You are aware of the comments and objections from the Local Highway Authority and Highways England (now National Highways). I have also highlighted to you that a large proportion of the public comments received have raised concerns on transport grounds and that detailed comments have also been received from local groups including Bicester Bike Users Group and the local Community Management Organisation on site. It is understood that you are working on a comprehensive response to address the comments made.

VTP RESPONSE TO CDC COMMENT 1

- 2.2.1 The CDC response is noted and accepted, with this TN forming the comprehensive response to the consultation comments noted above in response to the outline planning application.

2.3 WESTERN ACCESS CAPACITY

Should the access arrangement strategy be demonstrated to be suitable, then we will need to establish the capacity that could be accommodated from Access B to the western land to ensure that this is a clear parameter for future reserved matter submissions to be secured via planning condition.

VTP RESPONSE TO CDC COMMENT 2

- 2.3.1 Within the traffic assessments agreed with OCC prior to submission and presented within the TA, the access to the western parcel of land from a point south of the bus gate, which is referred to as 'Access B', has been assessed as servicing up to 69 residential units. This equates to approximately 13% of the total 550 units that were assessed within the TA, the findings of which were deemed to be acceptable by OCC.
- 2.3.2 It is also noted that the impact associated with the 69 units at Charlotte Avenue was able to be accommodated on the network based on the results of the junction modelling undertaken.
- 2.3.3 OCC has requested a proportionate contribution towards the improvement and signalisation of the existing priority junction of Charlotte Avenue with the B4100, which will further alleviate any capacity constraints at this junction.



- 2.3.4 On that basis, it is considered that the maximum capacity for Access B to inform future reserved matters applications is approximately 70 residential units.

2.4 CONSTRUCTION TRAFFIC

It is noted that OCC have raised comments relating to the way the EIA assesses construction traffic and the impacts of this upon noise and vibration and the adequacy of the EIA in this respect.

VTP RESPONSE TO CDC COMMENT 3

- 2.4.1 VTP has provided input to an Addendum Environmental Statement (ES), which will be submitted by the Environmental Consultants, Barton Willmore.
- 2.4.2 The Addendum ES includes further details of the construction traffic in both Chapters 5 – Construction Methodology & Phasing, and Chapter 6 – Transport and Access.

2.5 GRAMPIAN CONDITION

There may be a need for a Grampian condition to restrict the level of development permissible until such time that the realigned A4095 is in place and opened to vehicular traffic.

VTP RESPONSE TO CDC COMMENT 4

- 2.5.1 It is understood that the Grampian Condition has been proposed to limit the amount of development that could be occupied on the wider North West Bicester (NWB) allocated site prior to the implementation of the realigned A4095. Recent discussions with the Engineers at OCC that are coordinating this work have established that a Value Engineering exercise is currently being undertaken on the approved layout of the A4095 Strategic Highway Improvement scheme, and as such, the planned date of implementation in 2024 is likely to slip to 2026.
- 2.5.2 Hyder Consulting (HC) prepared an assessment in 2014 that identified that 900 dwellings could be occupied on the allocated site prior to the implementation of the A4095 Strategic Highway Improvement.
- 2.5.3 Using the agreed methodology set out by HC, an additional assessment was undertaken by David Tucker Associates (DTA) in 2015 that identified that between 900 and 1,200 dwellings could be occupied, which would facilitate the occupation of an ‘additional’ 150 dwellings from the Albion Land development.
- 2.5.4 VTP has prepared a Technical Note based on the same methodology set out by HC and DTA that identifies that a maximum of 1,150 units could be occupied prior to the implementation of the A4095 Strategic Highway Improvement before the highway impacts are identified to be “severe”. A copy of this TN is included at **ATTACHMENT 2** of this TN.
- 2.5.5 It is acknowledged that 393 dwellings have been permitted and are partially occupied at the Exemplar scheme, and 150 dwellings are permitted to be occupied on the Albion Land scheme, which equates to a total of 543 dwellings.
- 2.5.6 As a total of 1,150 dwellings has been demonstrated to be acceptable to be occupied prior to the implementation of the A4095 Strategic Highway Improvement, it is considered acceptable for the full 530 dwellings associated with the Firethorn application site to be occupied prior to the implementation of the A4095 Strategic Highway Improvement, with 77 occupations still available for other developments within the wider NWB allocated site.



- 2.5.7 Based on the above, it is suggested that there would be no need for a Grampian Condition associated with the Firethorn application site that might restrict the number of occupations prior to the implementation of the A4095 Strategic Highway Improvement.

2.6 CAR PARK PROVISION

We discussed the provision of a car park on site to provide provision for users of the Church (it is noted that a crossing is sought to provide access between the site and the Church) and it is understood that the proposed area for car parking (part of application 20/01325/F) may be available for this purpose. I would be grateful if this could be explained as a response to this point raised.

VTP RESPONSE TO CDC COMMENT 5

- 2.6.1 As noted within the CDC response, the application for a car park on the Home Farm site has been made by a third party. It is also acknowledged that The Applicant has considered the request to provide a new pedestrian crossing facility from the application site to the St Laurence Church in Caversfield, which is located on the northern side of the B4100 opposite the eastern parcel of the application site.
- 2.6.2 As the suitability of this car park is the subject of a separate planning application that is outside of the control or ownership of the Applicant, it is not considered appropriate to comment on this arrangement. However, the proposals associated with the provision of the new pedestrian crossing facility would not prejudice the provision of this car park by others, and in fact, would enhance the safety and suitability of this car park being utilised by churchgoers in the future.



3 RESPONSE TO OCC COMMENTS

3.1.1 The formal OCC consultation response in relation to Transport matters is dated the 06th of July 2021, and a copy of this is included at **ATTACHMENT 3** of this TN. Following post-submission meetings and discussions, OCC prepared further comments, which were circulated by email dated the 23rd of September 2021. A copy of these additional comments is also included at **ATTACHMENT 3**.

3.1.2 It is noted from the formal consultation response dated July 2021 that OCC objected to the planning application as submitted and listed the three reasons for objection as follows:

1. *Some inaccuracies and omissions in the Transport Assessment and Environmental Statement mean that it is not possible to fully assess the impact of the development in accordance with paragraphs 109 and 111 of the NPPF.*
2. *Some of the works to provide safe access are outside the red line and not on adopted highway, meaning that the development may fail to provide safe and suitable access to the site for all users in accordance with paragraph 108 of the NPPF*
3. *The site will create a desire line across the B4100 to the local Church, and no safe crossing is offered by the development, contrary to paragraph 108 of the NPPF*

3.1.3 OCC also provided information in relation to Section 106 Contributions and Obligations that would be expected in relation to the proposed development. The details of these suggested contributions are summarised in **Table 3-1**.

Table 3-1: Summary of OCC Identified Contributions

Contribution	Amount	Towards (details)
Highway Works 1	£47,289	Improvements to junction of Charlotte Avenue/B4100
Highway Works 2	£278,330	Improvements to junction of B4100/A4095
Ped/Cycle Infrastructure	£362,465	Improvements to cycle route between site and town centre/stations
Public transport services and infrastructure	£696,118	Improvements to bus services and infrastructure at NW Bicester
Travel Plan Monitoring	£2,832	Monitoring of the travel plan for its life
Public Rights of Way	£50,000	New public right of way and improvements to the public rights of way in the vicinity of the site
Pad/cycle bridge	TBC	The provision of a pedestrian/cycle bridge over the watercourse into the adjacent site to the west

3.1.4 OCC identified a series of further obligations, which are summarised as follows:

- *Proportionate contribution to Major Infrastructure costs (primarily the strategic link road/A4095 diversion through the NW Bicester allocation)*
- *Off site highway works*
- *Vehicular and ped/cycle connections into Elmsbrook (required as these are not public highway)*
- *Participation in North West Bicester Bus Forum*
- *Measures to ensure the delivery of the ped/cycle bridge*



- *Ped/cycle connections to adjacent site*

3.1.5 OCC's formal consultation response also identified a series of key points, which are set out below:

- *Further information and clarification needed on access points*
- *Visibility splay for construction access appears to cross third party land. Clarity needed on construction access to western parcel.*
- *Inadequacies in the Environmental Statement, particularly around assessment of construction traffic*
- *Inaccuracies in the TA regarding sustainable transport accessibility*
- *Crossing of the B4100 to Caversfield Church is required*
- *Connection to adjacent parcels needs to be secured*
- *Further work needed to identify suitability of spine road for additional traffic, and any mitigation measures needed.*

3.1.6 Whilst the comprehensive formal response from OCC did provide further details on the points raised above, it is considered appropriate to address the matters identified as key points within this TN with a view to providing sufficient further evidence to satisfy OCC in order for the three highways objections to be removed.

3.1.7 The OCC email response dated the 23rd of September 2021 identified further points for consideration and for ease of reference. These are summarised out below:

- *Major Infrastructure – a cost estimate from the A4095 project manager is to be provided by OCC.*
- *Access Arrangements – additional land is to be dedicated on the northern corner of Access C to maximise the forward visibility envelope. This could be grass verge. Further consideration of Access D is to be provided and a direct pedestrian connection to the bus stop on Braeburn Avenue is to be considered.*
- *Construction Access – details of the extent of adoption are to be checked with the OCC highway records team as it is expected that the ditch adjacent to the B4100 is not adopted. A setback distance of 2.4m was agreed.*
- *Cycling on carriageway – an assessment of the suitability of on carriageway cycling is to be undertaken in accordance with LTN 1/20.*
- *Crossing of the B4100 – OCC acknowledge that the offer of providing a signalised crossing of the B4100 to the Church would remove this objection.*
- *Footbridge to the Adjacent Site – OCC will be seeking a contribution towards the provision of a footbridge leading to the adjacent site, which would be in addition to the public rights of way contribution. Details of the potential footbridge, including a cost estimate are to be provided, so that a 50% contribution can be agreed.*
- *Traffic Impact – potential for a sensitivity test to help overcome the objections of the resident's association.*



- *NMU Assessment of the Spine Road – do the adjusted modal shares match with the targets in the Elmsbrook travel plan?*
- *Cumulative Impact – the cumulative traffic impact on Charlotte Avenue suggests that off carriageway facilities are required, even at 20mph, which means the current layout, particularly over the bridge, may not be suitable for the primary street for the masterplan development. This provision should be in accordance with LTN 1/20.*
- *Construction Access to the Western Parcel – OCC acknowledge that an alternative means of construction access to the western parcel is to be provided.*
- *Response to the Elmsbrook Community Association – OCC note that a response to the Elmsbrook Community Association is to be provided.*

3.1.8 These further points of consideration are also addressed within this section of the TN.

3.2 APPLICATION DRAWINGS

3.2.1 Following the various updates to the site access arrangements, the application boundary, and the provision of the proposed pedestrian crossing to the Church, a new set of application drawings has been provided within this TN.

3.2.2 For ease of reference, these are identified as follows, with the full set of drawings included at **ATTACHMENT 4** of this TN:

- ⊙ 4600-1100-T-004 Rev D – Proposed Pedestrian Crossing to Church
- ⊙ 4600-1100-T-005 Rev E – Proposed Planning Application Boundary
- ⊙ 4600-1100-T-009 Rev D – Site Accesses A + B + C
- ⊙ 4600-1100-T-010 Rev B – Site Access D
- ⊙ 4600-1100-T-011 Rev E – Site Access E – Construction Access (Eastern Parcel)
- ⊙ 4600-1100-T-020 Rev B – Site Access A – Swept Path Assessment
- ⊙ 4600-1100-T-021 Rev B – Site Access B – Swept Path Assessment
- ⊙ 4600-1100-T-022 Rev B – Site Access C – Swept Path Assessment
- ⊙ 4600-1100-T-023 Rev B – Site Access D – Swept Path Assessment
- ⊙ 4600-1100-T-024 Rev B – Site Accesses A + B + C – Visibility Splays
- ⊙ 4600-1100-T-026 Rev B – Construction Access Overview Plan
- ⊙ 4600-1100-T-027 Rev B – Construction Access (Western Parcel)
- ⊙ 4600-1100-T-029 Rev A – Existing Layby Swept Path Assessment

3.3 ACCESS ARRANGEMENTS

SITE ACCESS A

3.3.1 VTP Drawing 4600-1100-T-020 Rev B – Site Access A - Swept Path Assessment provides the swept path details of a large refuse vehicle and a large car manoeuvring to and from Charlotte Avenue to the south through this junction.



3.3.2 There are no visibility constraints at this access, and the works required to deliver the access arrangements to the eastern parcel of the application site are simply to extend the existing cul-de-sac. No works are proposed to the existing junction arrangement with the Spine Road as these works have already been completed.

3.3.3 It is acknowledged that a large refuse vehicle and a large car could not manoeuvre through this junction simultaneously, but as appropriate visibility splays and forward visibility can be achieved at the existing junction with the Spine Road, it is considered that this junction arrangement is acceptable.

SITE ACCESS B

3.3.4 VTP Drawing 4600-1100-T-021 Rev B – Site Access B - Swept Path Assessment provides the swept path details of a large refuse vehicle manoeuvring to and from Charlotte Avenue to the south through this junction.

3.3.5 There are no visibility constraints at this proposed access, and the works required to deliver the access arrangements to the western parcel of the application site from this proposed junction have been slightly amended to reflect a tighter radius towards the north to deter drivers from manoeuvring towards the bus only link.

3.3.6 It is acknowledged that a large refuse vehicle and a large car could not manoeuvre through this junction simultaneously, but as appropriate visibility splays and forward visibility can be achieved at the proposed junction with the Spine Road, it is considered that this junction arrangement is acceptable.

SITE ACCESS C

3.3.7 VTP Drawing 4600-1100-T-022 Rev B – Site Access C - Swept Path Assessment provides the swept path details of a large refuse vehicle manoeuvring to and from Braeburn Avenue to the north through this junction.

3.3.8 There are no visibility constraints at this access (see further details below), and the works required to deliver the access arrangements to the western parcel of the application site from this proposed junction have been slightly amended to reflect a tighter radius towards the south to deter drivers from manoeuvring towards the bus only link.

3.3.9 It is acknowledged that a large refuse vehicle and a large car could not manoeuvre through this junction simultaneously, but as appropriate visibility splays and forward visibility can be achieved at the proposed junction with the Spine Road, it is considered that this junction arrangement is acceptable.

3.3.10 It is noted that OCC requested additional land is to be dedicated on the northern corner of Access C to maximise the forward visibility envelope, which could be provided as a grass verge. This is considered to be an acceptable arrangement, and adequate land is available for this improved visibility envelope to be provided. The full details of this junction arrangement will be considered at the detailed design stage.

SITE ACCESS D

3.3.11 VTP Drawing 4600-1100-T-023 Rev B – Site Access D - Swept Path Assessment provides the swept path details of a large refuse vehicle and a car manoeuvring through this junction simultaneously.



- 3.3.12 It is noted that the OCC consultation response has requested that the swept path analysis should be provided for the entire route, which is assumed to be from the application site to the currently adopted highway, which is identified as being the junction of Braeburn Avenue with the B4100 Banbury Road. However, refuse vehicles and cars will be required to pass each other simultaneously for the permitted Exemplar scheme along this route, whether the application site is delivered or not. In addition, a Section 38 Agreement will be entered into (if it hasn't already been) that will ensure that the existing access roads within Phase 4 of the Exemplar scheme are adopted. It is expected that this adoption will be agreed upon prior to the proposed Firethorn development being implemented.
- 3.3.13 Based on the fact that the internal access roads of the Exemplar scheme are to be adopted by OCC and therefore would have been approved by the authorities on the basis that they are acceptable for cars and refuse vehicles associated with the permitted Exemplar scheme to pass each other, the swept path assessment demonstrates that the site access arrangement can accommodate these vehicle movements simultaneously.
- 3.3.14 It is noted that OCC would expect a 2.0m wide footway to be provided on both sides of the access road. The updated application drawing 4600-1100-T-010 Rev B – Site Access D identifies that the existing footway width on the western side of the internal access road within Phase 4 of the Elmsbrook development is only 1.8m. As such, the proposed footway width to connect to this existing provision is identified as being 1.8m within the application site.
- 3.3.15 A 2.0m verge has been identified on the eastern side of the proposed access road within the application site, but as no footway is provided within Phase 4 of the Exemplar scheme at the point where the existing access road meets the Firethorn application site, there would be little sense in providing a 2.0m wide footway within the application site that does not connect to an existing footway.
- 3.3.16 It is worth noting that the residents of the proposed Firethorn development within the western parcel, which could amount to as many as 400+ dwellings of the proposed 530 dwellings being applied for, would have very little desire (if any) to walk along the existing footway on the eastern side of the existing access road within Phase 4 of the Elmsbrook development as there is no destination towards the north of the application site that would attract pedestrians. It is considered that the considerable majority, if not all of the pedestrians generated by the proposed development within the western parcel, would utilise the pedestrian routes towards the south and along Charlotte Avenue, where local facilities are located.
- 3.3.17 It is acknowledged that a bus stop is located on Braeburn Avenue that might attract pedestrian footfall towards the north of the western parcel, but these pedestrians could utilise the bus stops to the south of the application site located on Charlotte Avenue or utilise the dedicated pedestrian route across the Exemplar scheme, as identified by the application boundary on the Site Access plan. Further commentary is provided within this note in relation to the pedestrian impacts along the Spine Road.
- 3.3.18 It is acknowledged that the residents within Phase 4 of the Exemplar scheme would be afforded a far more direct pedestrian route to local facilities, including the Gagle Brook Primary School, via the western parcel of the Firethorn application site and by utilising the 1.8m footway connection identified. Phase 4 of the Exemplar scheme consist of 138 dwellings. Based on the mode split assumptions to be applied to the application site, 138 dwellings would generate a total of approximately 36 two-way pedestrian movements in the AM peak hour and a total of approximately 32 two-way pedestrian movements in the PM Peak hour. This is based on a mode split of just over 19% associated with the pedestrians. As such, the single 1.8m footway is considered to be more than adequate for the pedestrian movements predicted to be generated



by Phase 4 of the Exemplar scheme.

- 3.3.19 Should OCC require that the developers of the Phase 4 Exemplar scheme provide a further 2.0m footway on the eastern side of the existing access road, the proposals for Site Access D of the application site would not prejudice this provision in the future as an adopted 2.0m wide verge has been identified on the application drawing. This request for the additional footway provision may be raised as part of the technical approvals process of the Section 38 Detailed Design of the Exemplar scheme. If the Section 38 has already been approved, then it must be considered that the internal access roads within the Exemplar scheme are considered to be acceptable and would be adopted soon. This would result in an amendment to the application boundary.

3.4 CONSTRUCTION ACCESS

- 3.4.1 VTP Drawing 4600-1100-T-026 Rev B – Construction Access Overview Plan presents the proposed construction access arrangement to both the western and eastern parcels. These temporary means of access to the application site have been designed to ensure that the application boundary includes the land required to deliver these access arrangements from the application site to the currently adopted highway.
- 3.4.2 For the western parcel, the adopted highway is identified as being the layby to the north of the priority junction of Braeburn Avenue with the B4100. For the eastern parcel, the adopted highway is located along the verge of the B4100, but it is noted that this highway boundary excludes the roadside ditch to the north of the proposed temporary construction access.

CONSTRUCTION ACCESS TO THE WESTERN PARCEL

- 3.4.1 VTP Drawing 4600-1100-T-027 Rev B – Construction Access Western Parcel presents the proposed construction access arrangement to the western parcel from the layby located to the north of the priority junction of Braeburn Avenue with the B4100.
- 3.4.2 The temporary access is proposed to be formed along the western boundary of Phase 4 of the Exemplar scheme, and discussions with both A2 Dominion and Crest Nicholson have been undertaken to ensure that this temporary arrangement is acceptable.
- 3.4.3 The temporary access road has been considered in the context of facilitating two-way HGV access for large articulated vehicles to use this route simultaneously. The swept path assessment of a 16.5m articulated HGV is included on the plan. By ensuring that simultaneous movements can be achieved along the temporary access road, there is no risk that any construction traffic would have to wait within the layby for another vehicle to exit the site before being able to enter the temporary access road. This arrangement avoids the potential for any disruption or delay to vehicles that are not associated with the construction of the application site that might be using the layby.
- 3.4.4 The width of the temporary access road is identified as being 7.0m, and fencing is proposed to assist with the screening of this temporary activity from the residents of Phase 4 of the Exemplar scheme.
- 3.4.5 It is noted that in order to provide this temporary access road, there is a need to relocate the substation that has been proposed on Phase 4 of the Exemplar scheme, as well as to realign a short section of the internal road arrangement, which will also require the realignment of a highway swale. These proposed amendments to the layout of the Phase 4 scheme are not considered to warrant any changes to their planning position, and they have been informed of this arrangement and have confirmed that this would be acceptable. Temporary access to the substation would be via the temporary access road until such time as



the construction of the western parcel was completed and the temporary access road removed.

- 3.4.6 To ensure that the layby is suitable to accommodate large HGV movements, VTP Drawing 4600-1100-T-029 Rev A – Existing Layby Swept Path Assessment presents the turning movements of a 16.5m articulated HGV towards the north and south from the existing junction with the B4100. It is noted that adequate visibility is provided, and due to the wide junction arrangement, all movements from this junction for all vehicles is acceptable.
- 3.4.7 Access to the layby is only permitted from the south, and due to the existing central reserve arrangement that forms part of the Braeburn Avenue priority junction arrangement, all vehicles are prevented from turning into the layby from the north. **Figure 3-1** presents a screenshot from google street view of this arrangement.

Figure 3-1: Existing Access to the B4100 Layby



- 3.4.1 As direct access to the layby is prevented from the north of the B4100, all construction vehicles wishing to access the western parcel will have to approach from the south. The Addendum ES that supports the application states that the construction traffic that approaches from the north of the application site along the B4100 will have to continue along the B4100 to the existing roundabout junction with the A4095 and Banbury Road.
- 3.4.2 However, it is noted that this existing roundabout junction is the subject of a current planning application (Planning Ref 21/02457/OCC), which is proposed to reconfigure this existing roundabout arrangement to provide a four-arm signalised crossroads arrangement.
- 3.4.3 A copy of the proposed four-arm signalised junction arrangement is included at **ATTACHMENT 5** of this TN. As the proposed signalised junction would not accommodate U-turn movements, the Addendum ES has considered that construction traffic accessing the western parcel from the north will have to pass through the proposed signalised junction towards the east and perform a U-turn movement at the existing A4095/A4421/Skimmingdish Lane/Buckingham Road roundabout junction.
- 3.4.4 This is considered to be the most robust assessment, and it is acknowledged will result in some double counting of construction traffic along some of the identified links. This has been accounted for within the

assessment of construction traffic set out within the Addendum ES.

CONSTRUCTION ACCESS TO THE EASTERN PARCEL

- 3.4.5 VTP Drawing 4600-1100-T-011 Rev E – Site Access E – Proposed Construction Access has been updated to reflect OCC’s comments in relation to the identified visibility splays and the potential encroachment on third party land.
- 3.4.6 The highway boundary details, as provided by OCC, have been included on the VTP drawing and account for the roadside ditch that is not adopted by OCC.
- 3.4.7 OCC has confirmed that visibility splays of 2.4m x 90.0m are appropriate for this temporary construction access, and these visibility splays are presented on the VTP drawing.
- 3.4.8 As a result of avoiding the roadside ditch to the north of the temporary construction access, the visibility splay towards the north has been identified as being slightly offset into the carriageway. This is considered to be acceptable for visibility in this direction as the vehicles on the B4100 within this carriageway lane will be travelling away from the driver’s position as they are exiting the temporary access. For drivers approaching the temporary access from the north along the B4100, more than adequate forward visibility is provided in terms of stopping sight distance (SSD). The introduction of signage, as noted on the VTP drawing, is considered to assist with this amendment in terms of the visibility provision.
- 3.4.9 It is also noted that whilst the roadside ditch does not form part of the adopted highway land, and therefore visibility splays should not encroach on third party land, by the very nature of this being a roadside ditch, it is lower than the existing ground level where no vegetation is currently identified or considered to be a risk in the future as this would impact on the purpose of the roadside ditch. As such, in reality, the actual achievable visibility splay towards the north will be more than adequate but will cross this roadside ditch by a fraction. This encroachment on the roadside ditch is included on the VTP drawing and is identified as being very minor.

3.5 ENVIRONMENTAL STATEMENT – ASSESSMENT OF CONSTRUCTION TRAFFIC

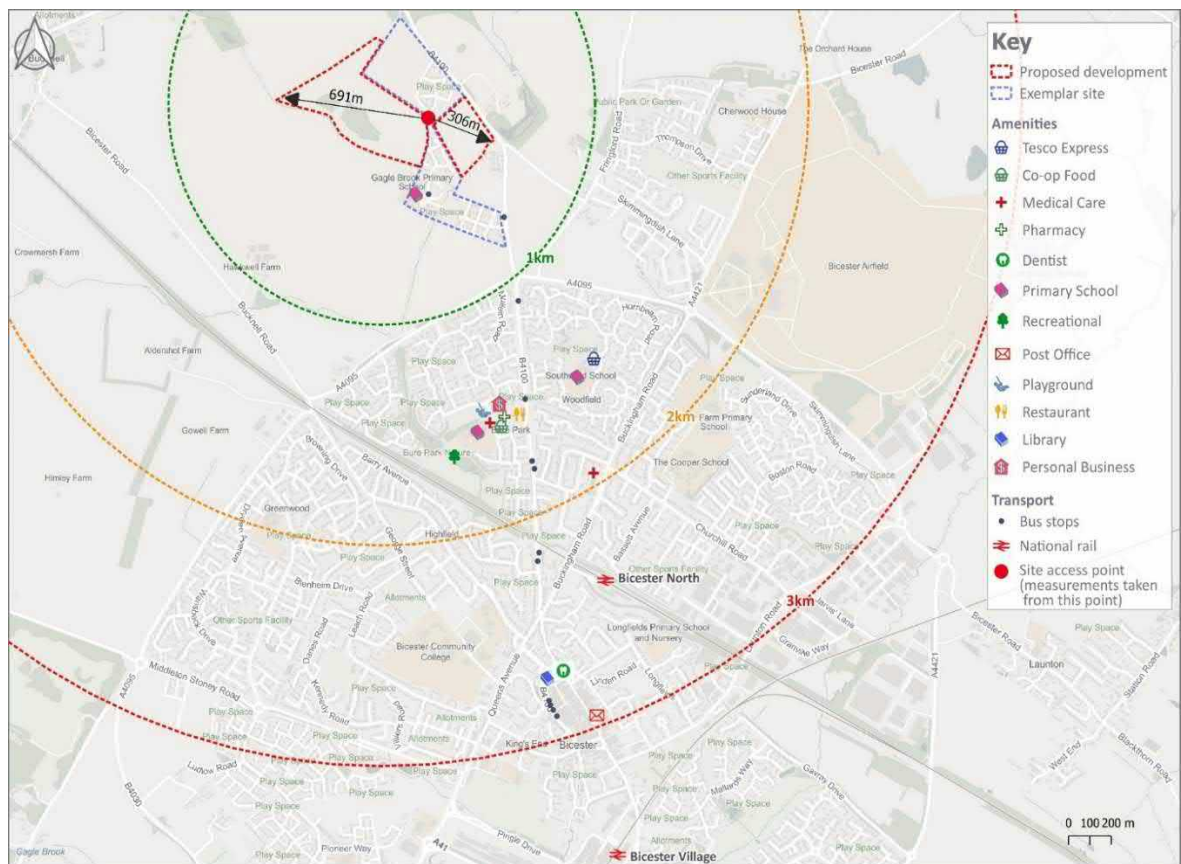
- 3.5.1 The Addendum ES includes an assessment of construction traffic that will utilise both the western and eastern temporary access roads to facilitate the construction of the proposed development.
- 3.5.2 The construction traffic assessment draws on the agreed levels of construction traffic that were set out within the hybrid planning application at Heyford Park (Planning Ref 18/00825/HYBRID).
- 3.5.3 The Addendum ES includes an assessment of the construction traffic and operational traffic in terms of the following transport effects on the following:
 - ⦿ Severance;
 - ⦿ Driver Delay;
 - ⦿ Pedestrian Delay;
 - ⦿ Cyclist Delay;
 - ⦿ Pedestrian Amenity;
 - ⦿ Cyclist Amenity;
 - ⦿ Fear & Intimidation; and
 - ⦿ Accidents & Road Safety



3.6 SUSTAINABLE TRANSPORT CONNECTIVITY

- 3.6.1 The distances to local facilities have been reviewed, and **Figure 3-2**, provided below, identifies the location from where the measurements have been taken more clearly. It is acknowledged that this location was not identified on the plan included within the TA, and in fact, the measurements were taken from the junction of Charlotte Avenue with the B4100, which is not relative to the application site.
- 3.6.2 In addition to the updated measurements, the starting point of the calculations, which is located between the eastern and western parcels, is identified as being approximately 300m from the easternmost point of the eastern parcel and approximately 700m from the westernmost point of the western parcel. The internal layouts of these parcels have not been agreed upon yet, but hopefully, this provides a little more clarity.

Figure 3-2: Local Amenities in proximity to the Application Site



- 3.6.3 The updated walking distances to local amenities are provided below in **Table 3-2**.



Table 3-2: Local Amenity Access in proximity to the Application Site

AMENITY	WALKING DISTANCE	TIME (MINS)
Gagle Brook Primary School	400	5
Bicester Play Area	1,800	23
Tesco Express	1,700	21
Jardines Pharmacy	1,800	23
North Bicester Surgery	1,800	23
Bure Park Nature Reserve	2,100	26
Bicester Post Office	3,300	41
Bus stop E1	180	2
Bus stop 505	800	10
Bicester North Station	2,600	33
Bicester Village Station	3,700	46

- 3.6.4 The walking distances outlined above have been established utilising the Google Maps tool, which identifies the most effective walking route from the starting point to the listed facilities.
- 3.6.5 It is also acknowledged that the application site would benefit from the nearby amenities associated with the Exemplar scheme, including a public house, a number of small retail units, and the employment facility at the Eco Business Centre, as well as other future land uses within the wider NWB Masterplan.
- 3.6.6 Whilst the facilities at the Exemplar scheme are not all yet constructed, it is recognised that there is already an established network of local facilities that will benefit future residents of the application site, with the prospect of a number of additional amenities being provided once construction of the Exemplar scheme is completed and other schemes within the wider NWB Masterplan come forward.

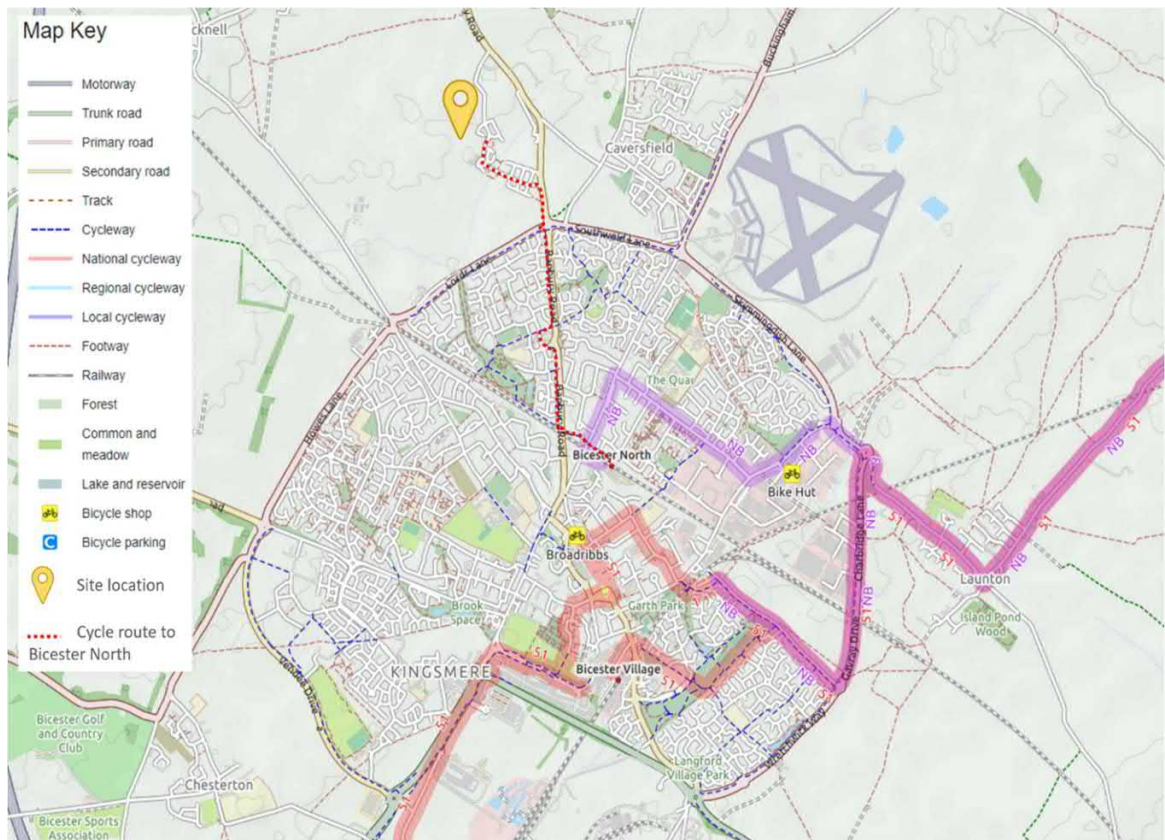
CYCLING

- 3.6.7 With respect to the OCC reference to the continuous off-carriageway cycle route to Bicester North railway station, this route has been reviewed, and it is maintained that whilst this route is only identified as being off-carriageway from the junction of Charlotte Avenue with the B4100, it is recognised to exist. It is acknowledged that there is a short section of approximately 50m along the eastern side of Buckingham Road as it passes under the railway bridge where a shared pedestrian/cycle route is not currently provided. However, the rest of the 1.8km route from the junction of Charlotte Avenue with the B4100 is considered to be along an off-carriageway cycle route.
- 3.6.8 It is acknowledged that the route may not currently comply with Local Transport Note (LTN) 1/20 ‘*Cycle Infrastructure Design*’, particularly in terms of the appropriate width requirements, but this is considered to be due to the fact that the route precedes the development of the LTN 1/20 guidance. It is also noted that there may be a need to utilise crossing facilities to cross the roads, but nevertheless, the vast majority of the route remains off-carriageway.



3.6.9 **Figure 3-3** highlights the cycle routes in Bicester, with the link from the application site to Bicester North railway station identified.

Figure 3-3: Cycle Routes in Bicester



3.6.10 In addition to the specific route to Bicester North railway station, OCC comment on the need to consider the Local Cycling and Walking Infrastructure Plan (LCWIP) that was presented to Cabinet in September 2020.

3.6.11 In order to address the need to consider improvements to the local pedestrian and cycling network both along specific routes and in accordance with the LCWIP, OCC has requested a financial contribution to the provision of pedestrian and cycle infrastructure in the order of £362,465 (as referenced in **Table 3-1** of this TN).

3.6.12 It is considered that this substantial sum will go some way to improving the off-site provisions, in line with the requirements of LTN 1/20 and will fulfil the Applicant’s obligations towards providing a proportionate contribution to the comprehensive upgrade of provision required to deliver the allocated developments as set out in the adopted CDC Local Plan.

3.7 CROSSING OF THE B4100 TO CAVERSFIELD CHURCH

3.7.1 VTP Drawing 4600-1100-T-004 Rev D – Proposed Pedestrian Crossing to Church presents the proposed layout of the signalised crossing facility to the Church.

3.7.2 The design of this crossing facility draws on the previous work undertaken by Peter Brett Associates (PBA) as part of the Home Farm SGR1 Planning Application (18/00484/OUT), which was supported by a Technical Note dated August 2018.

3.7.3 The PBA Technical Note considered three options for this crossing facility, as follows:



- ⦿ Option 1 - uncontrolled pedestrian crossing with dropped kerbs and tactile paving;
- ⦿ Option 2 - uncontrolled pedestrian crossing with central refuge island with dropped kerbs and tactile paving; and
- ⦿ Option 3 - signalised pedestrian crossing with dropped kerbs and tactile paving.

3.7.4 The recommendation that was set out by PBA following consultation with OCC is presented below for ease of reference:

“In the context of the above, while either Option 1 or Option 2 is the design favourable with Oxfordshire County Council and Cherwell District Council, given the volume of traffic along B4100 Banbury Road and the limits on required visibility splay, together with the vulnerability of users of the crossing facility, the correct technical solution is Option 3. The required visibility splay can be accommodated within public highway either to the nearside or offside signal head while the additional protection control in a location with potentially higher vehicle speeds is more suitable to the vulnerable users of St Laurence Church. ”

3.7.5 Based on the previous work undertaken by PBA and agreement with OCC, a signalised scheme is proposed and has been designed, which would be implemented as part of the Section 278 Works for the proposals.

3.8 CONNECTIONS TO THE ADJACENT SITE

3.8.1 OCC’s consultation response identified a number of aspects with regards to connecting with the adjacent site. In the first instance, a contribution of £50,000 has been requested to provide adequate connections to and improvements of the nearby Public Rights of Way. In addition, OCC has requested that details of a potential pedestrian/cycle bridge that will cross the watercourse to the south of the application site is identified to ensure that a 50% contribution to the provision of this footbridge can be made.

3.8.2 The contribution to provide connections to and the improvement of nearby Public Rights of Way is accepted.

3.8.3 Following the OCC comment on the provision of a crossing over the watercourse, an enquiry was sent to a specialist bridge consultant that has provided similar bridges for other developers, including for schemes within Oxfordshire. Whilst the full details of the design of this bridge would be required in due course, which it is expected could be required through an appropriate condition, details of the type of bridge and an indicative cost of this bridge are included at **ATTACHMENT 6** of this TN.

3.8.4 Whilst the indicative cost estimate includes for the provision of a wooden bridge, it is acknowledged that the current cost of timber is fluctuating. As such, the cost of a polybridge is also provided. The enclosed brochure is for the polybridge, but it should be noted that the provision of this bridge would require further consideration as part of the detailed design process in the future, when the cost of timber may be even higher than at present. As such, it is considered appropriate to summarise the cost of the proposed polybridge at £15,000 (see enclosed cost estimate). When the other aspects are included, the indicative total is in the order of £27,090. As such, to ensure some scope for changes in the cost of this footbridge in the future, it is considered robust to identify a total cost of £30,000.

3.8.5 OCC has requested that a 50% contribution to the provision of this footbridge be agreed, which it is considered would equate to £15,000.

3.8.6 As the proposed Firethorn development is only expected to provide up to 530 dwellings and when considered in the context of the wider NWB Masterplan, which identifies as many as 3,000 dwellings to be provided north of the railway line, excluding the existing 393 dwellings at the Exemplar scheme, of which



all of the residents would have access to this footbridge, a more proportionate contribution is considered to be in the order of 25%.

3.1 SPINE ROAD SUITABILITY ASSESSMENT

- 3.1.1 OCC has requested that an assessment of the existing Spine Road through the Exemplar scheme be undertaken to establish if the impact of the application site would be significant and require mitigation. To this extent, VTP has prepared a TN, which identifies the predicted levels of traffic that would not only be generated by the proposed Firethorn development, but it also considers the cumulative impact of the traffic associated with the permitted Exemplar scheme and the traffic that is identified as using part of the Spine Road that would be associated with the adjacent site that also forms part of the wider NWB Masterplan and would link with the existing Exemplar scheme at Cranberry Avenue near the Gagle Brook Primary School. A copy of the TN – Spine Road Assessment is included at **ATTACHMENT 7** of this TN.
- 3.1.2 It is acknowledged that the existing Exemplar scheme was granted planning permission by CDC on the 10th of July 2012 (Planning Ref 10/01780/HYBRID) and was supported by a TA that was originally prepared in 2010 and followed by an Addendum TA that was dated April 2011. The historical traffic generation identified for the Exemplar scheme was very dated and is not considered to be consistent with the agreed traffic generation profile for the Firethorn development or that associated with the adjacent site, which included traffic flows from the Bicester Transport Model (BTM). As such, the VTP Spine Road Assessment includes a sensitivity test that adjusts the original traffic generation for the permitted Elmsbrook development to ensure a robust assessment of the cumulative impacts on the Spine Road.
- 3.1.3 The Spine Road Assessment includes consideration of non-motorised users (NMU), i.e. pedestrians and cyclists that would also be required to use the Spine Road. Again, a cumulative assessment has been undertaken with consideration of an adjusted mode split for the Exemplar scheme as a sensitivity test.
- 3.1.4 The VTP Spine Road Assessment identified that the cumulative impact in terms of vehicles, pedestrians and cyclists on the northern section of the Spine Road, i.e. Braeburn Avenue, would not be significant, and the existing provision is more than adequate to accommodate the cumulative impacts that are expected in the future.
- 3.1.5 With regards to the southern section of the Spine Road, the VTP Spine Road Assessment identified that the portion of Charlotte Avenue from the bus gate to the Gagle Brook Primary School is considered to be adequate, but the east-west provision from the Gagle Brook Primary School to the junction with the B4100, with particular regard to the existing bridge that is located to the west of the Eco Business Centre, is not currently adequate to accommodate the levels of movement predicted by all modes in the future, particularly when considered in the context of the traffic impacts from the adjacent site.
- 3.1.6 It is acknowledged that the NWB Masterplan presented at Figure 10 of the CDC North West Bicester SPD (adopted February 2016), an extract of which is contained within the VTP Spine Road Assessment, identified that this east-west portion of Charlotte Avenue would have to be a “*Primary Road with segregated footpath/cycleway*” in order to accommodate the predicted impact of the full NWB Development.
- 3.1.7 The VTP Spine Road Assessment provides the technical analysis of this portion of the Spine Road and identifies that in order to accommodate the predicted levels of traffic, pedestrian and cycle movements, improvements to the Spine Road should be made in line with the adopted SPD. Four improvement options are set out within the VTP Spine Road Assessment for consideration, and it is expected that the future developments that will have an impact on this portion of the Spine Road, including the Firethorn



development, should contribute towards the improvement of the Spine Road in line with a strategy to be identified by OCC.

3.1.8 For completeness, **Table 3-3** summarises the assessment of the Spine Road Assessment.

Table 3-3: Spine Road Suitability Summary

MODE OF TRANSPORT	SUITABILITY CRITERIA	COMPLIANCE	MITIGATION NEEDED
Pedestrians	TfL Pedestrian Comfort Level Guidance - suggests minimum footway width of 2m in areas where pedestrian flows are less than 600 PPH	Yes - footways of at least 2m are provided	-
Cyclists	LTN 1/20 - minimum width of 3m for shared pedestrian and cyclist facilities. Traffic flow in order of 6,000 vehicles per day requires protected cycle facilities to ensure cycling is inclusive to all.	No	A series of options have been proposed to improve the provision in line with LTN 1/20, to be discussed and agreed with OCC
Vehicles	Superseded DMRB TA 77/99 has been extrapolated to determine that carriageway widths of 5.5m and 4.1m can accommodate two-way hourly flows in the order of 1,091 and 804 hourly vehicles	Yes - projected traffic flows fall below 804 two-way hourly flows in the future Base 2031 Do Something scenario	-

3.1 SUMMARY

3.1.1 Having considered the formal consultation response from OCC dated the 06th of July 2021 and the further comments set out within the email dated the 23rd of September 2021, both of which are included at **ATTACHMENT 3** of this TN, the above information and supporting Technical Notes provide the additional information required to satisfy OCC and for the three objections to be removed.

3.1.2 In summary, **Objection 1** noted that there were some inaccuracies within the TA, which have now been addressed. **Objection 2** commented that some of the works to provide safe access were outside of the red line and not on the adopted highway, which has now been addressed. **Objection 3** noted that a pedestrian crossing is to be provided across the B4100 to the local Church, which has now been identified.



4 RESPONSE TO NATIONAL HIGHWAYS COMMENTS

- 4.1.1 Highways England (HE), which became National Highways (NH) in August 2021, responded to the planning application on the 28th of July 2021, recommending that planning permission not be granted for a specified period, identified as being 56 days from the date of the recommendation, until a further assessment of the M40 Junction 9 was provided as follows:

“M40 Junction 9 Impact Assessment

The impact of the development is not shown south at Junction 9 of the M40, development flows can be seen to travel south on the B4100, A4095 and subsequently Vendee Drive towards this junction but no further distribution is provided in the diagrams nor mentioned in the text. The highest flow shown being +83 southbound in the AM peak on Vendee Drive. We are content with the trip generation and distribution methodology, however more information is required to show the traffic impact and distribution at Junction 9 of the M40.

Recommendation

Highways England recommends that Local Planning Authority does not grant planning permission for the application for a period of 56 days (Ref: P21/10042/FUL) from the date of this recommendation to enable further assessment to be undertaken.

Reason

To allow Highways England to understand the impact of the development on the safe and efficient operation of the Strategic Road Network and provide the Local Planning Authority with fully informed advice.”

- 4.1.2 The above formal response from HE was supported by an email dated the 28th of July 2021 addressed to CDC, which provided further details on the information requested in relation to further considerations at the M40 Junction 9, which forms part of the Strategic Road Network (SRN).
- 4.1.3 Whilst VTP responded to NH by email providing additional information for their consideration on the 21st of September 2021, NH wrote to CDC on the 21st of September 2021 recommending that the Local Planning Authority does not grant planning permission for a further 56 days from the date of the recommendation to enable a further assessment to be undertaken.
- 4.1.4 Following receipt and consideration of the details provided by VTP on the 21st of September 2021, NH responded to VTP on the 12th of October 2021 requesting further clarification of the assessment of traffic at the M40 Junction 9, to which VTP provided further details by email on the 14th of October and then again on the 10th of November 2021 including Traffic Flow Diagrams that identified the traffic flows associated with the application site that are predicted to pass through the M40 Junction 9.
- 4.1.5 The recommendations from HE/NH to CDC not to grant planning permission for an identified period, and the full correspondence between VTP and HE/NH, including the Traffic Flow Diagrams, is provided at **ATTACHMENT 8** of this TN.



4.2 SUMMARY

- 4.2.1 With respect to the impact of the traffic associated with the application site at the other junctions that form part of the SRN, i.e. the M40 Junction 10 and Baynards Green Roundabout at the junction of the A43 with the B4100, NH confirmed in their email dated the 12th of October 2021 that the levels of traffic predicted to pass through these junctions in the AM and PM peak hours would not be considered significant.
- 4.2.2 In relation to the impact of the Proposed Development at the M40 Junction 9 and the impact of the Proposed Development as a whole on the Strategic Road Network (SRN), it is acknowledged that the application site, which forms part of the wider NWB Masterplan – an allocated site in the CDC Local Plan, has already been assessed within the CDC Local Plan Evidence Base.
- 4.2.3 This is acknowledged within the Technical Note *‘Peripheral Routes Assessment Technical Note Cherwell Local Plan Main Modifications to Growth for Bicester’*, produced by WYG (now Tetra Tech) dated October 2014. Paragraph 3.1 of the WYG Technical Note acknowledged that there were discussions with the Highways Agency (now National Highways) in relation to the future impact of the Local Plan developments on the SRN and specifically on the M40 Junction 9.
- 4.2.4 Within the future scenarios assessed by WYG, the western parcel of the application site, which comprises up to 412 units (as identified within the VTP TA), falls within the 2,600 units assessed at the site known as ‘Application 1’ (14/01384/OUT) which was included within the assessments undertaken as part of the Local Plan Evidence Base.
- 4.2.5 As the CDC Local Plan has been adopted, it is considered that the impact of the western parcel of the application site has already been considered on the SRN and deemed to be acceptable by NH.
- 4.2.6 However, VTP does acknowledge that the eastern parcel of the application site lies outside of the Application 1 boundary, which comprises up to 138 units (as identified within the VTP TA), and as such, the traffic associated with the eastern parcel may not have been included within the Evidence Base for the CDC Local Plan. Whilst the eastern parcel does form part of the wider NWB Masterplan (as per Figure 10 of the SPD), it was shaded green on the NWB Masterplan and identified as space for ‘green infrastructure’, with no associated housing or vehicular impact.
- 4.2.7 On this basis, an assessment has been undertaken to assess the impact of the proposed 138 units associated with the eastern parcel of the application site on the SRN and specifically on the M40 Junction 9.
- 4.2.8 Utilising the agreed distribution profile, the Traffic Flow Diagrams identify that the 138 units will generate a total of 28 two-way vehicle movements in the AM peak hour and 25 two-way vehicle movements in the PM peak hour.
- 4.2.9 Whilst a formal response is yet to be provided by NH in this regard at the time of preparing this TN, a telephone conversation with Joe Colclough of the NH on Thursday the 18th of November 2021 confirmed that NH is now satisfied that the impact of the traffic associated with the full Firethorn development on the SRN, including the M40 Junction 9, is acceptable and they will remove the recommendation to CDC that planning permission not be granted and to confirm that they will have no objection to the proposals.



5 RESPONSE TO BICESTER BIKE USERS GROUP COMMENTS

- 5.1.1 The Bicester Bike Users Group (Bicester BUG) provided a written response to the application dated the 22nd of June 2021. A copy of this response is included at **ATTACHMENT 9** of this TN.
- 5.1.2 This section of the TN summarises the comments made by Bicester BUG and provides a response to the matters raised.

5.2 ASPIRATIONS FOR ACTIVE TRAVEL

- 5.2.1 The points raised in this portion of the Bicester BUG response are summarised below for ease of reference:
- ⦿ The proposal does not make sufficient effort to attain the aims of current Local Policy;
 - ⦿ A more ambitious plan for the development should be provided, rather than a typical generic development street outline; and
 - ⦿ *“Cycling facilities should be regarded as an essential component of the site access and any off-site highway improvements that may be necessary”* – paragraph 14.2.12 of LTN 1/20.

VTP RESPONSE TO BICESTER BUG COMMENT

- 5.2.2 VTP has prepared a standalone Technical Note – Spine Road Assessment, a copy of which is included at **ATTACHMENT 7** of this TN, which expands on the information set out within the TA that supported the planning application and which identifies the level of vehicle, pedestrian, and cycling trips associated with the application site in accordance with the targets set out within the adopted SPD, i.e. 60% of trips by modes other than the private car. This target has resulted in the need to adjust the baseline mode share to reflect the increase in movements by modes other than the private car.
- 5.2.3 In addition to the mode share for the application site, the VTP Spine Road Assessment considers the mode share of the permitted Exemplar scheme and that associated with the adjacent site that forms part of the wider NWB Masterplan. The Spine Road Assessment acknowledges that the predictions associated with the Exemplar scheme are not consistent with the aspirations of current Local Policy, and as such, a sensitivity test adjusting the mode share of the permitted development has been included to ensure a consistent cumulative assessment.
- 5.2.4 The planning application for up to 530 dwellings on the application site is an outline planning application, and therefore, details of the on-site provision for all modes of travel, including the local road network and the provision for pedestrians and cyclists on the application site is not being considered as part of this application. It is noted that the on-site provision for all modes of travel will be compliant with all current guidance and standards. This includes LTN 1/20, Manual for Streets 1 & 2, the OCC Residential Design Guide (2nd Edition 2015), and the OCC Draft Street Design Guide (December 2020). These details will only be provided as part of a future reserved matters application.
- 5.2.5 Notwithstanding that the planning application is in outline, an assessment of the likely levels of all modes of travel on the wider local highway network has been undertaken. With regards to the impact of all modes, including pedestrians and cyclists on the local network, both OCC and NH have confirmed that subject to financial contributions that are to be agreed upon within the Section 106 Agreement that will be required for this development, and Section 278 Agreement that will be required for any works on the public highway, the development would have an acceptable impact on the local highway network.



5.2.6 With specific regards to pedestrian and cycling provision, it is acknowledged that much of the existing off-site network does not comply with LTN 1/20. As such, OCC has identified financial contributions from the Applicant that will mitigate the impact of the proposed development and assist with upgrading the off-site provision in the context of what will be necessary to address the impacts of all of the identified development within the adopted CDC Local Plan. Proportionate contributions from respective applications associated with the allocated developments is a recognised and standard method for mitigating the impacts of specific developments.

5.3 PEDESTRIAN AND CYCLE ROUTES

5.3.1 The points raised in this portion of the Bicester BUG response are summarised below for ease of reference:

- ⦿ There are few dedicated pedestrian and cycle routes;
- ⦿ Cycle storage is not mentioned;
- ⦿ New cycle and walking infrastructure should comply with LTN 1/20 and the Bicester Local Cycling & Walking Infrastructure Plan (LCWIP);
- ⦿ Consideration of on-carriageway and off-carriageway provision for cyclists; and
- ⦿ Questions are raised with regards to the robustness of the traffic modelling.

VTP RESPONSE TO BICESTER BUG COMMENT

5.3.2 As noted within the previous VTP response, the planning application is in outline, and therefore details of the on-site provision for pedestrians and cyclists will be the subject of further consideration at the reserved matters stage.

5.3.3 As the application is in outline, details of the on-site cycle storage facilities will be provided as part of the reserved matters application. Whilst it is suggested that cycle storage is not mentioned within the application, paragraph 6.4.1 of the submitted TA states, *“Cycle parking will be provided in line with CDC’s Residential Design Guide SPD (adopted on the 16th of July 2018) which sets out the Cycle Parking Standards at Table 5.1 (page 70), which in turn is extracted from OCC’s Residential Road Design Guide (2nd Edition – 2015).”*

5.3.4 The lack of cycle parking and storage on the Elmsbrook development is not a matter for this application, and paragraph 6.4.2 of the TA goes on to state, *“The final provision and layout of cycle parking across the development site will be made in accordance with the standards and policy set out by CDC and OCC and presented in detail on the proposals to be submitted at the reserved matters stage.”*

5.3.5 As noted within the previous VTP response, the impacts of the proposed development on the off-site pedestrian and cycle infrastructure have been considered and OCC have requested financial contributions to mitigate this impact in line with the requirements of LTN 1/20 and the Bicester LCWIP.

5.3.6 The VTP Spine Road Assessment considers the suitability of the existing Spine Road through the Exemplar scheme to identify the suitability of on and/or off-carriageway provision for cyclists. Whilst it is acknowledged that traffic data provided by the OCC Bicester Transport Model (BTM) identified cumulative traffic flows in the order of 6,000 vehicles along the east-west portion of Charlotte Avenue from the Gagle Brook Primary School to the junction with the B4100, which would require the provision of segregated facilities for pedestrians and cyclists, the traffic flows on the rest of the Spine Road are significantly lower and would accommodate on-carriageway cycling in accordance with LTN 1/20.



5.3.7 Figure 10 of the adopted North West Bicester SPD acknowledges that the portion of Charlotte Avenue from the Gagle Brook Primary School to the B4100 will need to be a “*Primary Road with segregated footpath/cycleway*”. The VTP Spine Road Assessment confirms this through a technical analysis of the predicted number of vehicles, pedestrian and cycle movements along this key stretch of the local network and provides a series of options for OCC to consider that would mitigate the impact on this existing route to accommodate the allocated development. Contributions for the respective developments that would impact this route (and others) will then be sought from OCC and CDC to deliver the aspirations of the adopted SPD.

5.3.8 With regards to the suitability of the traffic modelling, the BTM was commissioned by OCC and is the agreed source for all traffic data that relates to the assessment of the developments identified within the adopted CDC Local Plan. OCC has confirmed that the BTM is ‘fit for purpose’.

5.4 LINKS TO LOCAL CYCLING AND WALKING NETWORK

5.4.1 The points raised in this portion of the Bicester BUG response are summarised below for ease of reference:

- ⦿ There is no continuous off-carriageway cycle route from the site to Bicester North railway station;
- ⦿ The assessment of travel times to local facilities is incorrect;
- ⦿ Improvements to off-site routes should be made to improve travel times;
- ⦿ Consideration of the off-site proposals for the roundabout junction of Banbury Road/Skimmingdish Lane and associated provision for pedestrians and cyclists.

VTP RESPONSE TO BICESTER BUG COMMENT

5.4.2 Whilst the TA referenced the provision of a continuous segregated route to Bicester North railway station from the Exemplar scheme (paragraph 4.3.10 of the TA), it is acknowledged that there is a 50m length of Buckingham Road that is located under the existing railway bridge that does not include a segregated route. OCC has requested a financial contribution of £362,465 towards improvements to the cycle route between the site and town centre/station.

5.4.3 It is acknowledged that the travel times to local facilities as set out within the TA were not recorded from an appropriate starting point. Section 3 of this TN addresses the travel distances to local facilities, with the updated walking times included within **Table 3-2** of this TN.

5.4.4 The Bicester BUG have commented that a cycling “*speed of 320m/s which is clearly incorrect (corresponding to 1152km/h)*”, this was a typo contained at paragraph 4.5.3 of the Framework Residential Travel Plan (F RTP). Paragraph 4.5.3 of the submitted TA states that this measurement is actually 320 meters per minute (m/m), which for the purposes of total clarity, equates to 19.2 km/h.

5.4.5 It is acknowledged that OCC has submitted a planning application to CDC for the redevelopment of the existing Banbury Road roundabout junction of the B4100 and the A4095 (planning ref 21/02457/OCC). Reference is made to this submission in Section 3 of this TN, and a copy of the preferred traffic signals scheme is included at **ATTACHMENT 5** of this TN.

5.4.6 Any contribution to this scheme or any proposed amendments to the pedestrian and cycling facilities that are associated with this scheme is expected to be requested by OCC to ensure that a proportionate contribution from the Applicant is provided in line with those contributions that will be sought from other allocated developments as set out within the adopted CDC Local Plan.



5.5 MISSING LINKS TO LOCAL CENTRES AND BICESTER

5.5.1 The points raised in this portion of the Bicester BUG response are summarised below for ease of reference:

- ⦿ No provision for active travel access is made to the Church; and
- ⦿ Consideration of the Aunt Ems Lane as an active travel link from Caversfield to the application site.

VTP RESPONSE TO BICESTER BUG COMMENT

5.5.2 As set out within Section 3 of this TN, a signalised pedestrian crossing facility across the B4100 to the Church is proposed to be delivered by the proposed development.

5.5.3 Whilst it is acknowledged that the existing route from Caversfield to the Gagle Brook Primary School is limited by the existing provision for pedestrians and cyclists, the TA identified that the distance from the junction of Aunt Ems Lane and Fringford Road to the Gagle Brook Primary school is actually shortest via the existing provision along Fringford Road.

5.5.4 It is not considered necessary for residents of Caversfield to access the application site for any other reason than to potentially visit future residents of the application site for recreational and social reasons. There are no destinations proposed on the application site that would generate the need for access by pedestrians and cyclists, and therefore, no off-site improvements are proposed to either the existing route to the Gagle Brook Primary School from Caversfield or that proposed by Bicester BUG along Aunt Ems Lane.

5.5.5 It is noted that OCC has not requested any improvements along this route specifically, and if there is a need for any improvements in terms of enhancing the safety measures or access opportunities between the residents of Caversfield and access to the Gagle Brook Primary School, OCC could draw on the requested financial contribution of £362,465 for improvements to cycle route between the site and town centre/stations S106 Contribution.

5.6 VEHICLE ACCESS

5.6.1 The points raised in this portion of the Bicester BUG response are summarised below for ease of reference:

- ⦿ The proposed access to the development will have a negative impact on the walking and cycling provision along Charlotte Avenue and Braeburn Avenue; and
- ⦿ The proposed signalisation of Charlotte Avenue is a result of insufficient effort on the part of the developer to mitigate car traffic through modal shift to active travel.

VTP RESPONSE TO BICESTER BUG COMMENT

5.6.2 The Spine Road Assessment includes a detailed analysis of the pedestrian and cycling impact along both Charlotte Avenue and Braeburn Avenue. The conclusions are that the existing provision for pedestrians and cyclists along the majority of the Spine Road is suitable, with the exception of the provision at the critical point of Charlotte Avenue, i.e. the bridge located to the west of the Eco Business Centre.

5.6.3 It is acknowledged that the impact of the proposed development in terms of pedestrian and cycle movements along the bridge on Charlotte Avenue, particularly when considered in the context of the existing permitted Exemplar scheme and that proposed on the wider allocated NWB Masterplan, there is a need to improve the provision for pedestrians and cyclists. VTP has outlined a number of options for OCC to consider, and subject to a request from OCC/CDC to contribute to the proposed improvements, a proportionate financial contribution could be agreed.



- 5.6.4 The proposed signalisation of the existing priority junction of Charlotte Avenue with the B4100 is identified as a direct request from OCC. The TA includes capacity assessments of both the existing priority junction arrangement and a proposed signalised arrangement. These capacity assessments have been undertaken with traffic flows provided by the OCC approved BTM model and not based on an assessment that was undertaken as a result of “*insufficient effort*” on the part of the developer to identify a greater shift towards active travel modes.
- 5.6.5 The consultation with OCC prior to the submission of the original application and subsequent post submission discussions have identified that the BTM model is considered to be ‘fit for purpose’ and that the BTM provides the appropriate traffic forecasts for an interim year of 2026 and a future year of 2031, which coincides with the end of the Local Plan period. It is assumed that if the BTM is considered ‘fit for purpose’, it accounts for the policy targets for mode share.
- 5.6.6 Whilst the VTP Spine Road Assessment does include a sensitivity test of the figures considered in the original technical work that supported the permitted Exemplar scheme, this was only in the context of adjusting the mode share to reflect 60% of travel modes other than the private car. It is not considered appropriate to adjust the traffic flows provided from the approved BTM model, particularly with regards to modelling off-site highway junctions on the local highway network.

5.7 PUBLIC TRANSPORT

- 5.7.1 The points raised in this portion of the Bicester BUG response are summarised below for ease of reference:
- ⦿ The bus stop on the east side of the B4100 north of the toucan crossing needs to be linked to the active travel paths.

VTP RESPONSE TO BICESTER BUG COMMENT

- 5.7.2 A single bus stop is provided on the B4100, which is located to the north of the junction with Charlotte Avenue on the western side of the B4100 (not the eastern side as suggested by Bicester BUG) and is located approximately 185m north of the existing toucan crossing located on the B4100 south of the junction with Charlotte Avenue.
- 5.7.3 The comment from the Bicester BUG suggests that access to this bus stop is across a grass verge, but it is clear from the extract from google presented below that a paved footway provides access to this bus stop and the associated bus shelter.
- 5.7.4 An extract from google maps is included at **Figure 5-1** to present the location of this existing bus stop.



Figure 5-1: Existing Bus Stop on the B4100



- 5.7.5 In addition, a more detailed review of the bus stop facilities identifies that in addition to the bus shelter, 2 Sheffield stands are provided in close proximity to the bus stop facilitating cycle parking for up to 4 bicycles, thus demonstrating the suitability of access to this facility by active modes of travel.
- 5.7.6 An extract from google street view is included at **Figure 5-2** to present further details of the facilities provided at this existing bus stop.

Figure 5-2: Facilities at the Existing Bus Stop on the B4100



6 RESPONSE TO ELMSBROOK RESIDENTS’ GROUP

6.1.1 The email from OCC dated the 23rd of September 2021 requests that a response is provided to the Elmsbrook Community Association (ECA). A copy of the ECA Transport Assessment – Analysis, short version, is included at **ATTACHMENT 10** of this TN. This document is not dated, but it is noted that it was uploaded to the CDC Planning Portal on the 22nd of June 2021.

6.1.1 This section of the TN summarises the comments made by the ECA and provides a response to the matters raised.

6.2 ITEM 1: CRITICAL CONCLUSION AND HOW IT IS EVIDENCED

“The significant concluding result is stated in Table 9-1, in section 9.2 “Junction Assessment” – which is reproduced:

Table 9-1: B4100 Banbury Road/Charlotte Avenue – 2031 - Do Something PICADY

ARM	AM PEAK HOUR			PM PEAK HOUR		
	RFC	QUEUE (PCU)	DELAY (S)	RFC	QUEUE (PCU)	DELAY (S)
B4100 (N)	-	-	-	-	-	-
Charlotte Avenue	0.87	5.2	79.67	0.77	3.1	56.10
B4100 (S)	0.09	0.1	7.61	0.01	0.0	7.89

The critical figure here is the flow capacity (RFC) for vehicles exiting Charlotte Avenue, which is found to be 0.87. This is “slightly over” the recommended maximum capacity of 0.85, enabling the conclusion from 9.2.3 of the Transport Assessment.

What this also implies, however, is: if there is any error in the methodology/set up for the simulations and calculations which determine this, then the above conclusion will not hold – and in that scenario, the existing junctions would be found unable to sustain the additional volume of traffic due to the proposed new homes”.

VTP RESPONSE TO ECA ITEM 1

6.2.1 The ECA comment is noted, however, the modelling undertaken in support of the application was in accordance with the methodology agreed with OCC, using traffic data from the agreed BTM Model.

6.2.2 It was agreed with OCC prior to submission of the application that any modelling work undertaken would be required to utilise traffic flows obtained from the BTM Model. The approach undertaken is therefore in accordance with what was agreed with OCC, who have confirmed that the outputs of the BTM Model are ‘fit for purpose’.

6.2.3 This is acknowledged within the OCC response to the planning application, stating (emphasis added):

*“Baseline traffic counts and turning movements were provided to the Applicant by OCC, taken from the Bicester Transport Model. Following preapplication discussions it was agreed that the most recent version of the model would be used. This has a base year of 2016 and was updated in 2018 to include the Heyford Park (Policy Villages 5) allocation. **This model was validated and approved by OCC, and as part of the scoping of this TA, further sense checks were carried out.**”*

6.2.4 With respect to the Ratio of Flow to Capacity (RFC) results referred to within the ECA response, it is acknowledged that in the AM peak hour, the junction is anticipated to operate with an RFC of 0.87 on the



Charlotte Avenue approach, which is in excess of the typically recommended capacity threshold of 0.85. However, in interpreting the results of this modelling, reference is made to the Transport Research Lab (TRL) Junctions Software developer guidance who acknowledge that RFC is not the most practical way to measure junction operation, stating within their best practice guidance available online¹:

“What maximum RFC is acceptable?”

In fact, it makes no sense to quote a maximum value because:

RFC varies throughout a peak, and can rise and fall sharply or slowly.

The consequences of a high RFC depend on the flow. An RFC value of 1.2 might not matter with a very low flow whereas a value of 0.8 might be disastrous with a high flow.

The important criteria for judging the success of a design (from the point of view of congestion) are the total delay to all vehicles, and the mean delay per vehicle on each of the approaches. The latter is a question of “fairness” and “politics”. Is it acceptable for some drivers to suffer twice as much delay as others? How about ten times as much? That is a matter for opinion.”

- 6.2.5 The delay on the Charlotte Avenue approach is at worst the equivalent to around 80 seconds, which is not considered significant and will likely allow sufficient opportunity for drivers to access the B4100. This delay is also within the typical ‘cycle time’ that a signal junction would operate within, meaning this delay is not considered excessive and within the acceptable delay that drivers would typically be faced with.
- 6.2.6 It is also noted that as part of the Section 106 contributions, OCC has requested a proportionate contribution towards the signalisation of the B4100 / Charlotte Avenue junction, which would further increase capacity at the junction and alleviate the concerns noted above.
- 6.2.7 Whilst the VTP TA includes an assessment of a potential signal junction at this location, as it is likely that the improvements to the existing Banbury Road roundabout junction of the B4100 and the A4095 (planning ref 21/02457/OCC) would be to form a signalised crossroads junction in the future, the proposed signal junction of Charlotte Avenue with the B4100 would be linked with this new signal junction, thus allowing for an even more optimised operation. The details of the proposed signalised crossroads are not yet available in the public domain, nor are these improvements approved at the time of preparing this TN.
- 6.2.8 The ECA comment is therefore considered to have been appropriately addressed.

6.3 ITEM 2: SCOPE AND BASELINE MODEL INFORMATION

Information as to the Baseline Model which the developers were instructed to use comes from:

Para 11.1.13 As agreed during scoping discussions with OCC and HE, the Bicester Transport Model (BTM) has been confirmed as the appropriate tool to identify the forecast future year traffic flows. This traffic generation has been used at the request of OCC as the basis for assessing the traffic impact.

From the Appendix 6.1, Part 2.pdf document, further details are given regarding the BTM:

¹ <https://trlsoftware.com/support/knowledgebase/what-maximum-rfc-is-acceptable/>



3.8 BASELINE TRAFFIC

3.8.1 *It is noted that the 'Bicester SATURN Model' was originally developed in 2007 but following a series of vehicle counts undertaken in 2012/2013, a revised base year of 2012 was developed.*

3.8.2 *A review of the NW Bicester Outline Planning Application 1 (14/01384/OUT), which considered a total of 2,600 dwellings associated with the wider NW Bicester Masterplan for development located to the north of the railway line including the majority of the application site (with the exception of the Eastern Parcel, which was considered as part of application 18/00484/OUT) includes significant data analysis based on the 2012 'Bicester SATURN model'.*

Further detail indicates that the modelling carried out in 2021, aimed at predicting traffic in 2031, is using a Base Model from 2012, released in 2014, largely based on 2007 data. However, this model therefore ignores issues with the 2010/11 Hyder TA and TP for NW Bicester Exemplar Phase, which was shown in 2018-19 to significantly underestimate the true peak traffic flows, based on 2x surveys, 4 months of Traffic Monitoring data (Sept-Dec 2019), and presented to members of OCC and CDC on 29/1/19, 5/12/19 and (showing trends met) 9/9/20. Not only is it not using the latest version of the model, it is missing known additional features which need to be incorporated."

VTP RESPONSE TO ECA ITEM 2

6.3.1 The ECA comment is noted. However, the modelling undertaken in support of the application was in accordance with the methodology agreed with OCC, using traffic data from the agreed BTM Model.

6.3.2 As per the VTP response to ECA Item 1, It was agreed with OCC prior to submission of the application that any traffic modelling work undertaken would be required to utilise traffic flows obtained from the BTM Model. The approach undertaken is, therefore in accordance with what was agreed with OCC, who has confirmed agreement with the outputs of the BTM Model.

6.1 ITEM 2: EXAMPLES SHOWING EVIDENCE THAT THE CONCLUSIONS CANT BE TRUSTED

- A Evidence from within the calculations using Baseline Model:
 - Trip generation calculations are challenged
- B Evidence from anomalous results within the Baseline Model:
 - Traffic distributions via Cranberry Avenue are challenged
 - The development included within the Model is challenged
- C Comparison of Traffic Simulation with Real Time Data, from Autumn 2019:
 - It is suggested that observed traffic data from Autumn 2019 is substantially different from that used in the original 2014 planning application
 - Concerns raised over the validity of the BTM model, and therefore the assessments of junction and the subsequent capacity results
- D Comparison of School Demographic Assumptions with existing evidence:
 - The model does not consider that future residents might choose to send primary



school-aged children to a school other than the Gagle Brook Primary School

- Clarification is sought with regards to the Person Trips for Education Purposes presented within Table 7-8 of the submitted TA
- E Significant Omissions from the Model, first reported to OCC and CDC in January 2019:
- Concerns are raised with regards to the road narrowings on the Charlotte Avenue Bridge
 - Concerns over the lack of parking provision for the Gagle Brook Primary School
 - An assessment of traffic flows along Charlotte Avenue identifies those unacceptable impacts that will be realised at the “bottlenecks”
 - There are no road crossings outside the school
- F Base Flows and Percentage Change:
- Comments on the potential traffic impacts set out within the ES are made
- G Financial Contribution Calculations:
- Concerns are raised that the calculated financial contributions may not be accurate

VTP RESPONSE TO ECA ITEM 2

- 6.1.1 The ECA comments set out at Item 2 are comprehensive, and clearly, a very detailed review of the information submitted with the planning application has been undertaken. Whilst not wishing to be dismissive, the traffic assessment work included with the planning application was scoped with the local highway authority, OCC, and the methodologies adopted within the assessments was agreed. Any suggestions that the traffic data from the BTM is in any way distorted or flawed is not a matter for the Firethorn application to resolve.
- 6.1.2 OCC has confirmed that the BTM is ‘fit for purpose’ and that the BTM provides the appropriate traffic forecasts for an interim year of 2026 and a future year of 2031, which coincides with the end of the Local Plan period.
- 6.1.3 Whilst the BTM was adjusted to exclude any development traffic associated with the application site, which was then considered as a standalone development with traffic flows predicted from a total of 550 dwellings (rather than the 530 being applied for) and based on trip rates and a distribution profile that was agreed with OCC as part of the scoping process. The traffic flows from the BTM are considered to be acceptable and have been utilised within the assessments.
- 6.1.4 It is noted that the traffic flows suggested to utilise Cranberry Avenue to access the adjacent development are unrealistic. It must be acknowledged that the traffic flows for the existing Exemplar scheme and those associated with the adjacent site that forms part of the wider NWB Masterplan were derived from the BTM and not as a result of VTP identifying these flows. As such, whilst it is acknowledged that these flows may appear to be “impossible”, these flows are derived directly from the BTM.
- 6.1.5 ECA notes that the list of developments that are included within the BTM may not be reflective of the actual developments proposed within the adopted CDC Local Plan, or at the very least, do not reflect the appropriate quantum of development identified. The figures quoted in the ECA response are taken directly from the uncertainty logs that support the BTM and, as such, are not a matter for the Firethorn application



to resolve.

- 6.1.6 Paragraph 7.4.4 of the TA that supported the planning application states, “*all primary school aged children from the proposed development will be afforded a place at this school.*” It does not suggest or state that all primary school-aged children will attend the Gagle Brook Primary School. However, it must be acknowledged that for the purpose of assessment, assumptions must be made with regards to where children will attend school and how they will travel to school.
- 6.1.7 It is noted that the ECA response identifies that some families that move house within Bicester may choose to keep their children in their existing schools and that some families may have other children that mean ensuring that both children can attend a school that offers both Primary and Secondary provision on the same site is more suitable. In addition, some children may attend private schools, and therefore, whilst the Gagle Brook Primary School may offer a place to all primary school-aged children, not all of these children will ultimately attend the school. Again, it must be acknowledged that assumptions have to be made to undertake the high-level assessments that are required to support a planning application.
- 6.1.8 Table 7-8 of the TA identifies a high-level review of the Person Trips for Education Purposes by Mode. As suggested in the ECA response, arrivals and departures are identified for various modes of travel, which are derived from agreed trip rates, distribution profiles, mode share, and National Travel Survey (NTS) data. It is not considered possible or appropriate to identify site-specific trips by mode for every dwelling and every school within a catchment as it is acknowledged, including by ECA, that there are many variables that are associated with school attendance. Again, it must be acknowledged that assumptions have to be made to undertake the high-level assessments that are required to support a planning application.
- 6.1.9 With regards to the concerns raised over the road narrowings on Charlotte Avenue, whilst the Applicant does not own or have rights to amend this existing arrangement, this bridge is included within the application boundary as it is currently not an adopted highway. As the author of the ECA response identifies as a professional noise assessment consultant, they will be aware that any proposed development needs to ensure that access is identified from the adopted highway. Notwithstanding that the road narrowings are outside of the ownership of the Applicant, the VTP Spine Road Assessment, a copy of which is included at **ATTACHMENT 7** of this TN, does assess the impact of the application site on this portion of the local road network.
- 6.1.10 The VTP Spine Road Assessment also includes a sensitivity test that adjusts the predicted levels of pedestrian cycle movements from not only the permitted Exemplar scheme, but it also considers the impacts along the Spine Road associated with the adjacent site within the allocated NWB Masterplan based on the traffic numbers provided by the BTM for various periods.
- 6.1.11 The VTP Spine Road Assessments suggests a number of potential improvements to Charlotte Avenue for OCC to consider, which includes an option that would remove the road narrowings. Subject to further consideration by OCC, a potential financial contribution to the proposed improvements along this stretch of Charlotte Avenue may be agreed upon within the S106 Agreement.



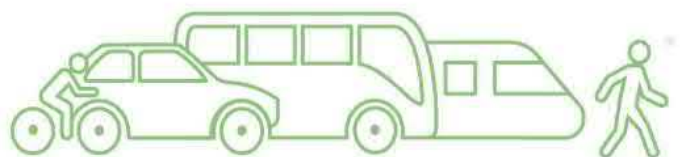
VTP CONSULTATION RESPONSES

PART 1 OF 3 ATTACHMENTS 1-3



ATTACHMENT 1

CHERWELL DISTRICT COUNCIL CONSULTATION RESPONSE



Planning and Development

David Peckford, Assistant Director – Planning and Development



Cherwell

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Please ask for: **Caroline Ford**

Direct Dial: **01295 221823**

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Your Ref:

21st September 2021

Dear Hannah

TOWN AND COUNTRY PLANNING ACT 1990

Application No.: 21/01630/OUT

Applicant's Name: Firethorn Developments Ltd

Proposal: Outline planning application for residential development (within Use Class C3), open space provision, access, drainage and all associated works and operations including but not limited to demolition, earthworks, and engineering operations, with the details of appearance, landscaping, layout and scale reserved for later determination

Location: Land at North West Bicester
Home Farm, Lower Farm and SGR2
Caversfield

Parish(es): Bicester

I write with reference to the above application currently with me for consideration. I apologise for the length of time it has taken me to provide comments on this proposal, but nevertheless as agreed via our recent discussions, please find below the areas that I consider require further consideration based upon my review of the application and the comments received from Consultees.

Principle of the development

Given the land forms part of the allocated site at NW Bicester (allocated via Policy Bicester 1 of the Cherwell Local Plan Part 1 2011-2031 – CLP 2011-2031) and it is (mostly) shown as being for residential purposes within the Masterplan for the site as set out within the North West Bicester SPD (February 2016), I am content that the broad principle of development is acceptable on this site.

As you are aware, the Policy includes a number of detailed requirements that require assessment in order to achieve the Policy standards, which, for NW Bicester relate to achieving true zero carbon development to Eco Town Standards (now embedded within the NW Bicester SPD) amongst other requirements. These matters therefore require further consideration.

True Zero Carbon Development/ Climate Change Adaptation

As referred to above, the target for development at NW Bicester is to achieve true zero carbon, the definition for which is 'that over a year, the net carbon dioxide emissions from all energy use within the buildings on the eco-town development as a whole are zero or below'. Policies ESD1-5 also set out requirements relating to energy and sustainability. The SPD refers to the importance of climate change adaptation including the need for the development to be designed to take account of future climate scenarios with the greatest risk being identified as being from overheating and water stress. Bioregional have reviewed the submission (in terms of both energy, climate change adaptation and wider sustainability matters) and have raised a number of areas where greater clarity is sought. The key points can be summarised as follows:

- An indicative carbon balance should be provided to give reassurance on the true zero carbon target to be met.
- There should be a commitment to building to certain fabric efficiency (i.e. in line with the Future Homes Consultation or beyond). Further detail could be provided on indicative U values of roof, wall, windows.
- Further clarity around the potential for carbon offsetting if this were to be required.
- Advice as to whether there are updates on plans by SSE to replace the gas at the current energy centre to enable connection there.
- The Policy requires the construction of homes to meet a minimum of Level 5 for the Code for Sustainable Homes. Whilst this is no longer in place, we would expect the homes to be constructed to the equivalent or improved level. It would be helpful for this to be mentioned in terms of what standards are proposed to be met and how that compares to what level Code 5 would have achieved.
- Acknowledgement of the requirements around real time monitoring/ information (energy and transport) and super-fast broadband.
- A consideration of the potential feasibility as to whether a heat main to the Ardley EfW plant to the site would be achievable.
- There should be commitments to reducing embodied carbon and how materials will be sourced taking into account local suppliers whilst retaining quality.
- There should be commitments to carrying out overheating analyses at later stages using TM59 with future climate scenarios to ensure that the properties are designed to not overheat. The information in the DAS which refers to adaptations to deal with climate change is acknowledged.
- Further detail is recommended relating to active travel (see also comments from Sport England referred to below) which should contribute to the ambitious modal shift requirements for the site.
- A commitment to the inclusion of EV charging infrastructure for both residential units and within the public realm at key focal points.

I should also add that Appendix B within your Technology Appraisal to Net Zero at NW Bicester is Schedule 8 'Carbon Offsetting'. This was not included within the final S106 for the Exemplar Local Centre S106 due to concerns that arose internally relating to how the Council could ensure that the contribution could deliver the required level of offset and what projects it could identify to deal with this. That proposal also related to a smaller scale scheme. I am concerned about a contribution towards offsetting at this stage and would expect that the site itself will meet the standards required or, the applicant would be directly responsible for offsetting.

It is noted that the report refers to a consideration of opportunities needing to be subject to thorough technical feasibility and financial viability. This will need further assessment as part of the overall assessment relating to the viability submission once received and through a thorough consideration of the options available to deal with the problem should it be agreed that a gap exists. To emphasise, the Policy requirement is to achieve True Zero Carbon as set out by Policy Bicester 1.

Homes

The SPD requirement around homes relates to achieving high standards around fabric energy efficiency, providing a mix of house types and sizes to meet local needs and contribute towards the creation of a sustainable community and to be adaptable and flexible to the way people live, including the ability for residents to work from home. The design of homes should also encourage more sustainable ways of living.

Part of the requirement of homes, as well as the requirement of Policy Bicester 1 and Policy BSC3 is the provision of affordable housing at 30% of the total number of dwellings proposed. The application is accompanied by an Affordable Housing Statement, which refers to the viability challenge of delivering affordable housing to the required Policy level (including the detailed breakdown and requirements as set out in Policy BSC3 and the Council's Developer Contributions SPD). The Council's Strategic Housing Team have raised detailed comments, including proposing a suggested tenure and property mix which

would be policy complaint, which should be reviewed. As the viability submission is anticipated shortly, this matter can be reviewed in further detail then. We will of course need to consider a range of options to consider how the viability gap (should one be agreed to exist) should be closed.

Employment

There are requirements around employment for the NW Bicester site and whilst this site is not required to provide for land for employment uses (in accordance with the Masterplan), the development principle does apply to all sites. In addition, Policy Bicester 1 sets out the requirement for an economic strategy to support planning applications that demonstrates how access to work will be achieved and to deliver a minimum of one employment opportunity per new dwelling that is easily reached by walking, cycling and/or public transport. I note the reference to home working within the Design and Access Statement which is acceptable for this to be further pursued at a reserved matters stage. Additional information relating to active travel opportunities would also assist with this in terms of accessing other employment opportunities off site. We would expect that the S106 secures the requirement for a Training and Employment Plan to be submitted with the commitment to the provision of construction apprenticeships.

Transport

You are aware of the comments and objections from the Local Highway Authority and Highways England (now National Highways). I have also highlighted to you that a large proportion of the public comments received have raised concerns on transport grounds and that detailed comments have also been received from local groups including Bicester Bike Users Group and the local Community Management Organisation on site. It is understood that you are working on a comprehensive response to address the comments made.

Should the access arrangement strategy be demonstrated to be suitable, then we will need to establish the capacity that could be accommodated from Access B to the western land to ensure that this is a clear parameter for future reserved matter submissions to be secured via planning condition.

It is noted that OCC have raised comments relating to the way the EIA assesses construction traffic and the impacts of this upon noise and vibration and the adequacy of the EIA in this respect.

There may be a need for a Grampian condition to restrict the level of development permissible until such time that the realigned A4095 is in place and opened to vehicular traffic.

We discussed the provision of a car park on site to provide provision for users of the Church (it is noted that a crossing is sought to provide access between the site and the church) and it is understood that the proposed area for car parking (part of application 20/01325/F) may be available for this purpose. I would be grateful if this could be explained as a response to this point raised.

Healthy Lifestyles

The NW Bicester SPD explains how development proposals should be planned to support healthy and sustainable environments and enable residents to make healthy choices easily. The content of the DAS in this respect is noted with regard to particularly the provision of multifunctional green space, pedestrian and cycle connections and opportunities for edible landscapes/ allotment provision.

The provision of formal sports facilities is part of creating a healthy lifestyle and these are planned for elsewhere at NW Bicester to enable the provision of a single main location for sports pitches to the south of the railway line and a further pitch to the north of the railway line to ensure a higher standard of provision and efficiencies in terms of long-term management and maintenance. The site is therefore not required to provide pitch space, but contributions would be required towards the site wide facilities. Contributions are also sought towards other matters that would contribute towards healthy lifestyles such as health provision, indoor sport and community hall space amongst others.

Sport England have sought clarification as to whether the scheme proposes to use the Sport England Active Design Principles within your Masterplan and further detail on how healthy lifestyles (including how green spaces can be used to create attractive areas for sport and recreation as well as local food production). Sport England have not raised an objection but have advised that if further details were provided on the above points, that they may be in a position to support the proposal should that be considered acceptable. The Design and Access Statement could be expanded to provide further clarity in response to these points.

Local Services

The SPD identifies the importance of local services in contributing to achieving a sustainable community, to provide attractive places for people to meet and to create a strong community focus. Whilst no local services are required to be provided on site given the requirements of the Masterplan, contributions will

be sought as appropriate towards community infrastructure which will assist this site in meeting this development principle and in addition, the points around active travel and how people can access local facilities using sustainable modes will also be important.

Green Infrastructure/ Landscape and Visual Impact

The Council's Landscape Team have raised no objections with regard to the findings of the LVIA which is considered to be comprehensive and they understand the reasoning for the developing landscape strategy. Other than the matter of scale in one particular area of the site as explained below, I agree with this conclusion.

The Policy and SPD require the provision of 40% Green Infrastructure of which at least half must be publicly accessible as a network of well managed, high quality spaces that are linked to the open countryside. Whilst there are a number of places through your submission where confirmation is provided that this level of GI will be achieved, I think that a plan demonstrating how this can be achieved (perhaps by reference to the current illustrative layout) should be provided to give greater certainty that this Policy requirement can be achieved and that later reserved matters can accommodate this. Green space provision must also meet the requirements of Policy BSC11. The impact upon the ability of the Masterplan to achieve 40% Green Infrastructure should also be considered given that a greater area on the Eastern parcel is now proposed for development compared to the Masterplan for this area (i.e. a smaller area of built development leaving a greater area of open space).

The Masterplan also highlights that a key development principle is the retention and reinforcement of existing hedgerows, trees and woodland with appropriate buffers. It is noted that these buffers are allowed for through the Multi-functional Green Space Masterplan.

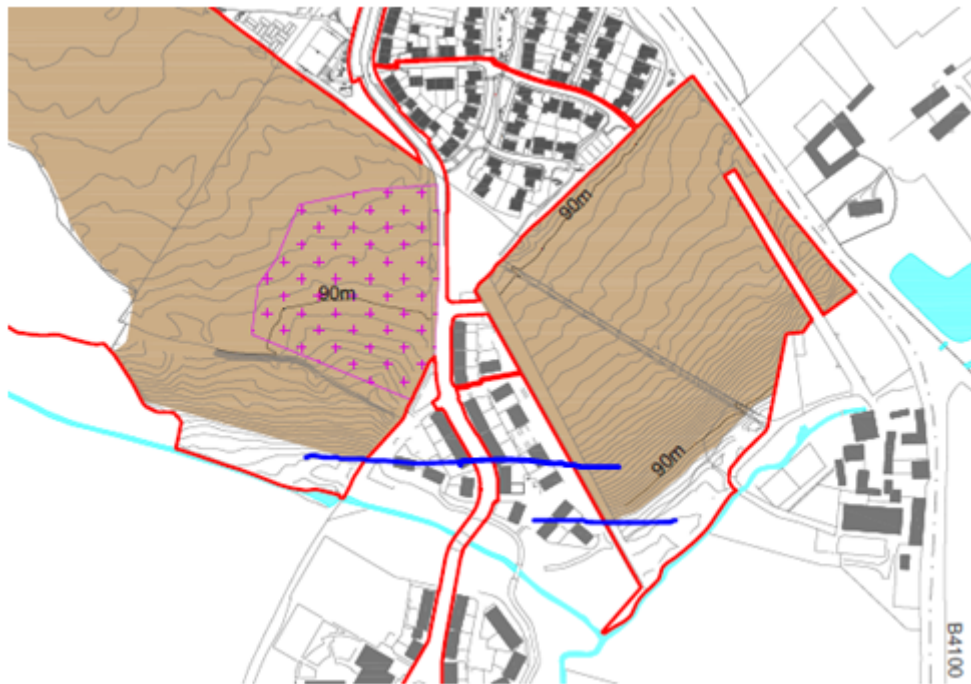
I wonder if the broad location of play space should be provided for on the Landscape Parameter plan with the form of each play area so that this is suitably secured (as well as via the S106).

The Tree Survey report does not seem to demonstrate where tree removal work and the extent of the required tree removal is proposed. Whilst I appreciate that in some cases access positions are proposed as a parameter (i.e. those points would be fixed later) and that in that case, further information would be required at that later stage, however there are some locations such as the access points to the Western parcel, where it should be possible for the access positions to be identified and the extent of tree work indicated. At the moment, the plans state 'low quality hedgerow offers no constraint on access point selection' but the access points are chosen given they are proposed for approval in full.

Design and Heritage

I am concerned regarding the maximum building heights parameter which identifies that there is an area of the site where 16m development would be permissible (please note there is an erroneous reference to 20m heights on page 25 of the DAS). In my opinion this is too high. This part of the NW Bicester site is more peripheral and an area of the site where you would expect to see less height (whilst it is located adjacent to the existing bus only route, it is not within an area that forms a clear 'core/ spine' to the wider site). I have also compared this to the proposals for this area of the site previously within application 14/01384/OUT (11m) and those emerging on the site to the south now subject to 21/03040/SCOP, where maximum residential building heights are likely to be proposed at around 12.5m and I believe that 16m in this area will be too high. I would recommend that the maximum building height be restricted to no more than 14m in this area.

I would also appreciate clarity on the levels marked '90m' on the Maximum Building Heights and Footprint parameter plan. If these are proposed as plateaus to be created from where building heights would be taken from, then I have concern with this in terms of the level of earthworks required to create these in some areas and also the impact of this level upon nearby residential units approved on Elmsbrook (Phase 2 particularly – the levels were approved by application 16/00044/DISC). My main concern relates to the southern areas of the site where the land drops towards the water courses. Some broad information on likely development levels would be helpful to assist in the assessment of maximum heights as it is noted that finished floor levels may vary by + or – 2m (detailed level information can be sought via planning condition but where a parameter plan is being proposed, then it is important that the judgement of the maximum heights that can be accommodated is made in the context of knowing the likely land level). In addition, the impact of significant earthworks (should they be proposed) may need assessment via the Environmental Statement as well as possible impacts arising from that. Cross sections in a few areas as identified below (and to the north) could assist the assessment of this:



The Plan should be amended to remove the reference to 90m or be updated if this is the case to ensure absolute clarity.

I have some concerns that the parameter plans themselves should be amended to show consistency with each other. For example, the building heights and footprint parameter plan shows built form on areas that cannot be built on according to the Green Space parameter plan – such as the heritage enhancement zone, the multi functional green space areas and the hedgerows and their buffers etc. I think that those areas need to be accounted for – this could either be through a single parameter plan (given the scale of the site) or, through a series as you currently have, but which take into account the constraints of each other.

Otherwise, I am generally supportive of the design and landscape approach suggested at this outline stage and consider that it forms a suitable basis for detailed consideration moving forward.

The Design and Conservation team have commented on the proposals and not raised an objection to the scheme and particularly the buffer between the development on the Eastern parcel and the nearby heritage assets. It is considered that the mitigation suggested is generally sufficient to minimise any harm. The comments generally relate to how the remaining open space area is treated and some concerns are expressed with regard to the play area in this location. It is also noted that further details would be required of the view corridor to St Lawrence's Church to ensure it is clear how this will be achieved in practice (i.e. that the landscape scheme is carefully considered to avoid obscuring the view entirely). Whilst I don't disagree with this assessment, I do have some reservations about the extent of development in this area and understand that you have looked at this in terms of providing some further information to consider this point. I would be happy to review this in detail. It would also be helpful if you could provide additional information relating to how this buffer area would be treated/ how it is proposed that a play space within this area could be suitable accommodated.

With regard to Archaeology, the OCC Archaeology Team have advised that should planning permission be granted, further work will be required to be secured via planning condition, including the implementation of a stage programme of archaeological investigation to be maintained during the period of construction.

Biodiversity

As noted by the Council's Ecologist, a Biodiversity Strategy calculating, via the use of a recognised metric, whether a net biodiversity gain will be achieved, has not been submitted. This is important as it is a policy requirement of both Policy Bicester 1 and ESD10 that a biodiversity net gain be achieved. The Council targets a net gain of at least 10%. A calculation to demonstrate this must be submitted for review.

As set out in the S106 Heads of Terms provided at the pre-app stage, there will be a requirement for a contribution towards off-site farmland bird mitigation. This requirement was established by the ecological work undertaken to support the Masterplan, which identified the impacts from the loss of habitats for farmland birds across the whole masterplan site. The contribution is sought based upon the site area for each application.

The Council's Ecologist has raised comments regarding the ecological enhancement measures proposed specifying that a minimum of one provision (habitat boxes/ bricks) per dwelling is sought. The use of Green roofs should also be identified.

With regard to protected species, it is noted that the ponds on and around the site have not been surveyed for Great Crested Newt suitability and that this aspect needs to be considered and dealt with pre-determination to ensure potential impacts for GCN are known and the required level of mitigation can be agreed. Please refer to the comments from Nature Space which sets out some options in this regard.

Comments have been raised regarding the lack of the provision of a Landscape Ecological Management Plan, however I am minded to consider that this would be more appropriately sought via a planning condition given that landscape is a reserved matter and therefore it will be at that later stage that it will be appropriate to agree how those areas will be managed.

Water/ Drainage/ Flood Risk

There is an outstanding objection from the Environment Agency on flood risk grounds and in the absence of an acceptable FRA. The EA comment that the FRA does not adequately assess the flood risks posed by the development as it fails to:

- Consider how a range of flooding events (including extreme events) will affect people and property using evidence which is fit for purpose
- Take the impacts of climate change into account as there is inadequate assessment of climate change allowances.

The EA seek a revised FRA which addresses the points above. Their consultation response provides full details of what is required to overcome the objection but, it is advised that detailed hydraulic modelling will be needed to establish the baseline degree of flood risk in this location and to enable a robust investigation of future risks of flooding as a result of climate change.

Thames Water have requested planning conditions be imposed relating to ensuring that there is sufficient capacity for foul water drainage (pre-occupation) and for water infrastructure (for water infrastructure, their advice is that they have identified that there would be capacity for 49 dwellings but that beyond this, network upgrades will be required). I am aware there was some correspondence on this matter and if matters have moved on further, then please provide additional information for re-consultation.

OCC as Lead Local Flood Authority have raised no objections to the outline drainage strategy proposed and its principles outlined. Planning conditions will be required relating to this matter.

Policy ESD3 of the CLP 2011-2031 sets out that the Council will seek a higher level of water efficiency than that required by the Building Regulations with developments to achieve a limit of 110 litres/ person/ day. The NW Bicester SPD seeks a more ambitious target of 105 litres/ person/ day with the aim that in residential properties, at least 25 l/p/d would be replaced with non-potable water to allow the target of 80 l/p/d to be achieved (by for example rainwater harvesting). Bicester is in an area of water stress and the SPD identifies that the site should be ambitious in terms of water with the aim to contribute to achieving water neutrality. Further clarity is sought in this respect.

Waste

Policy Bicester 1 and the NW Bicester SPD refer to the need for a waste strategy to be submitted with planning applications to cover both domestic and non-domestic waste which should set targets for residual waste levels and land fill diversion, set targets above national standards to be ambitious in terms of how waste is dealt with and which should set out how developers will ensure that no construction, demolition, and excavation waste will be sent to landfill. I have not been able to locate a waste strategy as part of the application documentation, so I am unable to assess the proposal for Policy compliance in this respect.

Community and Governance

The NW Bicester SPD sets out the requirements for the wider NW Bicester site in respect of Community and Governance. The aim is to create a mixed and balanced community that supports the ability of the site to establish long-term governance structures that complement the existing democratic governance

structures to enable standards to be met and maintained, to continue community engagement and involvement and to ensure that community assets are maintained. As there is the ambition for one organisation across the site to ensure efficiencies in this role, contributions are sought via the S106 towards the Community Management Organisation. The proposal does not appear to acknowledge this requirement.

Cultural Wellbeing

Cultural wellbeing is seen to be a part of achieving sustainable development by contributing towards creating a culturally vibrant place through high quality design, the use of public art where appropriate and community engagement. The NW Bicester SPD includes further details and has, as an appendix, an overarching Cultural Wellbeing Strategy. A site specific cultural wellbeing strategy will be sought through the S106 for this site to secure a scheme to enable the site to be culturally vibrant with projects that might draw on the suggestions set out within the SPD.

Environmental Matters

The Council's Environmental Protection Team have reviewed the submitted information relating to noise, air quality and contaminated land and have no objections subject to the imposition of conditions. There are no comments with regard to odour and it is requested that a lighting scheme be agreed prior to implementation, which would need to be sought via planning condition.

S106, Viability and Conditions

The S106 Heads of Terms were provided to you at the pre-application stage but as noted there have been some additional requests and updates made through the application process which would vary the initial indication provided. I will need to pull together a new comprehensive list of all S106 requests to make sure all matters are covered albeit I understand you have completed this activity and would be happy to share this for my review. In addition to seeking financial contributions, this will need to cover other matters such as monitoring to ensure the standards sought are achieved, arrangements for ongoing management and maintenance of facilities including open space and other matters which have been mentioned above. This will enable the site to comply with various Development Plan policies relating to the provision of infrastructure to support the new residents and make the development acceptable in planning terms.

It is understood that the Viability Assessment will be submitted towards the end of September. Once received, it will need detailed review and consideration of the proposed options. That is subject to separate discussions and I will not comment further on that at this point.

Subject to the application being recommended for approval once all matters are resolved and we have reviewed and progressed the viability, I would intend to share a draft list of planning conditions with you prior to their inclusion on a planning committee agenda.

Conclusion

Please note, the above represents the position to date and I will continue to review matters as we move forward and through writing my recommendation report at the appropriate time. I will aim to contact you on any other points that arise as soon as I am able.

As we have not yet signed the PPA enabling the determination period to be updated, please could we agree an extension of time – for now until the end of 31 March 2022? I would appreciate your confirmation so that I can update our timescales.

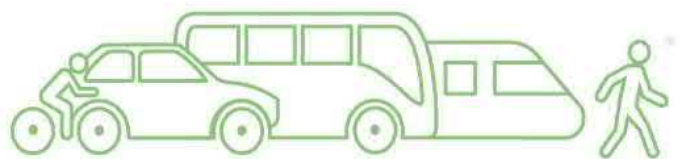
If you have any questions or queries regarding the above please contact me using the details provided above. Please accept that this advice is provided at Officer level and it is entirely without prejudice to any formal decision the Local Planning Authority may make.

Yours faithfully

Caroline Ford - Principal Planning Officer

ATTACHMENT 2

VTP TECHNICAL NOTE – GRAMPIAN CONDITION



1 INTRODUCTION

1.1 INTRODUCTION

1.1.1 Velocity Transport Planning (VTP) has been appointed by Firethorn Trust (the Applicant) to provide highways and transport planning advice for an outline planning application relating to the development of up to 530 dwellings on land which forms part of the North West Bicester Eco Town development, located in Oxfordshire.

1.1.2 The Application Site falls within the administrative area of Cherwell District Council (CDC) and within the authority of Oxfordshire County Council (OCC) who are the local highway authority.

1.1.3 The Proposed Firethorn Development description for the outline planning application, planning reference: 21/01630/OUT, is as follows:

“Outline planning application for residential development (within Use Class C3), open space provision, access, drainage and all associated works and operations including but not limited to demolition, earthworks, and engineering operations, with the details of appearance, landscaping, layout and scale reserved for later determination.”

1.2 CONSULTATION RESPONSE

1.2.1 A response to the outline planning application was received from CDC on the 21st of September 2021, with the third page of the letter covering matters related to transport. It is noted that paragraph four of the transport comments refers to the potential need for a Grampian Condition to restrict the level of development prior to the implementation of the A4095 Strategic Highway Improvement scheme (Planning Ref 14/01968/F).

1.2.2 For completeness, the CDC comment is replicated below:

“There may be a need for a Grampian condition to restrict the level of development permissible until such time that the realigned A4095 is in place and opened to vehicular traffic.”

1.3 REPORT STRUCTURE

1.3.1 A comprehensive response to the wider CDC comments and in relation to the other consultation responses is set out within a separate Technical Note (TN) prepared by VTP to respond to the wider comments raised in relation to highways and transport matters.

1.3.2 The purpose of this TN is to address the CDC comments in relation to the need for a Grampian Condition and following this introduction, this TN is structured as follows:

- ⦿ Section 2 - Policy Context;
- ⦿ Section 3 - Overview of Current Position;
- ⦿ Section 4 - Proposed Methodology;
- ⦿ Section 5 - Junction Capacity Assessment; and
- ⦿ Section 6 - Conclusions.



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2 HISTORICAL ASSESSMENTS

2.1 OVERVIEW

2.1.1 The Proposed Development and Application Site forms part of the wider North West Bicester (NWB) Eco Town proposals. The NWB Eco Town is a zero-carbon sustainable development that will provide a new community of up to 6,000 homes, new employment opportunities, and attractive amenities on 390 hectares of land to the north west of Bicester Town Centre.

2.1.2 The overall Eco Town scheme is guided by the NWB Masterplan, which is detailed within CDC's NWB Supplementary Planning Document (adopted February 2016), which expands upon Policy Bicester 1 of the adopted CDC Local Plan 2011-2031.

2.1.3 To date, a number of the initial phases of the wider NWB Masterplan have been brought forward, as follows:

- ⊙ Exemplar Scheme, known as 'Elmsbrook', (Planning Ref 10/01780/hybrid) comprising a mixed-use scheme for 393 residential dwellings, commercial and education uses. It was granted planning consent on the 20th of July 2012 and is currently nearing completion, but still only partially occupied.
- ⊙ Application 1: Land North of the Railway Line, (Planning Ref 14/01384/OUT) comprising an outline application for up to 2,600 residential dwellings, commercial and education uses.
- ⊙ Application 2: Land South of Railway Line, (Planning Ref 14/01641/OUT) comprising an outline application for up to 900 residential dwellings, commercial and education uses.

2.1.4 Both of the outline planning applications for Application 1 and Application 2 have a resolution to grant, subject to the agreement of Section 106 contributions. It is key to note that the majority of the Application Site, i.e. all of the larger western parcel, was included within the assessment of the Application 1 proposals, which excluded the permitted Exemplar Scheme.

2.1 A4095 STRATEGIC HIGHWAY IMPROVEMENT SCHEME

2.1.1 The A4095 Strategic Highway Improvement scheme, (Planning Ref 14/01968/F) was granted planning permission by CDC on the 21st of August 2019 for the following:

"Construction of new road from Middleton Stoney Road roundabout to join Lord's Lane, east of Purslane Drive, to include the construction of a new crossing under the existing railway line north of the existing Avonbury Business Park, a bus only link east of the railway line, a new road around Hawkwell Farm to join Bucknell Road, retention of part of Old Howes Lane and Lord's Lane to provide access to and from existing residential areas and Bucknell Road to the south and associated infrastructure."

2.1.2 It is noted that the A4095 Strategic Highway Improvement scheme plays a key role in the operation of the highway network, particularly to the west of Bicester, and will require contributions from the developments within the wider NWB Masterplan and other Local Plan allocations.

2.1.3 It is acknowledged that the existing arrangement of the A4095 from its junction with the B4030 and Middleton Stoney Road in the south, to a point between the existing junction of Bicester Road with Bucknell Road and the existing junction of the B4100 and Banbury Road to the north, is not suitable to accommodate the predicted levels of traffic that would be generated by the delivery of the proposed development identified within the adopted CDC Local Plan.



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- 2.1.4 The A4095 Strategic Highway Improvement scheme has been developed to accommodate the additional levels of development traffic that are predicted to be generated by the proposed development identified within the adopted CDC Local Plan.
- 2.1.5 Whilst Phase 1 of the approved A4095 Strategic Highway Improvement scheme has been constructed, which relates to the new vehicular underpass and pedestrian crossing of the railway line, OCC are currently undertaking a Value Engineering assessment of the further Phases of the scheme. As such, a finalised cost and programme for delivery of the remaining Phases of the A4095 Strategic Highway Improvement scheme, is yet to be confirmed by OCC.
- 2.1.6 For completeness, the current Phasing Plan of the A4095 Strategic Highway Improvement scheme is included at **ATTACHMENT A** of this TN.
- 2.1.7 The A4095 Strategic Highway Improvement scheme was predicted to be completed by 2024, but as noted above, due to a Value Engineering assessment, the final cost and programme have not been confirmed by OCC, but it is assumed that 2026 might be a reasonable prospect for the implementation of the A4095 Strategic Highway Improvement scheme.
- 2.1.8 CDC and OCC have acknowledged that some development can be delivered prior to the implementation of the A4095 Strategic Highway Improvement scheme and the traffic associated with the occupation of a limited amount of development can be accommodated on the existing highway network without having a “severe” highways impact.
- 2.1.9 To limit the number of occupations, and therefore the traffic impact, which might be acceptable prior to the implementation of the A4095 Strategic Highway Improvement scheme, CDC have identified Grampian Conditions associated with a number of permitted developments within the area restricting the levels of traffic impact on the existing highway network prior to the implementation of the A4095 Strategic Highway Improvement scheme.

2.2 APPLICATION 1

- 2.2.1 In 2014, a mechanism to identify suitable trigger points for the provision of the A4095 Strategic Highway Improvement scheme was developed and agreed by landowners within the wider NWB Masterplan, OCC and CDC - with reference to the anticipated impact of Application 1 (14/01384/OUT) and other cumulative schemes within the local area.
- 2.2.2 This was summarised in a memorandum produced by Hyder Consulting dated the 12th of December 2014, which was circulated to, and agreed with, both CDC and OCC. For completeness, a copy of the memorandum is included at **ATTACHMENT B** of this TN.
- 2.2.3 The assessment undertaken by Hyder Consulting sought to determine the quantum of development that could come forward and be occupied on the wider NWB Masterplan prior to the delivery of the A4095 Strategic Highway Improvement scheme.
- 2.2.4 This was undertaken through a series of proportionate traffic flow tests to determine the operation of the critical junction along the existing route, which is identified as being the A4095 Howes Lane / Bucknell Road priority junction, which is a known constraint along the existing network, and which will be significantly relieved with the implementation of the A4095 Strategic Highway Improvement scheme.
- 2.2.5 The memorandum initially assessed the full development quantum of the Application 1 proposals within the wider NWB Masterplan that had been envisaged to come forward by the future year of 2024, which



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equated to a total 2,256 (including the Exemplar scheme) units. The assessment then sought to determine thresholds from the full allocation that could reasonably come forward prior to the implementation of the A4095 Strategic Highway Improvement scheme e.g. 40% of the estimated allocation by 2024 - 900 units, and circa 55% of the estimated allocation by 2024 - 1,200 units.

2.2.6 The key threshold used to derive whether the impact of the number of units was acceptable was not the typical junction modelling criteria of Ratio of Flow to Capacity (RFC) but was instead whether queuing at the critical priority junction blocked the nearby junctions downstream, including the A4095 / Shakespeare Drive traffic signal junction, and the A4095 / Bucknell Road roundabout junction.

2.2.7 The assessment for the full allocation of 2,256 units considerably impacted the nearby junctions and was not considered acceptable by OCC. The assessment also determined that 1,200 units was unacceptable and not deliverable prior to the implementation of the A4095 Strategic Highway Improvement scheme, with downstream queues as follows:

- ⦿ A4095 Howes Lane approach: a queue of 70 vehicles was identified in the PM Peak hour, which would block the A4095 / Shakespeare Drive traffic signal junction; and
- ⦿ Bucknell Road approach (turning right into the A4095): a queue of 14 vehicles was identified in the PM peak hour, which would block the A4095 / Bucknell Road roundabout junction.

2.2.8 However, the Hyder Consulting assessment concluded that a total of 900 units could be delivered on the NWB Masterplan on land to the north of the railway line as the respective queues on the A4095 Howes Lane (28 vehicles) and Bucknell Road (8 vehicles) did not queue back and obstruct any of the nearby junctions.

2.2.9 For completeness, an extract of the junction modelling tables from Table 3 of the Hyder Consulting memorandum are provided in **Figure 2-1**.

Figure 2-1: Hyder Consulting Memo (Table 3) - A4095 Howes Lane / Bucknell Road PICADY Results

Table 3: Bucknell Road/ A4095 Howes Lane PICADY Capacity Tests (J20)

Arm / Turning Movement	AM Peak (0800-0900)					
	Test 1 – Interim Year 2024		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes	
	RFC	Queue	RFC	Queue	RFC	Queue
Howes Lane - Right Turn	2.922	26	0.225	0	0.382	1
Howes Lane - Left Turn	3.005	212	0.768	3	0.844	5
Bucknell Road N (Right Turn to Howes Lane)	1.184	134	0.845	7	0.917	13
Arm / Turning Movement	PM Peak (1700-1800)					
	Test 1 – Interim Year 2024		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes	
	RFC	Queue	RFC	Queue	RFC	Queue
Howes Lane - Right Turn	6.983	51	0.886	4	1.068	8
Howes Lane - Left Turn	7.065	362	1.028	28	1.153	70
Bucknell Road N (Right Turn to Howes Lane)	1.17	127	0.863	8	0.929	14

2.2.10 It is noted that of the 900 units assessed, 393 units had already been effectively taken out of the capacity by the Exemplar scheme, leaving capacity for a further 507 units that could be occupied on with wider NWB Masterplan prior to the implementation of the A4095 Strategic Highway Improvement scheme.

2.1 ALBION LAND

2.1.1 Following agreement of the methodology set out within the Hyder Consulting memorandum from 2014 with OCC and CDC, an additional assessment was undertaken David Tucker Associates (DTA) in 2015 on behalf of the developers of the Albion Land scheme (Planning Ref 12/00455/HYBRID), which was granted planning



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permission by CDC on the 07th of August 2017.

- 2.1.2 This additional assessment by DTA identified that the existing A4095 Howes Lane / Bucknell Road priority junction could accommodate the traffic generated by an 'additional' 150 residential dwellings and commercial uses associated with the Albion Land development.
- 2.1.3 Whilst the Hyder Consulting memorandum identified that the implementation of the A4095 Strategic Highway Improvement scheme was required at a point between the occupation of 900 units and 1,200 units north of the railway, the assessment did not identify the precise 'tipping point' above which the A4095 Howes Lane / Bucknell Road priority junction would block the downstream junctions and require the implementation of the A4095 Strategic Highway Improvement scheme.
- 2.1.4 To establish what this 'tipping point' might be, DTA prepared a Technical Note dated the 17th of September 2015 to identify if there was scope for additional occupations to be agreed prior to the implantation of the A4095 Strategic Highway Improvement scheme. A copy of this TN is contained at **ATTACHMENT C**.
- 2.1.5 DTA consulted with Hyder Consulting to obtain the traffic data and traffic model from the 2014 memorandum assessment, to see whether the additional 150 residential units at the Albion Land scheme could be delivered prior to the implementation of the A4095 Strategic Highway Improvement scheme.
- 2.1.6 The work undertaken by DTA concluded that the additional 150 units could be accommodated on the existing highway network, bringing the cumulative total of occupations north of the railway line to 1,050 dwellings. The DTA TN identified that these additional 150 dwellings would still not result in a 'severe' impact at the A4095 Howes Lane / Bucknell Road priority junction, as the queues on Howes Lane and Bucknell Road did not queue back and block the nearby junctions.
- 2.1.7 For completeness, an extract from Table 1 of the DTA Technical Note is provided below in **Figure 2-2** to present the junction modelling results.



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Figure 2-2: DTA Technical Note (Table 1) - A4095 Howes Lane / Bucknell Road PICADY Results

Table 1: Bucknell Road/A4095 Howes Lane PICADY Capacity Tests – Hyder Flows

	AM Peak (8000-9000)							
	Test 1 – Interim Year 2024		Test 2 – NWB 900 Homes		Test 2a – NWB 1050 Homes		Test 3 – NWB 1200 Homes	
Arm/Turning Movement	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Howes Lane – Right Turn	2.922	26	0.225	0	0.29	0	0.382	1
Howes Lane – Left Turn	3.005	212	0.768	3	0.80	4	0.844	5
Bucknell Road N (Right Turn to Howes Lane)	1.184	134	0.845	7	0.88	9	0.917	13

	PM Peak (1700-1800)							
	Test 1 – Interim Year 2024		Test 2 – NWB 900 Homes		Test 2a – NWB 1050 Homes		Test 3 – NWB 1200 Homes	
Arm/Turning Movement	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Howes Lane – Right Turn	6.983	51	0.886	4	1.05	6	1.068	8
Howes Lane – Left Turn	7.065	362	1.028	28	1.09	48	1.153	70
Bucknell Road N (Right Turn to Howes Lane)	1.17	127	0.863	8	0.9	10	0.929	14

Source: Tests 1, 2 and 3 – Hyder Consulting. Test 2a – DTA utilising Hyder Consulting base data.

- 2.1.8 The DTA assessment concluded that the additional 150 units, or cumulative total of 1,050 units, would bring the queues up to 48 vehicles on Howes Lane and 10 vehicles on Bucknell Road, which would still not block the downstream junctions and was thus acceptable in transport terms, despite the RFCs exceeding 1.0 which is typically regarded as the maximum theoretical capacity of a junction.
- 2.1.9 In summary, the work undertaken by DTA did not challenge the Hyder Consulting conclusion that 1,200 units north of the railway line was unacceptable, it just acknowledged that there was scope to bring the unit threshold up to 1,050 units, which included the 150 units at the Albion Land scheme and the 393 units at Exemplar.
- 2.1.10 It is acknowledged that an additional sensitivity test was undertaken by DTA to account for commercial land not being delivered at the projected rates within the Local Plan monitoring reports. However, this sensitivity test only sought to identify the proportional impacts of the commercial uses at the Albion Land scheme within a separate assessment and did not seek to challenge the number of occupations of the residential units that would be deemed as acceptable north of the railway at the NWB Masterplan.
- 2.1.11 The Albion Land application was approved on 7th August 2017, with no Grampian condition placed by CDC to restrict the quantum of development that could come forward prior to the implementation of the A4095 Strategic Highway Improvement scheme. On that basis, it is considered that the work undertaken by DTA, and conclusions reached in support of the Albion Land application, was deemed to be acceptable to both CDC and OCC.



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3 PROPOSED METHODOLOGY

3.1 OVERVIEW

- 3.1.1 At present and based on the technical work undertaken to date that is discussed within Section 2 of this TN, it is considered that in excess of 1,050 units, but no more than 1,200 units, could theoretically be delivered at the NWB Masterplan prior to the implementation of the A4095 Strategic Highway Improvement scheme.
- 3.1.2 The purpose of this assessment is therefore to determine the precise ‘tipping point’, above which no further development can come forward at the NWB Masterplan prior to the implementation of the A4095 Strategic Highway Improvement scheme.
- 3.1.3 As per Section 2, it is considered that a portion of the traffic associated with the Proposed Development has already been considered at the A4095 Howes Lane / Bucknell Road junction, as part of the Hyder Consulting work for Application 1.

3.2 METHODOLOGY

- 3.2.1 As the Proposed Development has already been partially considered within the Hyder Consulting work undertaken in 2014 in support of Application 1 and within the subsequent Albion Land assessments, it is proposed to pro-rata the results of the PICADY modelling undertaken by Hyder Consulting and DTA to ensure a consistent assessment and approach.
- 3.2.2 It is acknowledged that traffic data from the Bicester Transport Model (BTM) was utilised in support of the Firethorn planning application and the associated traffic modelling for the Proposed Development within the supporting Transport Assessment. However, whilst the traffic data from the BTM does include a future interim year of 2026, which it is noted is likely to be a more accurate date as to when the A4095 Strategic Highway Improvement scheme might be in place, the BTM interim year of 2026 includes the provision of the A4095 Strategic Highway Improvement scheme as it was expected to be implemented by 2024. On that basis, it would not be appropriate to utilise the BTM data, as it would not be in accordance with the previous technical work undertaken by Hyder Consulting and DTA and would not follow the same methodology.
- 3.2.3 It is considered that given the planning consents - the methodology and results of the assessment for both the 1,050 units and 1,200 units associated with the NWB Masterplan north of the railway line have already been reviewed and deemed as acceptable by OCC and CDC, with 1,050 units being acceptable and the implementation of the A4095 Strategic Highway Improvement scheme being required at a point prior to the occupation of 1,200 units.
- 3.2.4 Therefore, the proposed methodology set out within this TN does not seek to challenge what was previously agreed, but seeks to determine the precise ‘tipping point’ above the previously agreed 1,050 occupations at which the traffic impact on the existing A4095 Howes Lane / Bucknell Road priority junction would reach a point where it became “severe”, i.e. at which point the traffic queues would block the nearby junctions.

3.3 SEVERITY THRESHOLDS

- 3.3.1 In order to determine the trigger points that cause the junction to fail, and the traffic impact associated with the NWB Masterplan to become “severe”, the key thresholds determined by OCC relate to queuing back and blocking of the A4095 / Shakespeare Drive Signal junction.
- 3.3.2 It is acknowledged that queues could impact the A4095 / Bucknell Road roundabout, with the Albion Land



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assessment regarded as acceptable with a 10 vehicle queue on Bucknell Road, which may partially queue into the roundabout.

3.3.3 However, given the nature of roundabouts, it is likely that these queues would form ‘sliver queues’ and still allow traffic to move slowly through the junction. It is considered that queues at this junction would therefore not present as much of a safety concern as any queues at the A4095 / Shakespeare Drive Signal junction, as drivers would simply just wait to give way.

3.3.4 From a review of the geometry along the A4095 Howes Lane, it is considered that the key tipping point is reached when the queue exceeds 390m or is the equivalent to a queue of 65 vehicles - which would cause vehicles to block back and queue through the A4095 / Shakespeare Drive Signal junction.

3.4 REFERENCE SCENARIOS

3.4.1 The difference between the PICADY modelling results for the 1,050 and 1,200 NWB allocations presented in **Figure 2-2** have been proportionally allocated to determine the uplift in both RFC and Queues associated with the additional units at the NWB Masterplan to the north of the railway line.

3.4.2 For completeness, the following reference scenarios have been utilised for the A4095 Howes Lane / Bucknell Road junction:

- ⊙ Test 2 - 900 units at NWB, within the Hyder Consulting memorandum dated the 12th of December 2014;
- ⊙ Test 2A - 1,050 units at NWB, within the DTA TN dated the 17th of September 2015; and
- ⊙ Test 3 - 1,200 units at NWB, within the Hyder Consulting memorandum dated the 12th of December 2014.

3.4.3 The proportional percentage increases are calculated based on the difference between 1,050 units at NWB and 1,200 for robustness, as the impacts on the RFCs and queues will increase in direct portion to the number of units and traffic being generated.

3.4.4 The proportionate increases in both RFC and vehicle queue (Q) per unit is presented in **Table 3-1** for the AM peak and **Table 3-2** for the PM peak.

Table 3-1: Proportionate Increase in RFC and Queue per Unit - AM Peak

ARM	2 NWB: 900 UNITS SOURCE: HYDER		2A NWB: 1,050 UNITS SOURCE: DTA		3 NWB: 1,200 UNITS SOURCE: HYDER		APPROXIMATE INCREASE PER UNIT (%)	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Howes Lane (Right Turn)	0.225	0	0.29	0	0.382	1	0.21%	-
Howes Lane (Left Turn)	0.768	3	0.8	4	0.844	5	0.04%	0.17%
Bucknell Road N (Right Turn)	0.845	7	0.88	9	0.917	13	0.03%	0.30%



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Table 3-2: Proportionate Increase in RFC and Queue per Unit - PM Peak

ARM	2 NWB: 900 UNITS SOURCE: HYDER		2A NWB: 1,050 UNITS SOURCE: DTA		3 NWB: 1,200 UNITS SOURCE: HYDER		APPROXIMATE INCREASE PER UNIT (%)	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Howes Lane (Right Turn)	0.886	4	1.05	6	1.068	8	0.01%	0.22%
Howes Lane (Left Turn)	1.028	28	1.09	48	1.153	70	0.04%	0.31%
Bucknell Road N (Right Turn)	0.863	8	0.9	10	0.929	14	0.02%	0.27%

3.5 PROPOSED ASSESSMENT SCENARIOS

3.5.1 A sensitivity test has then been employed using the methodology outlined above to determine the precise number of units that can be accommodated in the interim without causing the vehicle queues to block the A4095 / Shakespeare Drive signal junction e.g. where queueing on the A4095 Howes Lane exceeds 65 vehicles.

3.5.2 Using the proportional increases discussed in the above tables, the following theoretical development quantum at NWB has been assessed:

- ⊙ Scenario 2B: 1,100 homes at NWB;
- ⊙ Scenario 2C: 1,150 homes at NWB; and
- ⊙ Scenario 2D: 1,165 homes at NWB.

3.6 ASSESSMENT

3.6.1 The results of the revised theoretical junction capacity assessments for the AM peak is provided in **Table 3-3** and in **Table 3-4** for the PM peak.

Table 3-3: NW Bicester Theoretical Scenario Assessments - AM Peak

ARM	2A NWB: 1,050 SOURCE: DTA		2B NWB: 1,100 VTP ASSESSMENT		2C NWB: 1,150 VTP ASSESSMENT		2D NWB: 1,165 VTP ASSESSMENT		3 NWB: 1,200 SOURCE: HYDER	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q	Q	RFC
Howes Lane (Right Turn)	0.290	0	0.031	1	0.351	1	0.361	1	0.382	1
Howes Lane (Left Turn)	0.800	4	0.815	4	0.829	5	0.834	5	0.844	5
Bucknell Road (Right Turn)	0.880	9	0.892	10	0.905	12	0.908	12	0.917	13



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Table 3-4: NW Bicester Theoretical Scenario Assessments - PM Peak

ARM	2A NWB: 1,050 SOURCE: DTA		2B NWB: 1,100 VTP ASSESSMENT		2C NWB: 1,150 VTP ASSESSMENT		2D NWB: 1,165 VTP ASSESSMENT		3 NWB: 1,200 SOURCE: HYDER	
	RFC	Q	RFC	Q	RFC	Q	RFC	Q	RFC	Q
Howes Lane (Right Turn)	1.050	6	1.056	7	1.062	7	1.064	8	1.068	8
Howes Lane (Left Turn)	1.090	48	1.111	55	1.132	63	1.138	65	1.153	70
Bucknell Road (Right Turn)	0.900	10	0.910	11	0.919	13	0.922	13	0.929	14

- 3.6.2 The revised sensitivity assessment suggests that the precise ‘tipping point’ for development quantum at NWB is 1,165 units, with the queues in the PM peak meeting the 65 vehicle queue threshold that would cause vehicles to queue back and block the A4095 / Shakespeare Drive signal junction.
- 3.6.3 To ensure robustness within the assessment, it could therefore be assumed that the development quantum at NWB north of the railway could increase to 1,150 units, which will add an additional margin for error at the junction, though 1,165 would be the maximum development quantum possible.
- 3.6.4 Once the threshold of 1,165 units has been reached, there is no further capacity within the existing A4095 Howes Lane / Bucknell Road priority junction without the need to implement the A4095 Strategic Highway Improvement scheme.



TECHNICAL NOTE: GRAMPIAN CONDITION REVIEW

4 CONCLUSIONS

4.1 OVERVIEW

4.1.1 Velocity Transport Planning (VTP) has been appointed by Firethorn Trust (the Applicant) to provide highways and transport planning advice for an outline planning application relating to the development of up to 530 dwellings on land which forms part of the North West Bicester Eco Town development, located in Oxfordshire.

4.1.2 In their response dated the 21st of September 2021, Cherwell District Council (CDC) noted that there may be a need for a Grampian Condition to restrict the quantum of development that could come forward at the application site prior to the implementation of the A4095 Strategic Highway Improvement scheme as the existing A4095 Howes Lane / Bucknell Road priority junction can only accommodate a limited amount of additional traffic until the impacts are considered to be “severe”.

4.1.3 An historic assessment by Hyder Consulting in 2014 concluded that the upper thresholds of development that could come forward prior to the implementation of the A4095 Strategic Highway Improvement scheme would be 900 units at the North West Bicester (NWB) Masterplan north of the railway line, which was agreed with both Oxfordshire County Council (OCC) and CDC. The Hyder Consulting assessment concluded that 1,200 units at the NWB Masterplan could not be accommodated and would require the implementation of the A4095 Strategic Highway Improvement scheme to mitigate the impact of this additional traffic.

4.1.4 A subsequent assessment was undertaken by David Tucker Associates (DTA) that updated the findings of the Hyder Consulting assessment, utilising the same methodology, to conclude a threshold of 1,050 units (including 150 units at the Albion Land scheme) would be acceptable prior to delivery of the A4095 Strategic Highway Improvement scheme, with 1,200 units still not being deemed as acceptable without triggering the need for mitigation.

4.1.5 In summary, of the units considered within the NWB Masterplan on land to the north of the railway line that have previously been assessed and deemed as acceptable on the A4095 Howes Lane / Bucknell Road junction, the number of units by scheme is broken down as follows:

- ⦿ 393 units associated with the Exemplar Scheme
- ⦿ 150 units associated with the Albion Land application
- ⦿ **Total: 543 units at NWB**

4.1.6 Based on the previously agreed threshold of 1,050 units at NWB Masterplan, this left a spare capacity for 507 units on the NWB Masterplan land to the north of the railway line prior to the implementation of the A4095 Strategic Highway Improvement scheme.

4.2 ASSESSMENT CONTEXT AND FINDINGS

4.2.1 Based on the findings of the updated assessment undertaken within this Technical Note, it is suggested that the overall development quantum that could be accommodated at the NWB Masterplan on land to the north of the railway line prior to the implementation of the A4095 Strategic Highway Improvement scheme, is in fact between 1,150 and 1,165 units, which would supersede the indicative threshold of 900 units previously concluded by Hyder Consulting in support of Application 1, and the 1,050 units concluded by DTA in support of Albion Land proposals.



TECHNICAL NOTE: GRAMPIAN CONDITION REVIEW

4.2.2 This conclusion also accords with the findings of the previous assessment for Application 1 undertaken by Hyder Consulting, which suggested an upper threshold of 1,200 units at the NWB Masterplan would not be acceptable without the implementation of the A4095 Strategic Highway Improvement scheme.

4.3 CONCLUSIONS

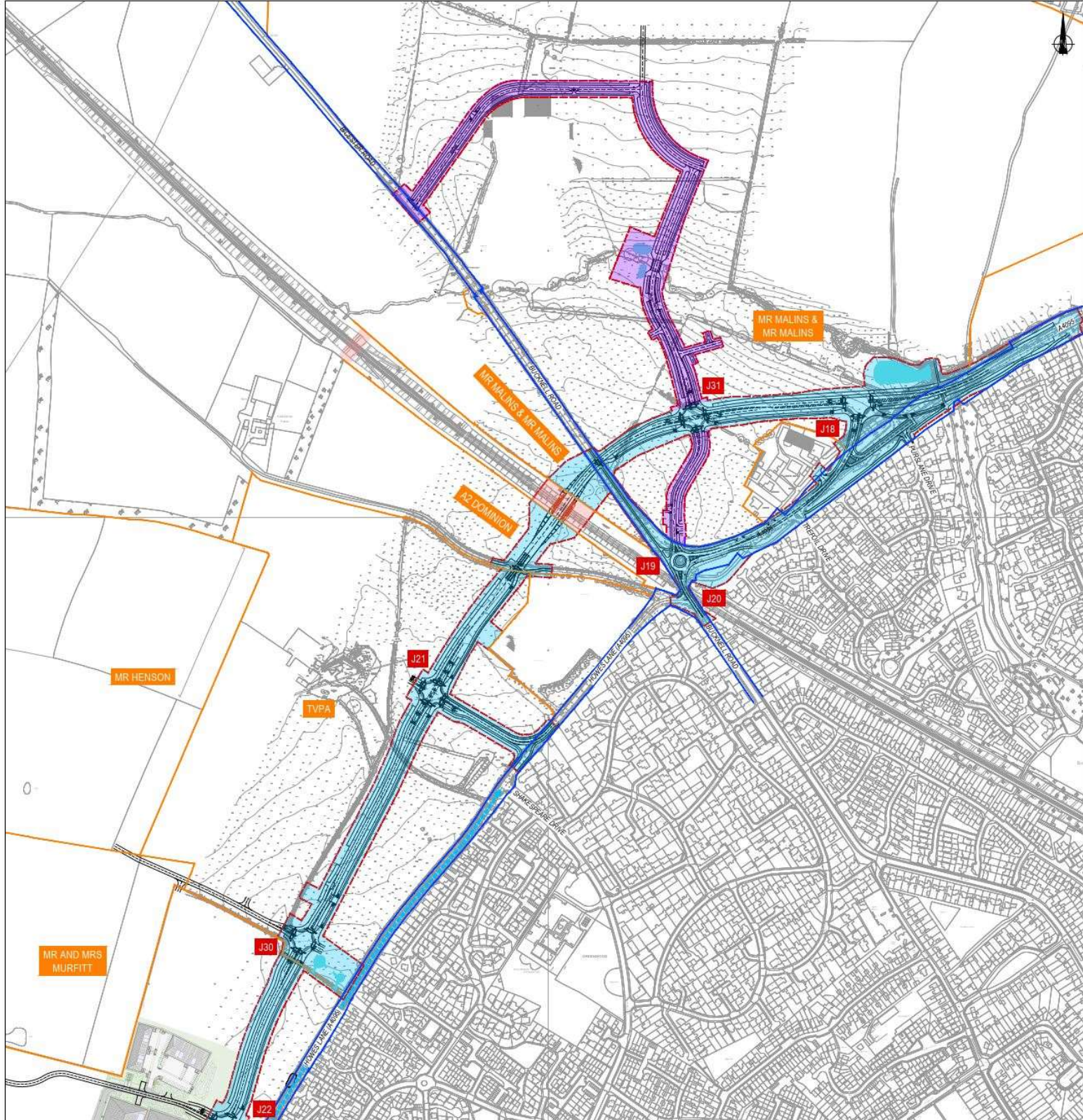
4.3.1 In light of the above, it is considered there is spare capacity for approximately 607 units at the NWB Masterplan land to the north of the railway line (1,150 less 543) that could be delivered prior to the implementation of the A4095 Strategic Highway Improvement scheme, which accounts for the units already allocated to Exemplar (393) and Albion Land (150).

4.3.2 On this basis, it is considered there would be no requirement for a Grampian Condition on the Proposed Development of 530 units. This TN has demonstrated that the traffic impact of the Firethorn development can be suitably accommodated at the existing A4095 Howes Lane / Bucknell Road junction without resulting in a “severe” highways impact on the local network.



ATTACHMENT 1

A4095 STRATEGIC HIGHWAY IMPROVEMENT PHASING PLAN



SITE PLAN
(APPROXIMATE SCALE 1:10,000)

KEY:

- PLANNING APPLICATION BOUNDARY
- LAND OWNERSHIP BOUNDARIES
- HIGHWAY BOUNDARY
- PHASE 1 - NEW RAIL UNDERPASS
- PHASE 2 - NEW STRATEGIC LINK ROAD
- PHASE 2B - CONVERSION OF EXISTING HOVES LANE (TO BE AGREED)
- PHASE 3 - PROPOSED NORTHERN LINK ROAD AND TWO-WAY BUS ONLY LINK

Rev	Description	Date	Drawn	Checked	Appr'd

Drawing Issue Status: **FOR INFORMATION**

**A4095 NORTH WEST BICESTER
PROPOSED LINKE ROAD DESIGN
PERMANENT REPLACEMENT SCHEME
SCHEME PHASING PLAN**

Client: **Balfour Beatty** **Stantec**

Project No:	48135/5501/SK018	Revision:	1	Date:	19/03/2024
Scale:	1:10,000	Author:	JH	Checked:	PH
Drawn:					

stantec.com/uk
48135/5501/SK018
19/03/2024

ATTACHMENT 2

HYDER CONSULTING MEMORANDUM (DECEMBER 2014)

MEMORANDUM

Date 12 December 2014
Reference UA005241 NW Bicester Development
From Janice Hughes
To Jacqui Cox - OCC
Michael Deadman - OCC
Jenny Barker - CDC
Copies Gerry Walker – A2 Dominion
Steve Hornblow – A2 Dominion
Steve Jury – A2 Dominion
Iain Painting – Barton Wilmore
Gary Young - Farrell's
Philip Harker – Hyder Consulting
Subject **NW Bicester - Transport Infrastructure Phasing**

1.1 Introduction

This memorandum sets out suggested phasing of transport infrastructure for NW Bicester. Trigger points in terms of occupation of homes are proposed for the delivery of key elements of access infrastructure and off-site mitigation.

The infrastructure elements are discussed in relation to the overall NW Bicester development as well as how this relates to the Application 1 and 2 developments submitted by A2 Dominion.

The infrastructure discussed in this memorandum is as follows:

- A4095 NW Strategic Link Road (the realignment of Howes Lane and Lords Lane);
- Signalisation of the Exemplar Southern Access junction;
- Capacity improvements to the A4095/ B4100 Banbury Road roundabout junction;
- Traffic calming measures in Bucknell Village;
- Walking and Cycling improvements in Shakespeare Drive; and
- Traffic reduction/ safety improvements at the B4100/ Caversfield junction.

It should be noted that this memorandum does not discuss town centre measures or eastern perimeter road improvements as information is awaited on the OCC proposals.

1.2 A4095 NW Strategic Link Road

The A4095 Strategic Link Road is proposed in order to address the constraints of the existing route to accommodate future planned growth including most notably the Howes Lane/ Bucknell Road junction as well as the poor standard of the Howes Lane road alignment.

In order to inform the phasing of this key element of transport infrastructure, traffic modelling results for a Local Development Plan Interim Year of 2024 have been obtained from White Young Green. The modelling scenario was developed on behalf of Oxfordshire County Council to inform the Local Development Plan

Modifications. The Interim Year 2024 scenario includes 1,863 homes in NW Bicester plus the Exemplar Development (total of 2,256) but does not include the A4095 NW Bicester Strategic Link Road, in order to enable an assessment to be undertaken of the point at which the scheme is required for planned growth.

The level of development included in the Interim Year is set out in Table 1 below. As noted above the figure of 1863 dwellings for NW Bicester is in addition to the consented Exemplar development, thus the scenario includes 2256 dwellings across the development (1863+393).

Table 1: Housing and Employment Figures: 2024 Trajectory

Plan Period Total Supply 2011–2024	Housing (Dwellings)	Employment (Hectares)
North West Bicester (Bicester 1)	1863*	10
Graven Hill (Bicester 2)	1400	26
South West Bicester Phase 1	1462	
South West Bicester Phase 2 (Bicester 3)	726	
South East Bicester (Bicester 12)	1100	
Gavray Drive (Bicester 13)	300	
Talisman Road (approved site)	125	
Bicester Business Park (Bicester 4)		29.5
Bicester Gateway (Bicester 10)		18
Land at NE Bicester (Bicester 11)		15
SE Bicester (Bicester 12)		28.8
Total	6976	127.3

*Note: 393 Exemplar already included in the model

Source: WYG December 2014

In order to test other levels of NW Bicester development without the A4095 NW Strategic Link Road, traffic growth between the Base Year 2012 and Interim Year 2024 has been reduced down by a factor based on the number of NW Bicester homes and subtracted from the 2024 turning movements. This means growth at other developments and background traffic growth (such as increase in through movements on the A4095) has also been reduced alongside that for NW Bicester.

The growth in traffic at each junction with 900 or 1200 NW Bicester homes has been assessed. Thus for example 900 homes is a 60.11% reduction on the 2,256 homes included in the Interim Year 2024 scenario. The selection of 900 homes was used as a starting point as this represents a minimal 500 homes post Exemplar across the development. The 1,200 homes scenario represents an incremental step from 900 homes.

The following three junctions have been modelled using Arcady and Picady programs:

- Bucknell Road/ A4095 Lords Lane (Ref Junction 19);
- Bucknell Road/ A4095 Howes Lane (Ref Junction 20);
- A4095 Howes Lane/ B4030/ Vendee Drive/ Middleton Stoney Road (Ref Junction 23).

Each junction has been the subject of three tests:

- Test 1 - Interim Year 2024 (NW Bicester 2,256 homes);
- Test 2 - NW Bicester 900 homes;
- Test 3 - NW Bicester 1200 homes.

Bucknell Road/ A4095 Lords Lane (Ref Junction 19)

Table 2 shows the results for the three tests at the Bucknell Road/ A4095 Lords Lane roundabout junction. It can be seen that the junction operates largely within capacity even with the Interim Year 2024 test of 2,256 NW Bicester homes and all the other planned growth shown in Table 1. Bucknell Road south is slightly over capacity in the PM peak hour with an RFC of 0.879 (0.85 is the theoretical capacity) and a queue of 7 vehicles. This infers that the capacity of this junction does not trigger the need for an improvement until the occupation of 2,256 NW Bicester homes.

Table 2: Bucknell Road/ A4095 Lords Lane ARCADY Capacity Tests (J19)

		AM Peak (0800-0900)					
		Test 1 – Interim Year 2024 NWB 2256 Homes		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes	
Arm	Name	RFC	Queue	RFC	Queue	RFC	Queue
Arm A	A4095 Lords Lane	0.508	1	0.376	1	0.319	1
Arm B	A4095 Bucknell Road (south)	0.724	3	0.56	1	0.457	1
Arm C	Bucknell Road (north)	0.299	0	0.175	0	0.177	0
		PM Peak (1700-1800)					
		Test 1 – Interim Year 2024 NWB 2256 Homes		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes	
Arm	Name	RFC	Queue	RFC	Queue	RFC	Queue
Arm A	A4095 Lords Lane	0.524	1	0.324	1	0.358	1
Arm B	A4095 Bucknell Road (south)	0.879	7	0.732	3	0.525	1
Arm C	Bucknell Road (north)	0.251	0	0.173	0	0.134	0

Bucknell Road/ A4095 Howes Lane (Ref Junction 20)

Table 3 shows the results for the three tests at the Bucknell Road/ A4095 Howes Lane priority junction. The modelling has used as a basis the recently implemented improvement scheme as part of the Exemplar development (provided by Infrastruct CS Ltd on 9th December 2014).

It can be seen that the junction operates significantly over capacity in the Interim Year 2024 test of 2,256 NW Bicester homes and all the other planned growth, as expected for this junction. With regard to the other tests of 900 and 1200 homes, both tests show the junction operating over capacity. It should be noted however that the Exemplar development was originally consented with the proposed junction showing an RFC over capacity of 0.941 and queue of 11 vehicles in the PM peak hour. In comparison, the test with 900 NW Bicester homes (i.e. a further 500 to the Exemplar) gives a maximum queue of 28 vehicles on the left turn from Howes Lane in the PM peak. This would not block back to the adjacent Shakespeare Drive junction.

The test with the 1200 homes (i.e. a further 800 to the Exemplar) gives a maximum queue of 70 vehicles on the same arm in the PM peak and is over capacity on the other movements.

Both tests of 900 and 1200 homes show the junction over capacity, but with the 900 homes capacity issues are not significantly worsened compared to the situation consented for the Exemplar.

Table 3: Bucknell Road/ A4095 Howes Lane PICADY Capacity Tests (J20)

Arm / Turning Movement	AM Peak (0800-0900)					
	Test 1 – Interim Year 2024		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes	
	RFC	Queue	RFC	Queue	RFC	Queue
Howes Lane - Right Turn	2.922	26	0.225	0	0.382	1
Howes Lane - Left Turn	3.005	212	0.768	3	0.844	5
Bucknell Road N (Right Turn to Howes Lane)	1.184	134	0.845	7	0.917	13
Arm / Turning Movement	PM Peak (1700-1800)					
	Test 1 – Interim Year 2024		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes	
	RFC	Queue	RFC	Queue	RFC	Queue
Howes Lane - Right Turn	6.983	51	0.886	4	1.068	8
Howes Lane - Left Turn	7.065	362	1.028	28	1.153	70
Bucknell Road N (Right Turn to Howes Lane)	1.17	127	0.863	8	0.929	14

A4095 Howes Lane/ Middleton Stoney Road/ Vendee Drive (Ref Junction 23)

Table 4 shows the results for the three tests at the A4095 Howes Lane/ Middleton Stoney Road/ Vendee Drive roundabout junction. It can be seen that the junction operates within capacity in both the 900 and 1200 homes scenarios. In the Interim Year 2024 test of 2,256 NW Bicester homes and all other planned growth the roundabout is over capacity in the PM peak with an RFC of 1.061 and queue of 51 vehicles. It can be inferred that the capacity of this junction does not trigger the need for an improvement until beyond the occupation of 1,200 homes but before the 2,256 NW Bicester homes.

The improvements at this junction are the remodelling of the roundabout with the new alignment of Howes Lane. Given the fact that the employment uses are concentrated close to this junction (whilst the traffic growth has been proportioned across the whole development) it would seem appropriate to use the lower development level (occupation of 1,200 homes) as a trigger for the Link Road in relation to this junction.

Table 4: A4095 Howes Lane/ Middleton Stoney Road/ Vendee Drive ARCADY Capacity Tests (J23)

Arm	Name	AM Peak (0800-0900)					
		Test 1 – Interim Year 2024 NWB 2256 Homes		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes	
		RFC	Queue	RFC	Queue	RFC	Queue
Arm A	B4030 (Northwest)	0.52	1	0.351	1	0.386	1
Arm B	A4095 Howes Lane	0.43	1	0.282	0	0.313	1
Arm C	Middleton Stoney Rd	0.533	1	0.385	1	0.415	1
Arm D	B4030 Vendee Drive left turn	0.119	0	0.059	0	0.072	0
Arm E	B4030 Vendee Drive ahead right	0.835	5	0.674	2	0.71	2
Arm	Name	PM Peak (1700-1800)					
		Test 1 – Interim Year 2024 NWB 2256 Homes		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes	
		RFC	Queue	RFC	Queue	RFC	Queue
Arm A	B4030 (Northwest)	0.493	1	0.333	1	0.367	1
Arm B	A4095 Howes Lane	0.456	1	0.316	1	0.346	1
Arm C	Middleton Stoney Rd	0.491	1	0.38	1	0.403	1
Arm D	B4030 Vendee Drive left turn	0.218	0	0.086	0	0.115	0
Arm E	B4030 Vendee Drive ahead right	1.061	51	0.712	2	0.788	4

Conclusions

The junction modelling of the three key junctions on the Howes Lane/ Lords Lane corridor leads to the following conclusions:

- The A4095 Lords Lane/ Bucknell Road junction operates within capacity until the Interim Year 2024 level of development (2256 NW Bicester homes);

- The A4095 Howes Lane/ Bucknell Road junction is over capacity with 900 NW Bicester homes but this is not significantly worse than was consented for the Exemplar development;
- The junction modelling results together with the proximity to the employment uses indicate that the A4095 Howes Lane/ Middleton Stoney Road/ Vendee Drive junction with the realigned Howes Lane will require improvement beyond occupation of 1200 NW Bicester homes.

On the basis of the analysis it is requested that OCC allow 900 homes to be occupied prior to the construction of the railway underpass section of the Link Road (from Shakespeare Drive to Lords Lane) in order to facilitate the phasing of the NW Bicester infrastructure and in recognition that the Link Road, whilst being funded by the NW Bicester development, will address existing issues and accommodate overall planned growth.

It is suggested that the section of the Link Road from Shakespeare Drive to the A4095 Howes Lane/ Middleton Stoney Road/ Vendee Drive junction is not required for junction capacity reasons until the occupation of 1200 homes.

1.3 Exemplar Southern Access Junction

The recently constructed Southern Access to the Exemplar site was tested as part of the Application 1 Transport Assessment with the full NW Bicester development of 6,000 homes in 2031 and is anticipated to be operating over capacity, as shown in Table 5. The queuing is experienced on the development access arm as traffic growth on Banbury Road increases.

Table 5: Exemplar Site Southern Access with Full Development 2031 PICADY model results (J15)

	AM		PM	
	RFC	Queue	RFC	Queue
B4100 South	-	-	-	-
Southern Access	0.698	2	2.683	71.84
B4100 North	0.016	0	0.639	1.65

Detailed testing of the priority junction layout has indicated it could accommodate 75% of the full 6,000 homes development traffic before requiring an upgrade to a signalised junction layout (i.e. 4,500 homes). However, the actual point in time that it is required will depend in particular on the rate of build out of the land north of the railway. It is suggested that the junction could be upgraded prior to Phase 4 of NW Bicester. The Exemplar and Phases 1 to 3 (up to 2031) comprises an estimated 3,793 units of which approximately 1,800 would be on land north of the railway, which is 69% of the Application 1 development. The development of 1,800 homes from Application 1, as it this development that leads to the need for the improvement, is therefore suggested as the most appropriate trigger for the improvement. This could be subject to monitoring of traffic delay at the junction and implemented prior to 2031 if required.

A signalised junction is proposed and a preliminary layout and LinSig modelling results are provided separately to this Memorandum.

1.4 A4095/ B4100 Banbury Road Roundabout

The junction modelling of the full NW Bicester development undertaken for the Masterplan and Application 1 and 2 has identified that the A4095 Lords Lane/ B4100 Banbury Road junction is forecast to be over capacity in the future year of 2031. Further tests have been undertaken using the Interim Year 2024 scenario (with NW Bicester 2256 homes but not the Link Road) for the Interim Year and 900 and 1200 homes in order to determine a point at which the improvements are likely to be required. There is an agreed scheme for minor modifications to the junction as part of the Exemplar, but the modelling discussed in this section has incorporated minor geometric amendments to optimise use of available lane width.

The results of the modelling for the three tests are shown in Table 8. It can be seen that in the Interim Year 2024 with 2256 homes, the Banbury Road north and Lords Lane approaches are over capacity with RFCs of 1.135 and 1.002 and queues of 64 vehicles and 26 vehicles respectively. Whilst the junction is over capacity in the 900 homes and 1200 homes tests, this is only in the PM peak hour for traffic going straight ahead or right from Lords Lane with a maximum queue of 13 vehicles. A further test with growth equivalent to 1500 NW Bicester homes (and other planned growth in proportion) has therefore been undertaken. This test 4 shows a maximum queue of 20 vehicles. A queue of this length would not extend back to the proximate junction to the west (Germander Way/ Development access) and can therefore be accommodated safely within the approach to the roundabout.

On the basis of the assessment it is considered that 1,500 NW Bicester homes would be an appropriate trigger for capacity improvements of the A4095/ B4100 Banbury Road roundabout junction. Preliminary solutions for improving capacity are provided separately to this Memorandum.

Table 8: A4095/ B4100 Banbury Road ARCADY Capacity Tests (J14)

AM Peak (0800-0900)									
Arm	Name	Test 1 – Interim Year 2024 NWB 2256 Homes		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes		Test 4 – NWB 1500 Homes	
		RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Arm A	B4100	0.668	2	0.551	1	0.576	1	0.601	2
Arm B	A4095 (east)	0.588	1	0.496	1	0.515	1	0.535	1
Arm C	Banbury Road	0.357	1	0.363	1	0.362	1	0.36	1
Arm D	A4095 (west) left lane	0.19	0	0.143	0	0.154	0	0.164	0
Arm E	A4095 (west) ahead right lane	0.85	5	0.735	3	0.761	3	0.786	4
PM Peak (1700-1800)									
Arm	Name	Test 1 – Interim Year 2024 NWB 2256 Homes		Test 2 – NWB 900 Homes		Test 3 – NWB 1200 Homes		Test 4 – NWB 1500 Homes	
		RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Arm A	B4100	0.533	1	0.458	1	0.477	1	0.495	1
Arm B	A4095 (east)	0.845	5	0.666	2	0.704	2	0.743	3
Arm C	Banbury Road	1.135	64	0.582	1	0.679	2	0.787	4
Arm D	A4095 (west) left lane	0.314	1	0.213	0	0.236	0	0.261	0
Arm E	A4095 (west) ahead right lane	1.039	41	0.908	9	0.943	13	0.981	20

1.5 Bucknell Village Traffic Calming

The link flow analysis demonstrates that whilst base year traffic flows are low, there is anticipated to be an increase in traffic on links to and from Bucknell in both the Reference Case and with the full NW Bicester development in 2031.

The diversion of Bucknell Road as part of the Development proposal reduces traffic on the link and will also help to reduce accident issues south of the village. In order to further minimise impacts in the village it is proposed to introduce traffic calming measures. Indicative proposals are put forward separately. The measures suggested include for the implementation of a 20mph zone for the village with associated traffic calming measures and signing.

It should be noted that there are local concerns about the existing traffic issues and any measures will address existing problems as well as mitigate the impact of the NW Bicester development and other planned growth in Bicester. Thus the responsibility for the funding of measures will require further discussion.

With regards to timing of improvements in relation to NW Bicester, the fact that the impacts of additional traffic may be experienced during construction phases indicates that measures should be put in place at an early stage of the further proposed development, such as prior to first occupation of future phases of NW Bicester. These measures are a result of the overall development rather than of a single application/ element of the development.

1.6 Shakespeare Drive Walking and Cycling Improvements

The Bicester Saturn Model scenario used for the assessment of the full NW Bicester development incorporates traffic calming measures to the Shakespeare Drive area including a one way section between the Shakespeare Drive and old Howes Lane and 20mph on Shakespeare Drive, Blenheim Drive and West Street, to see in principle what benefits traffic calming would bring. The modelling showed that the traffic calming would have benefits and there is a need for measures to discourage traffic movements through the area as increases could impact on pedestrian severance and amenity. Indicative proposals for Shakespeare Drive have been developed and are provided separately, involving a 3 metres wide shared cycleway/footway, build outs to reduce traffic speed and pedestrian crossing points.

The need for the improvements is closely related to the traffic impacts of land south of the railway as well as provision of walking and cycling connections for this area, as there will be a connection from Shakespeare Drive to the Link Road and the primary road into the development. However, the route is unlikely to become attractive to access the development until the Link Road is in place as well as when the Application 2 development and other developments in the vicinity are underway. It is therefore suggested that the measures should be implemented in accordance with the same timeframe as the Link Road (i.e. beyond 900 NW Bicester total homes).

1.7 B4100/ Caversfield junction safety improvements

The assessment of impacts of traffic from the NW Bicester development has identified safety and capacity issues at the junction of the B4100 and unnamed road junction for Caversfield as well as an anticipated increase in traffic on routes in the village. As such, indicative proposals have been developed for the junction with the B4100 to improve safety and discourage traffic from using the unnamed road into Caversfield, and as a short cut to Skimmingdish Lane. Two options are provided separately – minor signing and white lining measures to improve visibility and reduce overtaking or a left in and left out only junction. This latter suggestion would remove the right turn in and out of the unnamed road and thus improve safety, as well as reduce the traffic using the route.

There are acknowledged to be existing accident issues on the B4100 and the speed limit is to be reduced to 40mph as part of the Exemplar development, which will bring some benefit. It is suggested that the further improvement is made within the early phases of development of NW Bicester, to prevent safety issues arising and minimise the impact on Caversfield. A trigger of occupation of 900 homes of the overall NW Bicester development is put forward as a suggested timescale.

1.8 Summary

The discussion above has indicated trigger points for the various elements of transport infrastructure in relation to the NW Bicester development. These are summarised in Table 9 below.

Table 9: Summary of Suggested Phasing of Transport Infrastructure

Priority in Timescale	Transport Infrastructure	Suggested Trigger	Comment
1	Bucknell Village Traffic Calming	Prior to first occupation (during construction phase)	Related to all NW Bicester development as well as existing issues and overall planned growth
2	A4095 NW Strategic Link Road: Shakespeare Drive to Lords Lane	900 homes	Related to all NW Bicester development and overall planned growth
2	Shakespeare Drive Walking and Cycling Improvements	900 homes (in parallel with the Link Road)	Related to all NW Bicester development to the south of the railway.
2	B4100/ Caversfield junction safety improvements	900 homes	Related to all NW Bicester development to the north of the railway as well as existing issues and overall planned growth
3	A4095 NW Strategic Link Road: Western section from Middleton Stoney Road to Shakespeare Drive	1200 homes	Related to all NW Bicester development and overall planned growth
4	A4095/ B4100 Banbury Road roundabout capacity improvements	1500 homes	Related to all NW Bicester development and overall planned growth
5	Exemplar Southern Access Junction	1800 homes of Application 1 (3793 homes of overall NW Bicester development)	Related specifically to Application 1. Improvements may be most appropriately undertaken in combination with the A4095/ B4100 Banbury Road roundabout however.

ATTACHMENT 3

DAVID TUCKER ASSOCIATES TECHNICAL NOTE (SEPTEMBER 2017)

Introduction

1. As landowners forming part of the Bicester 1 Local Plan Allocation (NWB), Albion Land (AL) have a collaboration agreement in place with A2Dominion (A2D).
2. This firstly provides a mechanism by which part of the NWB link road is delivered on land under the control of AL; and secondly the mechanism by which AL makes proportionate financial contribution towards the comprehensive transport infrastructure/services package agreed between A2D and Oxfordshire County Council (OCC) is secured. This contribution is worked out in terms of the respective housing content on the Albion Land site (150) as a proportion of the full NWB allocation (6,000). The NWB Link Road is a fundamental element of the transport package.
3. For the infrastructure funding contribution to be secured from AL, the above relies upon the AL proposals to the south of the rail line coming forward early to secure the necessary funding. A2D are supportive of AL aspirations in this regard and have confirmed that they would not seek to construct any part of their proposals on land to the south of the railway line in advance of the rail crossing.
4. Nonetheless until AL secure unfettered development consent on their proposals, the consequential unavailability of the land necessary to form the western end of the Link Road and the funding contribution will present a significant obstacle to the delivery of the wider NWB allocation.
5. The securing of the Link Road rail crossing (tunnel) also currently presents an obstacle to the comprehensive delivery of NWB. In 2014, a mechanism to identify trigger points for highway infrastructure implementation, including the Link Road rail crossing was developed and agreed between A2D and their consultants Hyder Consulting, OCC and Cherwell District Council (CDC). This was summarised in a Memo dated 12/12/14 prepared by Hyder Consulting (attached as **Appendix A**). The traffic flow appraisal technique employed, gave rise to a NWB development threshold of no more than 900 dwellings together with a proportionate level of the other land uses across NWB prior to the implementation of the Link Road rail crossing. The threshold of 900 was derived following a series of proportionate traffic flow reduction tests to establish the

performance levels at the Bucknell Road/Howes Lane junction with varying development quantum. This is the main junction for which relief is provided by the Link Road rail crossing.

6. The residential element of this threshold figure will be delivered to the north of the rail line by A2D, including the Exemplar site (393) and 507 further dwellings.
7. The Memo defines the appraisal technique employed, whereby development quantum levels were tested as a proportion of the NWB development which had been envisaged for an interim year of 2024, within the Local Plan period to 2031. In terms of residential development, the 2024 trajectory had been for 1863 dwellings in addition to the already consented Exemplar site (393 dwellings), i.e. 2256 dwellings in total. The threshold of 900 dwellings therefore equated to 40% of the 2024 trajectory.

Employment Land

8. 40% of the employment on NWB is inherent within the traffic appraisal which established the agreed threshold. Given that the NWB employment trajectory in 2024 was 10 hectares, the acceptability of the traffic impact from 4 hectares of employment on NWB is already definitively established.
9. Within the A2D application documents, the land being promoted by AL is referred to as Zone 2 of NWB. The employment land use mix assumed by A2D for Zone 2 differs from the content of the AL planning application. Consequently the calculations implicit within the 2014 Memo, give rise to a 70-80% over-estimate of AL site generated peak period traffic levels. The junction appraisals set out within the Memo therefore overstate the resulting queues and delays.
10. In a similar vein, the background traffic levels within the threshold appraisals had been based upon assumed delivery of wider Bicester local plan housing and employment allocations trajectory. Traffic from the forecast level of development at these allocations is therefore included within the junction appraisals.

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11. The total employment trajectory set out in the Memo was for 127.3 hectares to be delivered over a 13 year period between 2011 and 2024. Proportionally this equates to approximately 10 hectares per year. Between 2011 and 2015, none of these sites have delivered any employment use. If the original profile of 10 hectares per year going forward is assumed, then by 2024 there would be a shortfall of 40 hectares, representing approximately 30% of the trajectory to 2024 with a consequential overstating of traffic levels in the agreed development threshold appraisal tests. The consequence of this is that the Bucknell Road/Howes Lane junction appraisal from which the threshold was derived, now represents a pessimistic outcome. It is therefore an entirely appropriate and consistent application of the methodology that the entirety of the NWB employment allocation can be delivered before the Road Link rail crossing. This employment is focussed on the AL site, and the approach is consistent with para 2 above, whereby A2D are supportive of AL development coming forward early.
 12. Traffic from the entire AL employment land can therefore be added to the network without further worsening the forecasted impact on the Bucknell Road/Howes Lane junction as set out in the December 2014 Memo.

Housing

13. Hyder Consulting have provided AL with traffic forecast output to reflect the inclusion of an additional 150 dwellings utilising the same methodology employed in the December 2014 Memo.

Appraisal based on agreed methodology

14. These flows have then been subject to appraisal using PICADY, with Hyder Consulting input parameters. **Table 1** in part replicates the AM and PM peak results of the tests included in the 2014 Memo (namely Test 1, 2 and 3). It also includes DTA test results (Test 2a) utilising the Hyder traffic flows and junction parameters for a threshold of 1050 dwellings (900 + 150).

Table 1: Bucknell Road/A4095 Howes Lane PICADY Capacity Tests – Hyder Flows

	AM Peak (8000-9000)							
	Test 1 – Interim Year 2024		Test 2 – NWB 900 Homes		Test 2a – NWB 1050 Homes		Test 3 – NWB 1200 Homes	
Arm/Turning Movement	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Howes Lane – Right Turn	2.922	26	0.225	0	0.29	0	0.382	1
Howes Lane – Left Turn	3.005	212	0.768	3	0.80	4	0.844	5
Bucknell Road N (Right Turn to Howes Lane)	1.184	134	0.845	7	0.88	9	0.917	13

	PM Peak (1700-1800)							
	Test 1 – Interim Year 2024		Test 2 – NWB 900 Homes		Test 2a – NWB 1050 Homes		Test 3 – NWB 1200 Homes	
Arm/Turning Movement	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Howes Lane – Right Turn	6.983	51	0.886	4	1.05	6	1.068	8
Howes Lane – Left Turn	7.065	362	1.028	28	1.09	48	1.153	70
Bucknell Road N (Right Turn to Howes Lane)	1.17	127	0.863	8	0.9	10	0.929	14

Source: Tests 1, 2 and 3 – Hyder Consulting. Test 2a – DTA utilising Hyder Consulting base data.

15. Test 2 which was the means by which the previously agreed 900 dwelling threshold was derived gave rise to a queue of 28 vehicles on Howes Lane and 8 vehicles on Bucknell Road in the PM peak. Neither queue would block the downstream junctions on the respective links (Shakespeare Drive traffic signals and A4095 mini-roundabout respectively). This was deemed acceptable by the authorities.
16. Test 3 (appraising 1200 dwellings) gave rise to queues of 70 vehicles and 14 vehicles on Howes Lane and Bucknell Road respectively in the PM peak. Both queues would block the downstream junctions. This operational level was considered unacceptable by the authorities.
17. Test 2a with the AL dwellings included gives rise to queues of 48 vehicles and 10 vehicles respectively. As with Test 2, neither queue would block the respective downstream junctions on Howes Lane or Bucknell Road.

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18. This consequential level of congestion is not severe in NPPF terms. Allied to this, the context of land being released to deliver the western part of the NWB link road by the delivery of residential and employment land on the AL site demonstrates the wider benefit that will ensue.

Alternative appraisal methodology

19. In order to ensure robust consideration of the implications of the additional AL dwellings, an alternative appraisal approach has also been prepared. This reflects the proximity of the AL site and the fact that traffic from these 150 dwellings to the south of the railway line will as a natural consequence of site traffic distribution will not tend to use the Bucknell Road/Howes Lane junction.
20. Building upon the Hyder Consulting 900 dwelling appraisal traffic flows as forming the permitted base (i.e. Test 2), an alternative method of appraisal of AL site traffic is presented at **Table 2**. Forecast site traffic from the AL Transport Assessment Report has then been added to the Test 2 junction turning flows. The results of the appraisal whereby traffic from 150 dwellings is added are provided in Test 2b in **Table 2** below.
21. Finally, notwithstanding the justification provided above that the AL employment should be allowed to come forward before the Link Road rail crossing, a further test to re-enforce this view is provided with the addition of the AL TAR residential site traffic and traffic from the balance of the employment land (over and above the 4 hectares already allowed for in Test 2). Again these results are provided at **Table 2** as Test 2c.

Table 2: Bucknell Road/A4095 Howes Lane PICADY Capacity Tests – Hyder Base + DTA Site Traffic

	AM Peak (8000-9000)			
	Test 2b – NWB 1050 Homes		Test 2c – NWB 1050 Homes and Balance of Employment	
Arm/Turning Movement	RFC	Queue	RFC	Queue
Howes Lane – Right Turn	0.25	0	0.25	0
Howes Lane – Left Turn	0.80	4	0.78	4
Bucknell Road N (Right Turn to Howes Lane)	0.86	8	0.88	9

	PM Peak (1700-1800)			
	Test 2b – NWB 1050 Homes		Test 2c – NWB 1050 Homes and Balance of Employment	
Arm/Turning Movement	RFC	Queue	RFC	Queue
Howes Lane – Right Turn	1.02	4	1.05	5
Howes Lane – Left Turn	1.05	35	1.09	49
Bucknell Road N (Right Turn to Howes Lane)	0.89	10	0.90	10

Source: Traffic levels sourced from Test 2 (Hyder Consulting) except for Site traffic – DTA estimates (AL TAR).

22. The Test 2b results with the AL residential traffic forecasts generally mimic the outcome of the Test 2 results (Table 1). Using his approach, the operational criteria deemed previously acceptable to the authorities would facilitate 1050 dwellings (ie 150 dwellings on AL).

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23. Similarly, the Test 2c results generally reflect the Test 2a results. In other words, using this approach the operational criteria deemed acceptable by DTA at paragraphs 16-17, facilitates 1050 dwellings and the full quantum of AL employment land.

Conclusion

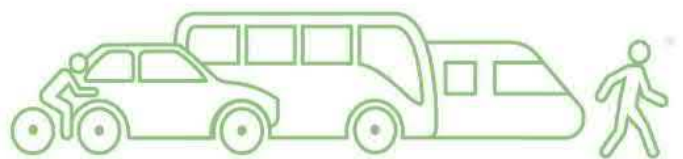
24. In conclusion:
- a. AL have a collaboration agreement with A2D providing a key part of the Link Road and financial contribution to transport infrastructure/services.
 - b. The traffic implications from 4ha of employment land on NWB are already accepted within the previously agreed 900 dwelling threshold prior to implementation of the Link Road rail crossing.
 - c. Using the same methodology the traffic implications of 1050 dwellings are demonstrated not to be severe in NPPF terms.
 - d. The lack of Local Plan employment allocation sites coming forward between 2011 and 2015 contributes towards the conclusion that the full AL employment content.
 - e. This conclusion is further strengthened by the limited traffic impact which the AL employment has on the Bucknell Road/Howes Lane junction. Beyond the first 4 ha of employment land, AL are prepared to enter into a Routing Agreement to preclude HGVs from accessing the site via Bucknell Road prior to the Link Road rail crossing.
 - f. Traffic from the AL site in accordance with the current application has been demonstrated to be acceptable on the highway network in advance of the Link Road rail crossing.



APPENDIX A

ATTACHMENT 3

OXFORDSHIRE COUNTY COUNCIL CONSULTATION RESPONSE



Application no: 21/01630/OUT

Location: Land at North West Bicester Home Farm, Lower Farm and SGR2 Caversfield

Transport Schedule

Recommendation:

Objection for the following reasons:

1. Some inaccuracies and omissions in the Transport Assessment and Environmental Statement mean that it is not possible to fully assess the impact of the development in accordance with paragraphs 109 and 111 of the NPPF.
2. Some of the works to provide safe access are outside the red line and not on adopted highway, meaning that the development may fail to provide safe and suitable access to the site for all users in accordance with paragraph 108 of the NPPF
3. The site will create a desire line across the B4100 to the local church, and no safe crossing is offered by the development, contrary to paragraph 108 of the NPPF

If despite OCC's objection permission is proposed to be granted then OCC requires prior to the issuing of planning permission a S106 agreement including an obligation to enter into a S278 agreement to mitigate the impact of the development plus planning conditions and informatives as detailed below.

S106 Contributions

Contribution	Amount £	Price base	Index	Towards (details)
Highway works 1	47,289	Dec 2020	Baxter	Improvements to junction of Charlotte Ave/B4100
Highway works 2	278,330	Dec 2020	Baxter	Improvements to junction of B4100/A4095
Ped/cycle infrastructure	362,465	Dec 2020	Baxter	Improvements to cycle route between site and town centre/stations
Public transport services and infrastructure	696,118	Dec 2020	RPI-x	Improvement of bus services and infrastructure at NW Bicester
Travel Plan Monitoring	2,832	Dec 2020	RPI-x	Monitoring the travel plan over its life

Public Rights of Way	50,000	July 2021	Baxter	New public right of way and improvements to public rights of way in the vicinity of the site
Ped/cycle bridge	TBC			The provision of a pedestrian/cycle bridge over the watercourse into the adjacent site to the west

Other obligations:

- Proportionate contribution to Major Infrastructure costs (primarily the strategic link road/A4095 diversion through the NW Bicester allocation)
- Off site highway works (see below)
- Vehicular and ped/cycle connections into Elmsbrook (required as these are not public highway)
- Participation in North West Bicester Bus Forum
- Measures to ensure the delivery of the ped/cycle bridge
- Ped/cycle connections to adjacent site

Key points

- Further information and clarification needed on access points
- Visibility splay for construction access appears to cross third party land. Clarity needed on construction access to western parcel.
- Inadequacies in the Environmental Statement, particularly around assessment of construction traffic
- Inaccuracies in the TA regarding sustainable transport accessibility
- Crossing of the B4100 to Caversfield Church is required
- Connection to adjacent parcels needs to be secured
- Further work needed to identify suitability of spine road for additional traffic, and any mitigation measures needed.

Comments:

Introduction

The application is in outline only, for 530 dwellings with all matters reserved except access. The application form proposes a total of 1082 car parking spaces and 1025 cycle parking spaces. The dwellings would be split over two sites, either side of the NW Bicester Exemplar site (Elmsbrook) spine road, and adjacent to the existing Elmsbrook development. The transport assessment assumes that there would be approximately 400 dwellings on the western parcel, and 130 on the eastern parcel. The site is within the NW Bicester Policy allocation area, although the NW Bicester Masterplan, which accompanied the SPD, did not include any housing on the eastern parcel.

Access arrangements

The eastern parcel is proposed to be accessed via an already constructed cul-de-sac off the spine road, just south of the bus-only link. This is referenced as Access A in the TA. Vehicle traffic from this parcel would therefore access via Charlotte Ave, and not Braeburn Ave.

The Western parcel is proposed to have three accesses: Access B immediately south of the bus gate and almost opposite Access A, would provide access to a limited number of dwellings - assumed to generate 37 two-way trips in the am peak, and 33 in the pm peak. The indicative masterplan shows that only 11 buildings would use this access, although some of these may be apartments.

Access C would provide one access to the remainder of the western parcel, immediately north of the bus gate. The other access into this parcel, Access D, would lead into the street network within the existing Elmsbrook development, which leads onto the spine road (Braeburn Ave) immediately south of its junction with the B4100. Traffic from accesses B and C would only be able to access the development via Braeburn Ave.

The TA states that there would be no vehicular connection between Accesses B and C (which would allow drivers to bypass the bus gate), although bollards may be used to permit emergency access.

The access via Charlotte Ave is more constrained by geometry and passes via the primary school and local centre. Also, its junction with the B4100 is more likely to experience congestion than the Braeburn Ave/B4100 junction. It is therefore important to minimise access via Charlotte Ave. The number of dwellings accessible from Access B should be limited by condition, and there should be a condition preventing a link between Accesses B and C. There should be no need for an emergency vehicular access between the cul de sac(s) off Access B and the rest of the western parcel - it should be cycle and pedestrian access only, to avoid the possibility of abuse.

It should be noted that the spine road is not yet adopted highway, although from the Site Location Plan, the land required for the accesses, right up to the adopted highway on the B4100, appears to be within the red line of the application, which suggests that the applicant has permission from the landowners to carry out the necessary works. I note that this red line application boundary does not match with plan 4600-1100-T-009 Rev C (Site accesses A, B and C), which shows that some of the works required to change the geometry of the existing cul de sac at Access A, and to provide the visibility splay for Access C, would be outside the application area. **This needs clarification.** OCC would seek for these works to be secured via a S106 agreement.

With regard to the layout, the vehicle swept path analysis is incomplete - no SPA has been provided for Access A, nor has the right turn out for Access B, and the right turn in for Access C been provided. Access B shows that the refuse vehicle entering the site would need to cross well over into the path of opposing vehicles on the spine road and

take up nearly all of the width of the access. This is likely to cause conflict with vehicles and cyclists exiting Access B to turn right, and the risk that vehicles may need to reverse, causing a safety risk.

At access C, the exiting refuse vehicle would take up nearly all the carriageway of the spine road, with risk of conflict particularly for cyclists, who would be on carriageway at this point. **Further information is required, to provide the missing SPA, plus revised geometry or demonstration of sufficient forward visibility to avoid conflicts, and in particular the need for vehicles to reverse, or cyclists to have to get onto the footway.**

Our preference would be for the geometry of accesses B and C to be such that it prevents or at least deters movements towards the bus only link. Signage for the bus link will need to be moved as part of the works and the TRO amended by OCC. **Further details are required.**

The existing ducting in place for the future installation of enforcement cameras at the bus gate will need to be moved as part of the works.

It is noted that the applicant would, as part of the works, provide footway along the western side of the bus only link.

Access D leads directly into the road network of the existing Elmsbrook development. Swept path analysis should be provided of this entire route, showing car passing refuse vehicle, to show that it is suitable for connection to 200+ further dwellings. This access should have a 2m footway on both sides. **Further information required.**

Construction access

Permission is also sought for a construction access into the eastern parcel directly off the B4100 in the approximate position of an existing field access. The construction of this access will require a S278 agreement. I have no objection to this access in principle, provided adequate visibility can be provided. However, I note that the necessary visibility splay to the north crosses a ditch that is not within the highway boundary. The applicant would need to obtain title to this land for the purposes of the S278 agreement and it can't be assumed this is possible. The visibility splay does not appear to be within the red line.
Reason for objection

It is assumed that construction access into the western parcel would be off the spine road. Access B would not be acceptable as vehicles would have to pass the school and village centre. Access C has awkward geometry and we would need to see swept path analysis for a maximum size artic, which I do not think would be achievable. Access D would not be appropriate as it passes through residential streets. **Further information is required.**

No widening is proposed to provide a right turning lane for construction vehicles into the site. To improve safety and avoid congestion it may be appropriate for permitted movements to be left in-left out only.

I consider that the Environmental Statement's assessment of the impact construction traffic is inadequate. It dismisses the need to assess construction traffic on the basis that the number of vehicles will be much less than the traffic associated with the development in operation. This takes no account of the different nature of the traffic. This also applies to the noise and vibration assessment, where construction traffic is not considered. It is notable that there are no dedicated cycle facilities on Braeburn Avenue, placing cyclists on carriageway, and therefore more likely to be affected by construction traffic. **Further information is required**

Sustainable transport connectivity/transport sustainability

Some of the information in the TA is inaccurate in terms of distances to local facilities, giving the impression that the site is more accessible by sustainable transport than it actually is. For example, the distances in Table 4.2 don't correspond with the plan showing distances. The nearest shops are beyond the acceptable walking distance. At 4.5 the description of rail services does not show how some of the London services are now routed to Bicester Village instead of Bicester North. The TA also claims that there is a continuous off carriageway cycle route to Bicester North station, which is not the case. Even with the planned improvements to the roundabout at the B4100/A4095 junction, there is still a substantial gap in safe cycle provision on Banbury Road. **Reason for objection**

In isolation, the site is in a location where there is a limited choice of travel by sustainable modes. However, as part of the North West Bicester masterplan, it would be better connected to local facilities. It is for the planning authority to decide whether the site is considered on the assumption that the rest of the NW Bicester masterplan will be built out, or whether it has to be considered in isolation.

The Transport Assessment relating to this states that “this development has incorporated a range of measures to ensure sustainability principles are met, reduce the emissions of greenhouse gases and increase adaptation to climate change” but there is no explicit mention of how it intends to do so with consideration to walking and cycling.

Bicester has an adopted Local Cycling and Walking Infrastructure Plan (LCWIP). The current Bicester LCWIP, published in 2020, shows clear opportunities for linking into;

- off-road connecting routes,
- high-traffic routes,
- quiet off-road routes and
- connecting routes via the B4100 – A4095.

Any new developments need to demonstrate how their site provides high quality active travel connections and deliver or contribute towards schemes required through the LCWIP. This site is in an ideal location for the reasonable continuation of this network as the Site falls on the boundary of the network where the 'High-Traffic' route BR8 terminates nearby along Banbury Road. This route will connect the site with the town centre by for those walking and cycling, and links to BR6, which connects to Bicester North rail station.

Much (but not all) of BR8 has cycle provision but will need upgrading to meet LTN 1/20 guidelines including but not limited to the following;

- Route signposting and wayfinding, and
- Physical separation and protection from high volume motor traffic i.e. using Orca kerbs.

The route within Elmsbrook is not continuous and does not meet LTN 1/20 standards.

LTP4 (Connecting Oxfordshire Volume 8 Part ii) supports the request of linking into these routes by explaining that is essential to provide high quality access to key locations by walking and cycling. Policy **BIC1** (Improve access and connections between key employment and residential sites and the strategic transport system by: *Delivery effective peripheral routes around the town*) supports this in saying:

- “Cycle-friendly measures must be incorporated into all new road schemes and new housing developments. It is essential that new developments are planned with cycling in mind and with facilities to make cycling both convenient and safe. This will link in with developing a connected, comprehensive cycle network across the town.
- We will review walking networks and focus capital improvements on routes with the greatest potential for increasing the numbers of people walking, particularly where improving the pedestrian environment would support economic growth and reduce car use.”

Policy **BIC2** similarly align with this request by saying:

- “We will work to reduce the proportion of journeys made by private car through implementing the Sustainable Transport Strategy by: *Identifying a number of new sections of urban pedestrian and cycle routes to better connect residential developments with the town centre and key employment destinations* (Bicester Sustainable Transport Strategy).”
- This includes “A direct link from the centre of North West Bicester (Eco Town) to Bicester North Station and onwards to the Launton Road industrial estate;”.

A contribution is requested to support the necessary improvements supporting the relevant parts of the Bicester LCWIP network.

I note the application makes no commitment to provide a pedestrian crossing on the B4100 to allow residents to access Caversfield Church. This will be the local place of worship for the allocation, there being no other place of worship in the NW Bicester masterplan, and will therefore be a need for a safe crossing. A signalised crossing was requested in relation to the previous planning application on the eastern parcel, to be implemented by the developer under S278. **Reason for objection**

Public transport

Oxfordshire County Council requires applicants to make provision for public transport improvements, either through financial contributions towards enhanced services or direct delivery of infrastructure works. This is in line with our policy position to secure 'good growth' and maximise the opportunity for new and existing residents to make sustainable travel choices.

The Transport Assessment has reviewed the existing public transport provision in the area around the proposed site. Table 4.3 refers to 'local routes', although it would appear this stretches to all services in Bicester – some of which do not operate in close proximity to the development. Of the routes listed in the table:

- only services E1 and 505 operate within 1km of the site;
- service 18 operates five times per day, not twice in the peak hour as suggested, and to no location north of Bicester town centre (it no longer serves Bicester North station);
- service 25A is now renumbered service 250 is does not operate north of Bicester town centre;
- service S5 now terminates at Glory Farm and does not serve Ambrosden, except on Sundays; and
- services 22 and 23 no longer exist.

The assessment is therefore significantly out of date, incorrect and misleading in that it presents a much more comprehensive picture than is the case in reality. The Council had provided the applicant's consultants with an updated bus service map and details in January 2021, but this does not appear to have been taken into account in the TA.

In addition, the future of service 505 is currently in doubt as the existing contract between Stagecoach and West Northamptonshire Council for this route is due to expire in January 2022, with no additional funding currently identified.

Table 4.4 contains incorrect details of rail service frequencies:

- From Bicester North, the current frequency of trains from this station to London Marylebone is three per hour at peak times and two at off-peak times, with one train per hour to/from Birmingham; and
- From Bicester Village, the frequency of trains is two per hour to London Marylebone and Oxford.

The bus connection information for Bicester North is largely irrelevant as there are no direct buses from the site to the station. Only services E1 and 505 provide connections to Bicester Village station. Services 8, 22 and 23 no longer exist.

The total cost of providing an effective and relevant bus service to the North West Bicester strategic allocation of 2,600 units has been calculated at £2,990,064. Taking this site as a proportion of that allocation, the total contribution requested from this application is **£609,513.04** *for the improvement of bus services and infrastructure in North West Bicester*. This will be index linked as per the Council's standard practice and it is proposed that payment is made in three broadly equivalent annual instalments commencing on 1st occupation.

It is agreed that the current location and condition of bus stops on Braeburn Avenue and Charlotte Avenue should be sufficient for the purposes of the additional development.

Service E1 is currently provided by Grayline Coaches under a direct arrangement with A2Dominion, although the Council has an option to take control of the service if required. At the appropriate time the funding situation for the service will be reviewed and consideration given as to whether service improvements or maintenance of the existing frequency is most appropriate. In the longer term the service is expected to be extended through the wider North West Bicester allocation and increased in frequency and hours of operation.

Public rights of way

There is a network of public rights of way to the north and northwest of the site. Connection to this network is referenced within the NW Bicester masterplan, which shows a ped/cycle route from the adjacent site to the west, crossing the watercourse into the site, and leading to a new right of way at the western tip of the western parcel. The red line area extends in a 'finger' towards the watercourse, presumably to facilitate the link. However, I am concerned about the proximity to an attenuation feature. **Further information is required** to demonstrate this is an appropriate location for a crossing of the watercourse, and to establish the likely design and cost of the bridge, as this site must contribute proportionately to its cost.

Although this site does not have any public rights of way (PRoW) across it, there are public footpaths nearby that will be impacted and that is not included in any parameter plans, plus the development needs to support active travel and healthy lifestyle choices. A S106 contribution will be necessary to enable the development to be acceptable in planning terms, plus more work to tie the development into LCWIP and active travel networks using roads and other carriageways.

Please see the image of PRoW in the vicinity of the site below. A s106 contribution of around **£50k** is requested towards countryside access mitigation measures. At this stage it is clear that the site will need to be connected to the footpaths to Bucknell to the north

(pink routes). This will mean a new offsite pathway will need to be negotiated for walkers and possibly cyclists and created plus measures on the existing footpaths to Bucknell. An indicative alignment of a new route is shown at point D.



In terms of onsite provision the site needs to be permeable for all non-motorised users (NMUs) with clear, safe and preferable 'green' routes connecting play and public open spaces with homes, community spaces and onward connections to Bicester and other developments within the overall 'Ecotown' development area. These circulatory/permeable routes should be designed to be safe and easy to use all year round and provide the opportunity for connections from outside the site to be made. There needs to be a commitment to this at this stage with the detail subject to condition

The principle and indicative alignment of NMU circulatory routes needs to be agreed at an early stage, and these will need to be provided to LTN 1/20 standard and managed in perpetuity. This will need to be secured through the S106 agreement.

In general terms the site needs to be permeable for all non-motorised users (NMUs) with clear, safe and preferable 'green' routes connecting play and public open spaces with homes, community spaces and onward connections to Bicester and other developments within the overall 'Ecotown' development area.

Site layout

This application is in outline only, so detailed comments are not offered on the layout of the indicative masterplan. The following are high level comments only:

- Connection point needed at western tip, to provide link to new PRoW towards Bucknell (see above). A link to this point would need to be dedicated.

- The connection to the southern boundary of the western parcel (marked 11) would need to be secured by condition or legal agreement. This connection is referenced in the NW Bicester masterplan as a ped/cycle route. This is to ensure connectivity across NW Bicester including to the new PRoW to the north.
- The connection to the northern boundary (marked 11) would also need to be secured - this is on a desire line to a play area within Elmsbrook and would provide a traffic free route.
- Two of the connection points indicated from the eastern parcel would not connect into adopted highway and therefore could not be guaranteed without agreement with the adjacent landowner. The connection point at nearest to the southern tip of the eastern parcel is considered to be very important in minimising walking/cycling distances for residents. Without it, the walking distance/direction could be a deterrent.
- The perimeter paths are welcomed and important.
- Clarity is needed on which are pedestrian and which are pedestrian/cycle routes
- Roads within the development must be designed to allow speeds of no more than 20mph. The main access road running the length of the western parcel is too straight. There must be no lengths of straight road more than 70m without some features to calm traffic.
- Given the likely traffic volumes within each parcel, if speeds are reliably <20mph, on carriageway cycling provision would be acceptable within the parcels.
- 2m footways would be required, and these will need to run across private driveways and side roads i.e. pedestrians have priority.

Advice from Road Agreements Team

Trees must not conflict with streetlights and must be a minimum 10 metres away and a minimum 1.5m from the carriageway. Trees that are within 5m of the carriageway or footway will require root protection. Given the number of trees indicated it would be helpful that the proposed street lighting is provided as trees will have to be located at least 10 metres away to ensure the streetlights can perform effectively.

Trees within the highway will need to be approved by OCC and will carry a commuted sum. No private planting to overhang or encroach the proposed adoptable areas.

The visitor parking bays parallel to the carriageway, can be adopted but accrue a commuted sum. Any other bays (echelon or perpendicular) or private bays will not be considered for adoption.

No property should be within 500mm to the proposed highway. No doors, gates, windows, garages or gas/electric cupboards should open onto the proposed highway.

No Highway materials, construction methods, adoptable layouts and technical details have been approved at this stage. The detailed design and acceptable adoption standards will be subject to a full technical audit.

Minor residential roads that serve four or less properties will not be considered for adoption. Roads serving 5 or more houses can be considered for adoption but will need

to meet adoptable criteria set out in the OCC Residential Design Guide Second Edition (2015).

The Highway boundary needs to be checked with OCC Highway Records (highway.records@oxfordshire.gov.uk) to determine whether or not it coincides with the site boundary at the proposed access junction. The highway boundary is usually identified along the roadside edge of the ditch.

OCC require saturated CBR laboratory tests on the sub-soil likely to be used as the sub-formation layer. This would be best done alongside the main ground investigation for the site but the location of the samples must relate to the proposed location of the carriageway/footway.

Car and cycle parking

The TA states that car and cycle parking is not detailed in this application but will be in accordance with CDC and OCC standards. OCC will be looking to ensure that there is sufficient visitor parking space within the development, and for a high level of good quality cycle provision. The overall number of parking and cycle parking spaces eventually approved may be different from the number specified in this planning application.

Refuse collection

It is noted that some refuse vehicle swept path analysis has been provided for typical elements of layout. However, this appears to overrun kerbs, which would be unacceptable.. Full swept path analysis for the whole site will be required with reserved matters planning application(s).

Traffic impact

Baseline traffic counts and turning movements were provided to the applicant by OCC, taken from the Bicester Transport Model. Following preapplication discussions it was agreed that the most recent version of the model would be used. This has a base year of 2016 and was updated in 2018 to include the Heyford Park (Policy Villages 5) allocation. This model was validated and approved by OCC, and as part of the scoping of this TA, further sense checks were carried out.

Appendix C of the TA sets out the assumptions regarding development and infrastructure included in the BTM scenarios. The assessment for this development uses the 2031 model scenario, which includes the new link road diversion of the A4095 under the new railway bridge, which is expected to be completed in 2024. The baseline includes the quantum of development at NW Bicester expected to come forward by 2031, according to the Local Planning Authority's Annual Monitoring Report, but the traffic flows in the model from this development have been removed.

To assess the impact of this development, the estimated development traffic has been added manually to the baseline traffic flows, according to an assumed distribution agreed

with OCC. The methodology for calculating the vehicular trips includes a level of containment that is perhaps more appropriate to the situation when the rest of the masterplan is built out, but the resultant trip rates per dwelling are considered to be acceptable for the location.

The TA has assessed the proportionate impact of the development on nearby junctions. The three junctions where the development has the most significant impact are the A4095/B4100 junction, where a scheme of improvements is being developed by OCC taking the traffic from the development into account, the junction of Braeburn Ave/B4100, and the junction of Charlotte Ave/B4100. The latter two have been assessed in detail using standard junction modelling software. However, the model output reports have not been provided. According to the summary, the Braeburn Ave junction has good capacity to accommodate the traffic from the development, while the Charlotte Avenue junction is pushed over the acceptable capacity threshold in 2031.

Contrary to the assertions of the TA, in its current form, I do not consider there is sufficient capacity at the Charlotte Ave junction to accommodate the traffic from the development. The applicant has put forward a scheme of signalisation, but OCC would not necessarily accept this particular scheme. It has long been accepted that this junction would need to be signalised in the future, but due to the proximity, it will need to be carefully designed and modelled in conjunction with the upgraded A4095/B4100 junction. A proportionate contribution is therefore requested towards the future upgrade of this junction.

For completeness, and to verify the above, the applicant must provide the PICADY model output for both junctions. **Further information required.**

A proportionate contribution is also requested towards the improvement of the B4100/A4095 junction.

The modelling assumes that the A4095 diversion is in place, because it is included in the 2031 BTM scenario. There is reasonable certainty of it being delivered by 2024, but a condition is recommended restricting the amount of development that can come forward before it is opened. Previous modelling has shown that it is required prior to 900 homes at NW Bicester to avoid severe congestion at the junction of Lords Lane/Howes Lane/Bucknell Road.

Comments are made in relation to M40 J9 and J10. It is anticipated that Highways England will provide a response to these points.

The TA does not assess the impact of development traffic on the Elmsbrook spine road. Local objectors have highlighted the congestion experienced currently, particularly at school start and finish times. The roads have been designed with tight geometry and narrowings to slow traffic down, with one long narrowing only 4.1m wide, north of the school. It is debatable whether the road was designed with the eastern parcel in mind, since the NW Bicester masterplan shows no dwellings on this site. Safety issues due to lack of formal crossing points have also been highlighted, and the applicant has offered

a contribution towards a zebra crossing. **Further work should be carried out by the applicant to assess the suitability of the link for the development traffic and NMUs, and this may result in further mitigation being required.**

Other comments regarding the Transport chapter of the Environmental Assessment:

- Table 6.1 - The sensitivity of receptors has no consideration of cyclists, or workplaces
- Table 6.5 - Why has Braeburn Ave been classed as 'moderate sensitivity' when it has houses directly fronting the road?
- Table 6.2 - the criteria for magnitude of change should be expressed in terms of a percentage increase, as in para 3.17 of the Guidance.
- 6.81 - recent survey data shows that overall traffic levels in Oxfordshire are only approx 3% lower than pre-Covid.
- Pedestrian amenity has been expanded to pedestrian and cycle amenity, using the guidelines for pedestrian amenity set out in the guidelines - this is not appropriate for cycling, as cyclists cannot use footways.
- There is an inequate description of cycle facilities on Braeburn and Charlotte Ave
- No assessment of construction traffic as it is assumed to be lower than operational traffic, but this does not take vehicle type into account. No justification/calculations are shown to demonstrate how the volume of construction traffic has been estimated.

Travel Plan

The sustainable travel options to residents should be promoted to residents. The Travel Plan and Travel Information Pack will help to reduce / limit SOV use while promoting active and sustainable travel.

The cycle parking is welcomed.

Will EV charging be provided?

The submitted Travel Plan does not meet OCC requirements and will need to be resubmitted for approval prior to occupation. The detailed comments section below provides further details. The size of the site will also trigger requirements for a monitoring fee.

OCC Travel Plan and Travel Information Pack guidance documents are available [online](#).

Travel Plan comments:

- Add the estimated / planned date of occupation;
- Add the anticipated number of residents;
- Add first / last service information for public transport;
- Add a predicted mode share using Census data;
- Targets should set out a reduction in SOV mode share;
- Targets must be set for each year in which monitoring is to take place;
- Mode share targets can be set using Census data, updated and agreed with OCC after the baseline survey;

- Year 1 survey must be undertaken after full occupation; and
- Add commitments that:
 - All surveys will be analysed and submitted to OCC within one month of survey completion;
 - The name and contact details of the TPC will be sent to the Travel Plans Team at OCC (travelplan@oxfordshire.gov.uk) as soon as they have been identified;
 - If targets are not met at the end of the initial period of monitoring, the Travel Plan should be reviewed, new measures introduced and monitoring extended for another two cycles; for example where monitoring has taken place in Year 1, 3 and 5, if targets have not been met monitoring should continue in years 7 and 9; and
 - Once it has been approved, any changes to the Travel Plan, in particular the targets, must be made in agreement with the Travel Plans Team at Oxfordshire County Council.

A fee will be required to cover the monitoring of the travel plan.

S106 obligations and their compliance with Regulation 122(2) Community Infrastructure Levy Regulations 2010 (as amended):

Highway works contributions as detailed above

Towards: Off site highway works needed to provide capacity to support the wider development (including this site) north of the railway.

Justification: The works were identified as part of the transport assessment carried out to inform the NW Bicester Access and Travel Strategy, which supports the NW Bicester SPD. The site is part of the NW Bicester development north of the railway, and would only be acceptable in the context of that development, and therefore must make a proportionate contribution to the cost of the works necessary to support this development. The TA shows that there is a significant impact on both junctions where contributions are requested.

Calculation: The amounts of the contributions have been calculated on the basis of 530/2600 of the total contribution identified as being necessary for development north of the railway.

Public Transport Service Contribution as detailed above

Towards: the cost of serving development at NW Bicester north of the railway by bus.

Justification: The bus service was identified as part of NW Bicester Access and Travel Strategy, which supports the NW Bicester SPD. This site must make a proportionate contribution to the cost of the public transport necessary to support this development.

Calculation: The amounts of the contributions have been calculated on the basis of 530/2600 of the total contribution identified as being necessary for development north of the railway.

Public Rights of Way Contribution as detailed above

Towards: Off site public rights of way improvements and new public right of way, in the vicinity of the site

Justification:

These are considered necessary to provide opportunities for leisure/health walking and connections to the nearby village of Bucknell, for residents of the wider NW Bicester development north of the railway. The routes will be easily accessible by residents of this site.

Calculation: A desk estimate of the costs of the improvements has been carried out - further details will be provided. Note that this is more than when first estimated in connection with the masterplan. A proportionate contribution will also be sought from other application north of the railway.

Travel Plan Monitoring Fee as detailed above

Towards: The cost of monitoring the travel plan over a 5-year period.

Justification: The travel plan requires surveys to be carried out and revisions to be made as appropriate over its life. To be effective, this requires monitoring by council staff.

Calculation: The fee is based on an at-cost estimate of the staff time required.

S278 Highway Works:

An obligation to enter into a S278 Agreement will be required to secure mitigation/improvement works, including:

- Informal crossing of B4100 and linking footway to improve access to Caversfield Church – further details required.
- Construction access to the site.

Notes:

This is to be secured by means of S106 restriction not to implement development (or occasionally other trigger point) until S278 agreement has been entered into.

The trigger by which time S278 works are to be completed shall also be included in the S106 agreement.

Identification of areas required to be dedicated as public highway and agreement of all relevant landowners will be necessary in order to enter into the S278 agreements.

S278 agreements include certain payments, including commuted sums, that apply to all S278 agreements however the S278 agreement may also include an additional payment(s) relating to specific works.

Planning Conditions:

In the event that permission is to be given, the following planning conditions should be attached:

Cycle parking: Prior to the first use or occupation of the development hereby permitted, covered cycle parking facilities shall be provided on the site in accordance with details which shall be firstly submitted to and approved in writing by the Local Planning Authority. Thereafter, the covered cycle parking facilities shall be permanently retained and maintained for the parking of cycles in connection with the development.

Reason - In the interests of sustainability, to ensure a satisfactory form of development and to comply with Government guidance contained within the National Planning Policy Framework.

Construction Traffic Management plan: Prior to commencement of the development hereby approved, a Construction Traffic Management Plan (CTMP) shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, the development shall not be carried out other than in accordance with the approved CTMP.

Reason: In the interests of highway safety and the residential amenities of neighbouring occupiers and to comply with Government guidance contained within the National Planning Policy Framework.

Travel Information Pack: Prior to first occupation the development a Travel Information Pack shall be submitted to and approved by the Local Planning Authority. Thereafter the first residents of each dwelling shall be provided with a copy of the approved Travel Information Pack.

Reason: To ensure all residents and employees are aware from the outset of the travel choices available to them, and to comply with Government guidance contained within the National Planning Policy Framework.

Travel Plan: Prior to the first occupation of the development hereby approved, a Travel Plan, prepared in accordance with the Department of Transport's Best Practice Guidance Note "Using the Planning Process to Secure Travel Plans", shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, the development shall be implemented and operated in accordance with the approved details.

Reason - In the interests of sustainability and to ensure a satisfactory form of development, in accordance with Government guidance contained within the National Planning Policy Framework.

Restriction on occupations prior to the opening of the Strategic Link Road (A4095 diversion) - wording TBC

No vehicular access to be permitted within the site between Access B and Access C

Informative:

Please note, the Advance Payments Code (APC), Sections 219 -225 of the Highways Act 1980, 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 visit our website.

Prior to the commencement of a development, a separate agreement(s) must be obtained from Oxfordshire County Council's (OCC) Road Agreements Team for the proposed highway works (vehicular access, new footway links, bus infrastructure, pedestrian refuge island, carriageway widening and new right-turn lane) under S278 of the Highways Act 1980. For guidance and information please contact the county's Road Agreements Team via <https://www.oxfordshire.gov.uk/cms/content/contact-road-agreements-team>.

Officer's Name: Joy White

Officer's Title: Principal Transport Planner

Date: 6 July 2021

Mark Kirby

Subject: FW: 21/01630/OUT - NW Bicester - Technical Meetings

Switch-MessageId: 3c15cc0523044a02a2b3267707567be9

From: White, Joy - Communities <Joy.White@Oxfordshire.gov.uk>

Sent: 23 September 2021 14:58

To: Mark Kirby <mkirby@velocity-tp.com>

Cc: Caroline Ford <Caroline.Ford@Cherwell-DC.gov.uk>

Subject: RE: 21/01630/OUT - NW Bicester - Technical Meetings

[EXTERNAL] This message was sent from outside your organization

Hi Mark

Just coming back to you as promised on various points in your response document dated 10 September.

- Major infrastructure - I have discussed the contribution with the new project manager, who has replaced DG - Alen Chanamuto. He understands the need for a cost estimate of the full scheme and I hope that this will be available within the next 2-3 weeks.
- Access arrangements: Access C: It was agreed that additional land could be dedicated on the northern corner to maximise the forward visibility envelope, given the constraints on movements and the need for good intervisibility between vehicles entering and exiting. This could be grass verge. Access D - you agreed to consider the suitability of the junction along the route between the access and Braeburn Ave and confirm the width of the route. You also agreed to look at a direct pedestrian access to the bus stop on Braeburn.
- Construction access - I advised you to contact our Highway Records team to confirm whether the ditch was a highway ditch or not, given the caveat regarding the highway boundary normally assumed to be the roadside edge of the ditch. I am happy with a 2.4m x distance.
- Cycling on carriageway - this is not automatically acceptable for speed limits of 20mph - daily traffic flows need to be taken into account, in accordance with LTN 1/20.
- The offer of an obligation to deliver a signalised crossing on the B4100 is welcomed and provided the location is in accordance with the previous planning application at the site, this would be acceptable in principle and would allow us to remove this objection.
- I confirmed that a contribution towards the footbridge leading to the adjacent site would be in addition to the public rights of way contribution, which would be to off site public rights of way improvement, to footpaths leading towards Bucknell village. I asked that the applicant do some work to establish the likely cost of such a bridge, so that a 50% contribution can be agreed.
- Traffic impact - potential for sensitivity test to help overcome the objections of the residents' association - to be discussed.
- NMU assessment of spine road - do the adjusted modal shares match with the targets in the Elmsbrook travel plan?
- Cumulative impact - as discussed, the cumulative traffic impact on Charlotte Ave does suggest that off carriageway facilities are required, even at 20mph, which means the current layout, particularly over the bridge, may not be suitable for the primary street for the masterplan development. Further, the predicted daily usage by pedestrians means the existing 3m shared use is not in accordance with LTN 1/20. I think this needs to be discussed with the planning authority. But it is worth looking into the feasibility of an access to the Eastern parcel only, directly off the B4100, as being preferable to loading it onto the

spine road, and you did agree to look at this. The proximity to the Home Farm access needs to be considered in the assessment. Indicently I note that the Home Farm access is within your revised application area, so could this be reconfigured to join up with a site access?

- I look forward to alternative proposals for construction access to the western parcel.
- You agreed to address Mr Fellows' concerns (as expressed in his consultation response) in your response.

I look forward to further discussion after my return from leave.

Best wishes

Joy

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