

**APPEAL AGAINST CHERWELL DISTRICT COUNCIL FOR THE
DEVELOPMENT OF**

**LAND AT NORTH WEST BICESTER, CHARLOTTE AVENUE,
BICESTER, OX27 8BP**

PROOF OF EVIDENCE

OF

MARK KIRBY

SUBMITTED ON BEHALF OF FIRETHORN DEVELOPMENTS LTD (THE APPELLANT)

APPEAL

PLANNING INSPECTORATE REFERENCE: APP/C3105/W/23/3315849
CHERWELL DISTRICT COUNCIL REFERENCE: 21/01630/OUT

MAY 2023

CONTENTS

1	Executive Summary	1
2	Introduction	2
3	Development Proposals	4
4	Summary of Highways and Access Issues Raised by CDC	7
5	Response to Highways and Access Issues Raised by CDC	8
6	Summary of Highways and Access Issues Raised by the Rule 6 Parties	33
7	Response to Highways and Access Issues Raised by the Rule 6 Party	34
8	Response to National Highways and Gagle Brook Primary School	40
9	Conclusions	44

APPENDICES

APPENDIX A	SITE ACCESS PLAN
APPENDIX B	OXFORDSHIRE COUNTY COUNCIL CORRESPONDENCE
APPENDIX C	HYDER CONSULTING MEMORANDUM (12 DECEMBER 2014)
APPENDIX D	ALTERNATIVE ACCESS PROPOSALS TO THE B4100 FROM THE EASTERN PARCEL



1 Executive Summary

- 1.1 My Proof of Evidence has been prepared to address the highways and access putative Reasons for Refusal raised by Cherwell District Council ('CDC') in their capacity as the Local Planning Authority ('LPA') in relation to the Planning Application for the Proposed Development at land at North West Bicester, Charlotte Avenue, Bicester, OX27 8BP ('the Site').
- 1.2 The Planning Application was submitted to CDC on 5th May 2021 and was validated on 6th May 2021.
- 1.3 Following an earlier deferral by members in the Committee Meeting on 12th January 2023 which led to the Appeal being lodged on the basis of non-determination, the application was presented to CDC Planning Committee on 9th March 2023 with a recommendation for approval (in the event that the Appeal had not already been lodged).
- 1.4 There was no objection¹ raised by Oxfordshire County Council ('OCC') in their capacity as Local Highway Authority ('LHA'). In addition, with reference to the LPA officer recommendation for approval², as set out within the Committee Report dated 09th March 2023, the LPA at that stage did not have any outstanding concerns in relation to highways matters.
- 1.5 Members commented at the CDC Planning Committee on 9th March 2023 that had the Appeal not already been lodged on non-determination grounds, they would have refused Planning Permission, with two of the five putative Reasons for Refusal related to highways and access.
- 1.6 In addition, two separate groups objecting to the Planning Application have been granted Rule 6 Party status in this appeal, the North West Bicester Alliance ('NWBA') and the Bicester Bike Users Group ('BBUG'), who have raised comments relating to highways and access each as part of their respective Statements of Case ('SoC').
- 1.7 My Proof of Evidence sets out how the matters raised by the LPA and the Rule 6 Parties are considered to be appropriately addressed within the information already submitted in support of the Planning Application, the additional information provided during the determination period and as part of the information within this Proof of Evidence.
- 1.8 In conclusion, based on my professional judgment, if Planning Permission were to be granted for the Proposed Development there would not be an unacceptable impact on highway safety, nor would the residual cumulative impacts on the road network be considered "severe". In addition, I believe that safe and appropriate access to the Proposed Development has been demonstrated for all users of the highway network.
- 1.9 As such, and in accordance with paragraph 111 of the National Planning Policy Framework ('NPPF'), there should be no reason to prevent or refuse the Proposed Development on highways grounds.

¹ OCC – Transport Schedule #8, 1st paragraph, page 2 [CD-5-8]

² CDC – Appeal Report to Committee, paragraph 11, page 128 [CD-3-4]



2 Introduction

- 2.1 My name is Mark Kirby. I am a Director of Velocity Transport Planning ('VTP') with more than 23 years of experience in transport planning and engineering in the United Kingdom (UK). I hold a Diploma in Civil Engineering from the Cape Technikon in Cape Town, South Africa and a Professional Certificate in Highways and Transport Planning from Nottingham Trent University in the UK.
- 2.2 I have significant experience in providing transport planning services relating to residential-led development ranging from single dwellings through to circa. 1,500 units, as well as a broad range of experience across a variety of sectors, including commercial, retail, education, health, leisure and regeneration developments.
- 2.3 I have been engaged by Firethorn Developments Limited ('the Appellant') to advise on highways and transportation matters for the Proposed Development of land at North West Bicester, Charlotte Avenue, Bicester, OX27 8BP ('the Site').
- 2.4 I have prepared this Proof of Evidence in relation to the Appeal made by the Appellant under Section 78 of the Town and Country Planning Act 1990 ('the Appeal') [Appeal Ref. APP/C3105/W/23/3315849] in respect of an outline Planning Application submitted to Cherwell District Council ('CDC') on 5th May 2021, which was validated on 6th May 2021 (Planning Ref. 21/01630/OUT), hereafter referred to as 'the Planning Application' or 'the Proposed Development'.
- 2.5 I led the team that prepared the documentation that supported the Planning Application, as well as the subsequent Technical Notes that were prepared to address post-submission consultation responses and requests for further information.
- 2.6 Oxfordshire County Council ('OCC'), in their capacity as Local Highway Authority ('LHA'), submitted a number of consultation responses to the Planning Application from July 2021 to December 2022, raising a number of objections in relation to highways and transport matters [CD-5-1 to CD-5-7].
- 2.7 In response to the consultation responses prepared by OCC, VTP prepared a series of Technical Notes to address OCC's concerns [CD-2-35 to CD-2-45].
- 2.8 Whilst OCC had confirmed their position of "No Objection" to CDC, and CDC had recommended to the CDC Planning Committee that the Planning Application be approved, CDC Members deferred the decision at the Committee Meeting on 12th January 2023, which led to the Appeal being lodged on the basis of non-determination.
- 2.9 The application was then presented to CDC Planning Committee on 9th March 2023 with a CDC planning officer recommendation for approval (in the event that the Appeal had not already been lodged). The Planning Committee Report was clear that the planning officers were of the view that there was no basis of highways grounds to refuse the Planning Application [CD-3-4 paragraph 11, page 128]
- 2.10 Members commented that had the Appeal not already been lodged on non-determination grounds; they would have refused Planning Permission, with two of the five putative Reasons for Refusal related to highways and access.
- 2.11 In addition, two separate groups objecting to the Planning Application have been granted Rule 6 Party status, the North West Bicester Alliance (NWBA) and the Bicester Bike Users Group (BBUG), who have raised comments relating to highways and access each



as part of their respective Statements of Case ('SoC').

- 2.12 In addition to the position taken by the CDC Planning Committee and the Rule 6 Parties, a number of other consultation responses were received in relation to highways and transport matters during the determination period. These include the following:
- a) Gagle Brook Primary School (June 2021) [CD-5-22];
 - b) Highways England (July 2021) [CD-5-10];
 - c) National Highways (September 2021) [CD-5-12]; and
 - d) National Highways (November 2021) [CD-5-14];
- 2.13 I note that whilst National Highways (formerly Highways England) initially raised a holding objection recommending that the Planning Permission not be granted for a specified period [CD-5-10 & CD-5-12], the consultation response dated 23rd November 2021 [CD-5-14] confirmed National Highway's position of "No Objection", subject to a number of proposed planning conditions to mitigate any impact of the development proposed on the SRN (strategic road network). These conditions have been accepted by the Appellant.
- 2.14 I understand that Gagle Brook Primary School are represented at this inquiry by NWBA. However, for completeness I deal with the matters raised in their objection at Section 8 of my Proof of Evidence.
- 2.15 I am familiar with the transportation proposals for the Site, as well as the relevant planning policies, design standards, and the guidance relied upon in developing the proposals.
- 2.16 The CDC Statement of Case ('SoC') [CD-9-2] acknowledges that the Appeal is against the non-determination of the application, although it notes that there are putative Reasons for Refusal raised by the Planning Committee, two of which relate to highways and access.
- 2.17 I confirm that my evidence for this Inquiry has been prepared and is given in accordance with the guidance of my professional institutions. I confirm that the opinions expressed are my true and professional opinions.



3 Development Proposals

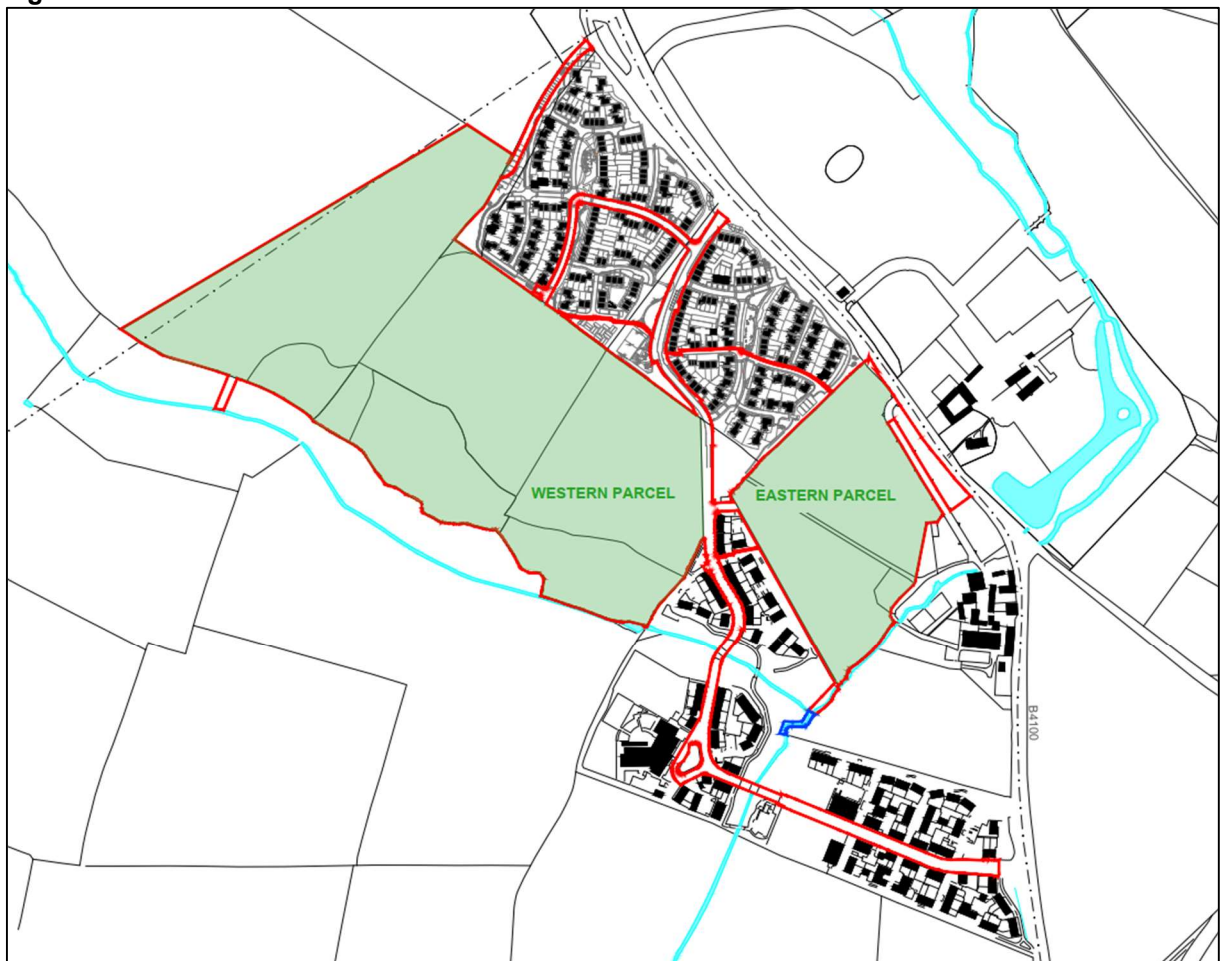
3.1 The Planning Application, which forms the subject of this Appeal, was submitted in May 2021 in outline with all matters reserved for future approval, with the exception of access. The CDC reference for the Planning Application is 21/01630/OUT.

3.2 The Planning Application is for the development of up to 530 residential units, and the description of the development (as amended) is as follows:

“Outline Planning Application for up to 530 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.”

3.3 The Proposed Development, which is located within the wider North-West Bicester Masterplan site and adjacent to the existing Elmsbrook Development, would broadly comprise two development parcels – the Western Parcel and the Eastern Parcel, as presented on the Location Plan [CD-2-3], an extract of which is presented in **Figure 3-1**, which identifies the development parcels.

Figure 3-1: Site Location Plan

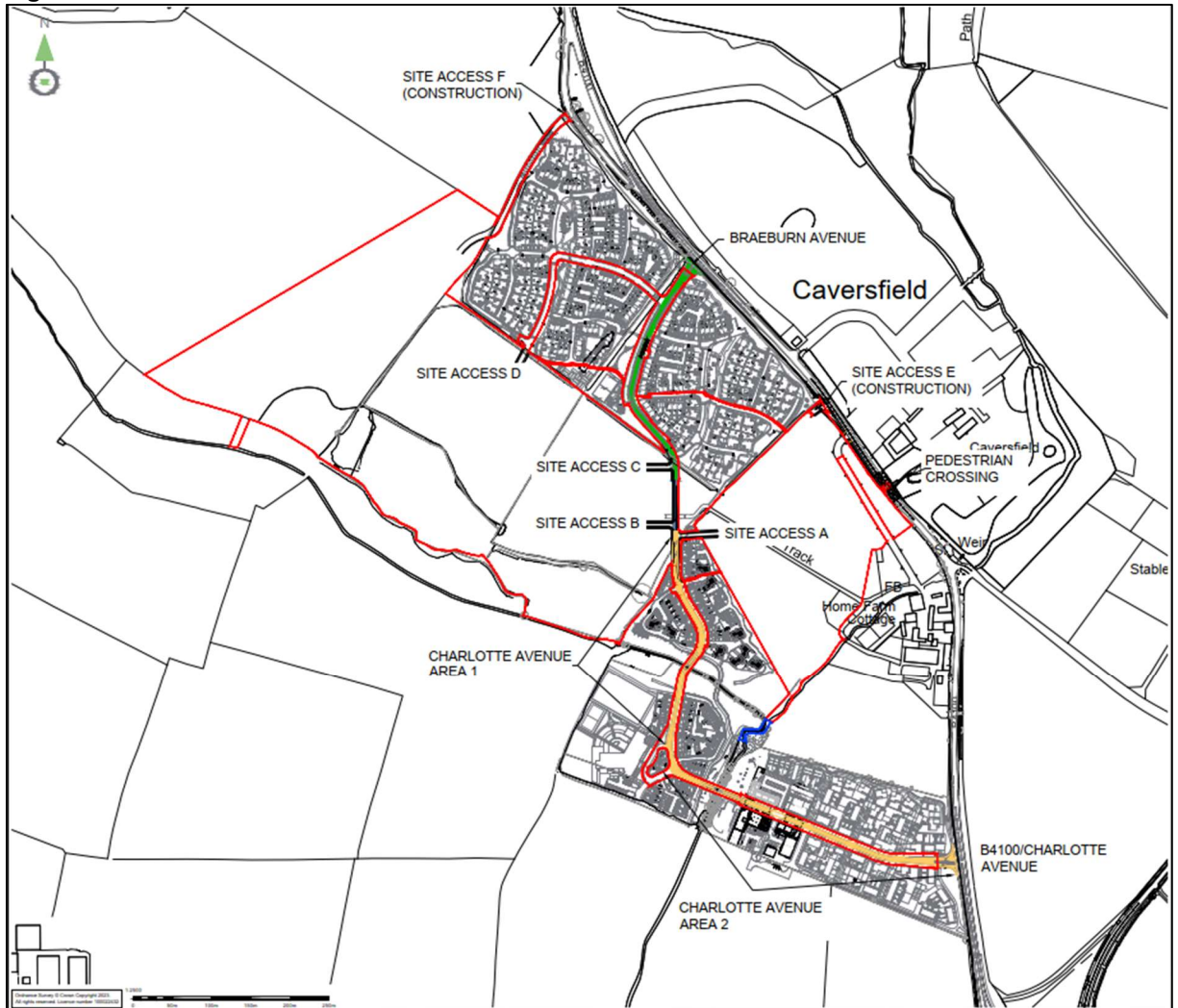


3.4 These Parcels are separated by the Elmsbrook Spine Road, which comprises Braeburn Avenue to the north of the Bus Gate and Charlotte Avenue to the south of the Bus Gate. For clarity, the existing Bus Gate is located between Site Access B and Site Access C,



both of which are presented on VTP Drawing 4600-1100-T-078 Rev B – Site Access Plan, a copy of which is included within **APPENDIX A**, an extract of which is presented in **Figure 3-2**.

Figure 3-2: Site Access Plan



3.5 The Planning Application seeks approval of the following documents:

Amended Development Parameter Schedule and Plans (December 2022), including the following Plans:

- a) Location Plan (drawing ref: 1192-001 Rev J) [CD-2-3];
- b) Parameter Plan 1 - Maximum Building Heights and Footprint (drawing ref: 1192-003 Rev N) [CD-2-25];
- c) Parameter Plan 2 - Green Space (drawing ref: 1192-003 Rev N) [CD-2-26];
- d) Parameter Plan 3 - Access and Movement (drawing ref: 1192-003 Rev M) [CD-2-27]; and

Highways drawings are as follows:



- e) Proposed Pedestrian Crossing to Church (drawing ref: 4600-1100-T-004 Rev D) [CD-2-4];
- f) Site Access A – Access to Eastern Parcel (drawing ref: 4600-1100-T-040 Rev A) [CD-2-18];
- g) Site Access A & B – Access to Eastern Parcel & Western Parcel (drawing ref: 4600-1100-T-041 Rev A) [CD-2-19];
- h) Site Access C – Access to Western Parcel (North) (drawing ref: 4600-1100-T-042 Rev A) [CD-2-20];
- i) Site Access D – Direct Access to North of the Western Parcel (drawing ref: 4600-1100-T-010 Rev B) [CD-2-6];
- j) Site Access E – Proposed Construction Access (drawing ref: 4600-1100-T-011 Rev F) [CD-2-17]; and
- k) Construction Access Western Parcel (drawing ref: 4600-1100-T-027 Rev B) [CD-2-8].



4 Summary of Highways and Access Issues Raised by CDC

- 4.1 My Proof of Evidence addresses the putative Reasons for Refusal in relation to highways and access given following the CDC Committee Meeting on 9th March 2023, which are set out within the CDC SoC [CD-9-2].
- 4.2 For completeness, the putative Reasons for Refusal relevant to highways and access given by CDC, are replicated below.

Putative Reason for Refusal 2

“The access arrangements to the site would be unsatisfactory as there would be an inability to provide for suitable pedestrian and cycle facilities along Charlotte Avenue. Any localised proposals to the road have not been proven to be possible, and are likely to raise safety concerns relating to users of the highway within proximity to Gagle Brook School, and would result in the loss of street trees and would impact on the character of the existing Eco Town. The proposal would not meet the requirements of LTN1/20 and would conflict with Oxfordshire County Council’s ‘Local Transport and Connectivity Plan’ Policies 1, 2b, 8, 9, 11, 35, 45 and 46b, Oxfordshire County Council’s ‘Tree Policy for Oxfordshire’ Policies 11, 18, 19 and 20, Policies SLE4 and Bicester 1 of the Cherwell Local Plan Part 1 2011-2031 and the North West Bicester SPD 2016.”

Putative Reason for Refusal 3

“The Proposed Development would result in congestion at the junction of Charlotte Avenue with the B4100, particularly during the peak period. This would result in a severe transport impact and the development would therefore conflict with Government guidance contained within the National Planning Policy Framework and Policies SLE4 and Bicester 1 of the Cherwell Local Plan Part 1 2011-2031.”



5 Response to Highways and Access Issues Raised by CDC

- 5.1 I set out below my respective responses to the highways and access putative Reasons for Refusal given by CDC within their SoC [CD-9-2].

Response to putative Reason for Refusal 2

- 5.2 I consider that putative Reason for Refusal 2 relates to the suitability of the existing width of Charlotte Avenue and the perceived failure to meet the recommendations of the Department for Transport (DfT) Local Transport Note 'Cycle Infrastructure Design' ('LTN 1/20', July 2020) [CD-8-2.8] and various CDC and OCC planning policies and the effect that the width of this road may have on the safety of users of the highway.
- 5.3 LTN 1/20 provides guidance and good practice for the design of cycle infrastructure. It sets out design matters, helpful tools, and advice on the procedural issues associated with the design of appropriate walking and cycling infrastructure. LTN 1/20 is clear at paragraph 1.31 that it should be applied to new highway construction/improvements and new improved cycle facilities.
- 5.4 I acknowledge that within the introduction section of LTN 1/20 the document states that it is intended as guidance, which is applicable to the design of new schemes. For completeness, I have extracted paragraph 1.1.1 of LTN 1/20 below:

*“Local authorities are responsible for setting design standards for their roads. This **national guidance** provides a recommended basis for those standards based on five overarching design principles and 22 summary principles. There will be an expectation that local authorities will demonstrate that they have given due consideration to this **guidance** when designing new cycling schemes and, in particular, when applying for Government funding that includes cycle infrastructure.” [emphasis added]*

- 5.5 With reference to OCC's 'Street Design Guide' ('SDG', 2021) [CD-8-2.6] and OCC's 'Local Transport and Connectivity Plan' ('LTCP', 2022) [CD-8-2.7], both of which were adopted after the submission of the Planning Application, it is agreed with OCC that the OCC guidance on transport and access is intended to be applied to new infrastructure. This is acknowledged within the introduction of the OCC SDG at page 8, which states:

*“Oxfordshire County Council is responsible for ensuring that **new** streets meet certain design standards. These standards help to ensure that **new** streets function in a practical and safe manner and help deliver the aspirations of the county.” [emphasis added]*

- 5.6 OCC's SDG [CD-8-2.6] was adopted in September 2021. It has been developed to provide clear expectations of OCC's development aspirations and standards, but also flexibility to enable innovation through collaboration with developers. OCC acknowledge that it is a first edition, which replaces the Residential Road Design Guide (2002) – Second Edition (2015), and as such, is subject to ongoing change and updates³. The SDG has been developed to:

- (a) Provide street design guidance to deliver high quality streets and places;

³ OCC SDG, last paragraph, page 7 [CD-8.26]



- (b) Inspire landowners, developers, and designers to deliver the highest quality development through positive and constructive working relationships;
 - (c) Promote good quality design by helping people understand the process and the criteria that deliver it; and
 - (d) Instil confidence in the residents of Oxfordshire that developments will be designed and delivered to the highest quality.
- 5.7 Part 1 of the SDG sets out some of the key masterplanning objectives that specifically relate to movement and street design. Part 2 sets out the user hierarchy required to prioritise active travel and the key principles that should be followed to help create legible street patterns. Part 3 looks at the more detailed aspects of streets, including road space allocation, parking, school drop off areas, drainage, trees and landscape, street lighting, innovation, and refuse collection. Finally, Part 4 provides further advice in relation topics such as tree planning, refuse, highways and lighting.
- 5.8 OCC's LTCP [CD-8-2.7] was adopted by OCC on 12th July 2022. It is a statutory document that outlines OCC's long-term vision for transport and travel in the county and the policies required to deliver this. The vision and policies will be used to influence and inform how OCC manage transport and the types of schemes OCC implement.
- 5.9 The key themes and headline targets identified within the LCTP are as follows:
- (a) By 2030 OCC's targets are to:
 - (i) Replace or remove 1 out of every 4 current car trips in Oxfordshire
 - (ii) Increase the number of cycle trips in Oxfordshire from 600,000 to 1 million cycle trips per week
 - (iii) Reduce road fatalities or life changing injuries by 50%
 - (b) By 2040 OCC's targets are to:
 - (i) Deliver a net-zero transport network
 - (ii) Replace or remove an additional 1 out of 3 car trips in Oxfordshire
 - (c) By 2050 OCC's targets are to:
 - (i) Deliver a transport network that contributes to a climate positive future
 - (ii) Have zero, or as close as possible, road fatalities of life changing injuries
- 5.10 Charlotte Avenue is an existing, constructed access road provided as part of the Elmsbrook Development which is not yet adopted but is the subject of a signed Section 38 Agreement dated 9th July 2014 [CD-8-2.3] between A2Dominion and OCC. As such, I do not consider it appropriate to retrospectively apply new design guidance to existing, built infrastructure. As set out above this is also clearly not the intention of LTN 1/20. This is further confirmed in the recent email correspondence with OCC dated 9th March 2023, a copy of which is included in APPENDIX B of my Proof of Evidence.
- 5.11 Notwithstanding the above, I set out a summary of the assessments I have undertaken, and the position reached with OCC on the suitability of the existing Elmsbrook Spine Road (which for clarity comprises Braeburn Avenue to the north for the existing Bus Gate and Charlotte Avenue to the south of the existing Bus Gate) to accommodate the additional vehicular, pedestrian and cycle activity associated with the Proposed Development.



- 5.12 Following concerns raised by OCC and local residents in consideration of the Planning Application, there had been a number of discussions with OCC during the determination period on the suitability of both the existing Braeburn Avenue and Charlotte Avenue for pedestrians, cyclists and vehicles, which are detailed within the following Technical Notes prepared by VTP:
- (a) TN004 – Spine Road Assessment [CD-2-37];
 - (b) TN007 – Response to OCC Comments [CD_2-40]; and
 - (c) TN009 – Response to OCC Comments [CD-2-43].

Braeburn Avenue

- 5.13 With respect to the suitability of the existing Braeburn Avenue arrangement to accommodate the existing and proposed vehicular activity, Diagrams 4 & 5 that were included within Appendix F of the Transport Assessment [CD-1-28.2]⁴, identified that a total of 37 two-way vehicle movements associated with the Proposed Development would utilise the full length of Braeburn Avenue from Site Access C in the AM peak hour, and 33 two-way vehicle movements associated with the proposed Development would utilise the full length Braeburn Avenue in the PM peak hour.
- 5.14 Accounting for the additional traffic associated with the Proposed Development that would access the Western Parcel from Site Access D and utilise the northern stretch of Braeburn Avenue between its junction with the B4100 and its junction with Lemongrass Road (which is located approximately 65m to the south of the B4100 junction with Braeburn Avenue), a total of 186 two-way vehicle movements associated with the Proposed Development would pass through the junction of the B4100 with Braeburn Avenue in the AM peak hour, and a total of 167 two-way vehicle movements associated with the Proposed Development would pass through this junction in the PM peak hour.
- 5.15 Based on the geographical location of the Proposed Development, particularly in the context of the wider Elmsbrook Development, it is considered that there are no 'sensible destinations' to the north of the area that would attract pedestrians, with the exception of the St Laurence Church, to which a Proposed Pedestrian Crossing Facility [CD-2-4], has been identified.
- 5.16 This is demonstrated by the fact that the existing Braeburn Avenue arrangement does not include pedestrian footways up to the junction with the B4100, as presented in the extract from Google Maps presented in **Figure 5-1**.

⁴ Transport Assessment – Appendix F, Diagrams 4 & 5, pages 16 & 17 [CD-1-28.2]



Figure 5-1: Existing Braeburn Avenue junction with the B4100



Source: Google Maps (June 2022)

- 5.17 Cyclists may wish to access the B4100 from Braeburn Avenue to travel to the most likely destination for cyclists, which might be Banbury (located approximately 14 miles from the Proposed Development, which Google Maps suggests would take approximately 1 hour and 12 minutes to cycle), or Brackley (located approximately 10 miles from the Proposed Development, which Google Maps suggests would take approximately 45 minutes to cycle). However, as no dedicated cycling facilities are currently provided along the B4100, which is considered to be a busy local distributor road with high volumes of traffic, including heavy goods vehicles (HGVs), these cyclists are not considered to be commuters and would likely be very experienced leisure cyclists that are aware of the existing safety concerns along the B4100.
- 5.18 OCC raised this as a concern in a number of their consultation responses and this was considered in the subsequent Technical Notes.
- 5.19 TN004 [CD-2-37]⁵ identifies that in order to ensure a robust assessment of the potential impacts of the Proposed Development in relation to vehicular, pedestrian and cycle trips, 100% of the pedestrian and cycle movements associated with the Proposed Development would use Charlotte Avenue and not Braeburn Avenue.
- 5.20 This is due to the fact that there are considered to be no 'sensible destinations' to the north for the Proposed Development and/or the Elmsbrook Development that would result in pedestrian or cycle trips from the Proposed Development using Braeburn Avenue to gain access to the B4100. Therefore 100% of the pedestrian and cycle trips associated with the Proposed Development will use Charlotte Avenue to access local facilities.
- 5.21 I note that account has been made for rail and bus trips that were identified as part of the agreed multi-modal assessment set out in TN007 [CD-2-40]⁶, which identified that some of these trips would result in a walking trip along Charlotte Avenue to reach the nearby bus stop in order to undertake the identified primary mode of travel. As such, the identified number of pedestrians that might use Charlotte Avenue, is considered to be robust.

⁵ TN004 – Spine Road Assessment, paragraph 3.1.12, page 6 [CD-2-37]

⁶ TN007 – Response to OCC Comments, Table 2.1, page 3 [CD-2-40]



- 5.22 TN009 [CD-2-43] provides further details of the assessment of Braeburn Avenue, particularly with regards to the suitability of this existing arrangement to accommodate cyclists on-carriageway when the increase of vehicular traffic from the Proposed Development is added to that which would be associated with the existing traffic along this part of the carriageway⁷.
- 5.23 TN009 [CD-2-43] identifies that less than 500 two-way vehicle movements would use Braeburn Avenue on a daily basis, and approximately 133 two-way cyclists associated with the permitted Phases 3 and 4 of the Elmsbrook Development could use Braeburn Avenue on a daily basis⁸.
- 5.24 TN009 [CD-2-43] concludes at paragraph 3.2.9 that *“This level of shared vehicle and cycle activity is considered to be well within the parameters identified within LTN 1/20 as being a suitable route for cyclists to share the carriageway with vehicles. As such, no further mitigation is considered to be required to accommodate cyclists, even with the predicted increase in vehicular activity associated with the Firethorn development.”*
- 5.25 Following a review of TN009 [CD-2-43], OCC stated within the consultation response dated 23rd June 2022 [CD-5-4]⁹ that they *“accept the argument that the traffic volumes on Braeburn Avenue are unlikely to trigger the need for segregated cycle facilities, according to LTN 1/20”*¹⁰.

Charlotte Avenue

- 5.26 OCC’s consultation response dated 06th July 2020 [CD-5-1] identified that further work should be carried out to assess the suitability of the link [Charlotte Avenue] for the development traffic and NMUs [non-motorised users]¹¹.
- 5.27 I interpreted this initial request from OCC to undertake further work as relating to two sections of Charlotte Avenue, namely Area 1 and Area 2, which are identified as follows:
- a) **‘Area 1’** – Charlotte Avenue – north of the Gagle Brook Primary School and south of the Bus Gate; and
 - b) **‘Area 2’** – Charlotte Avenue – east of the Gagle Brook Primary School and west of the B4100.
- 5.28 I have prepared VTP Drawing 4600-1100-T-078 Rev B – Site Access Plan¹², which identifies these areas. For ease of reference, **Figure 5-2** presents these Areas from an extract of the Site Access Plan:

⁷ TN009 – Response to OCC Comments, section 3.2, pages 7 & 8 [CD-2-43]

⁸ TN009 – Response to OCC Comments, Table 3-1, page 8 [CD-2-43]

⁹ OCC – Transport Schedule #4, last paragraph, page 1 [CD-2-4]

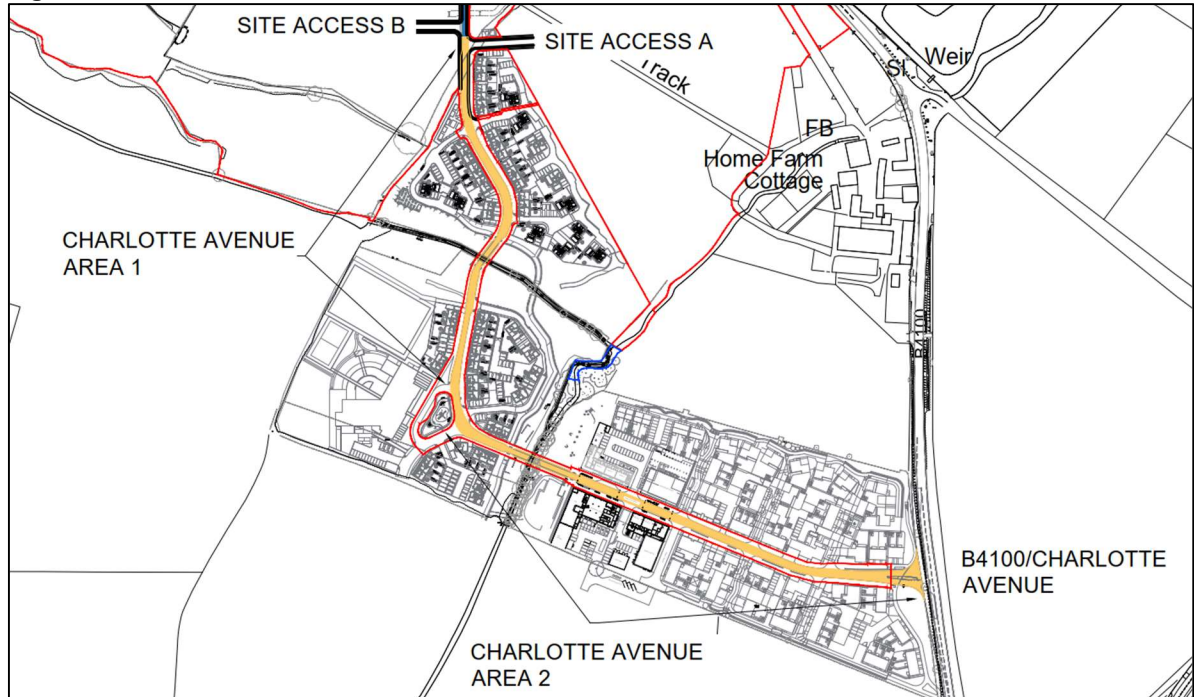
¹⁰ LTN 1/20 – Figure 4.1, page 33 [CD-8-2.8]

¹¹ OCC – Transport Schedule #1, 1st paragraph, page 13 [CD-5-1]

¹² VTP Drawing 4600-1100-T-078 Rev B, included at APPENDIX A



Figure 5-2: Charlotte Avenue - Areas 1 & 2



- 5.29 TN004 [CD-2-37]¹³ identifies that in order to ensure a robust assessment of the potential impacts of the Proposed Development in relation to vehicular, pedestrian and cycle trips, 100% of the pedestrian and cycle movements associated with the Proposed Development would use Charlotte Avenue.
- 5.30 TN004 [CD-2-37] sets out an assessment of the pedestrian environment along Charlotte Avenue to establish whether it could accommodate the expected demand from both the existing Elmsbrook Development and the Proposed Development. The assessment concluded that the footway widths available along the Elmsbrook Spine Road were already sufficient at a minimum width of 2m in almost all areas¹⁴, with the exception of limited footways identified in red.
- 5.31 This approach was not challenged further or dismissed by OCC. Therefore, I consider that the existing footway widths along Charlotte Avenue are suitable for pedestrians, with no mitigation or amendments required.

Area 1 – Charlotte Avenue – North of Gagle Brook Primary School

- 5.32 In relation to Area 1, TN009 [CD-2-43] identified that there is an area of Charlotte Avenue, which is 4.1m in width¹⁵. For ease of reference, **Figure 5-3** presents this section of Charlotte Avenue in Area 1.

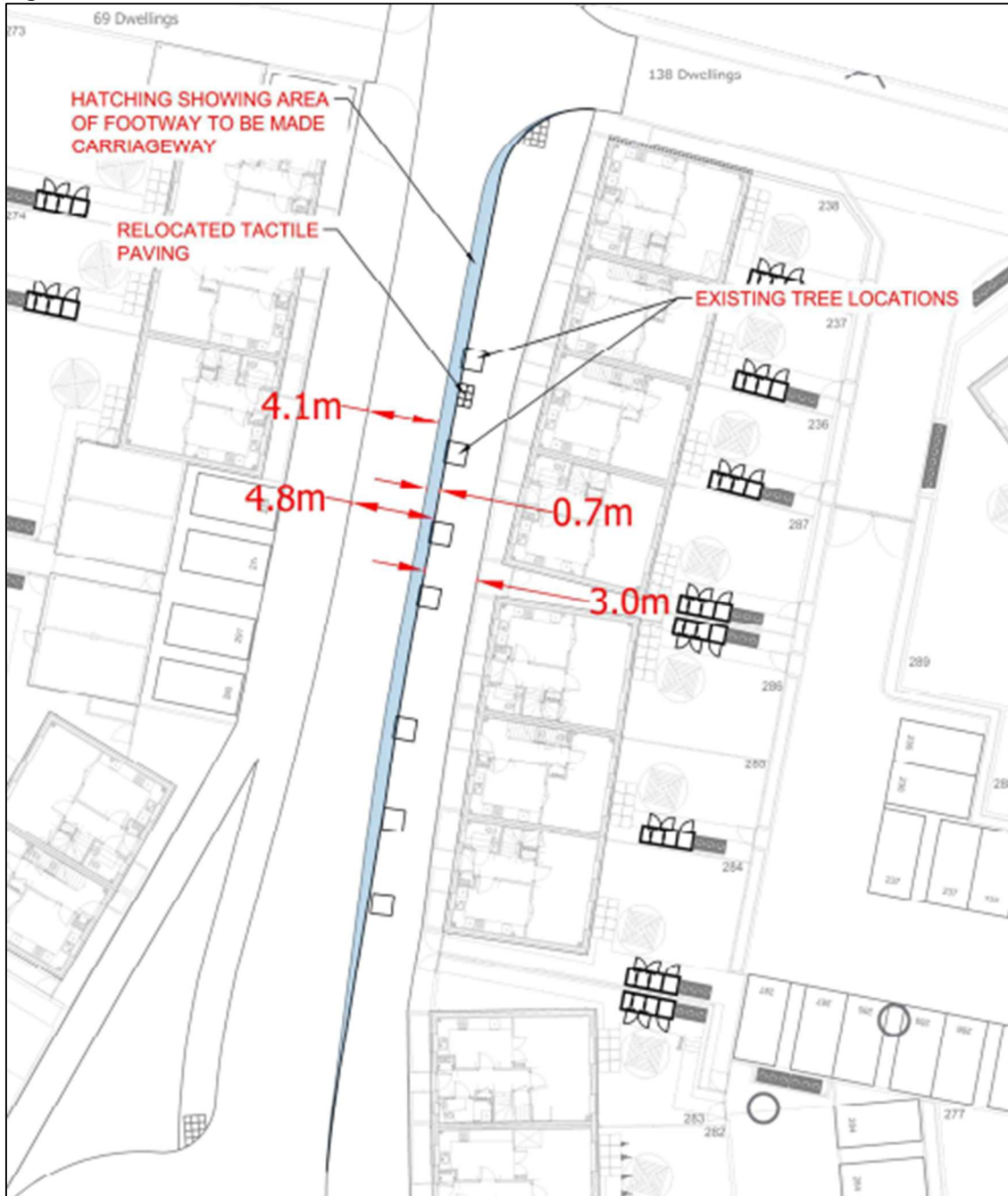
¹³ TN004 – Spine Road Assessment, paragraph 3.1.12, page 6 [CD-2-37]

¹⁴ TN004 – Spine Road Assessment, VTP Drawing 4600-1100T-025 Rev A, Attachment 4 [CD-2-37]

¹⁵ TN009 – Response to OCC Comments, VTP Drawing 4600-1100-T-073 Rev A, Attachment A [CD-2-43]



Figure 5-3: Extract of Area 1 on Charlotte Avenue



- 5.33 During the determination period, OCC raised concerns on the available width for vehicles to pass one another, including the need for a car and a bus (or other HGVs and light goods vehicles (LGVs)) to pass each other simultaneously, particularly as Braeburn Avenue and Charlotte Avenue provide an existing route for southbound bus movements.
- 5.34 This was responded to within TN004 [CD-2-37] and TN009 [CD-2-43], which identified that any perceived width constraints would have been identified and considered by OCC within the original Planning Application for the wider 'Exemplar' scheme, now known as Elmsbrook (Planning Ref: 10/01780/HYBRID) and the subsequent signed Section 38 Agreement [CD-8-2.3], which identifies that OCC has accepted the design and provision of both Braeburn Avenue and Charlotte Avenue as being suitable for adoption in the future. This section of carriageway at 4.1m in width was therefore considered to be



acceptable to OCC to accommodate the need for a car and a bus/HGV to use Charlotte Avenue simultaneously regardless of there being any additional increase in traffic flows that might warrant the carriageway needing to be widened.

- 5.35 Whilst I accept that the North West Bicester Masterplan is identified within the CDC Supplementary Planning Document (SPD) adopted in February 2016 [CD-4-5]¹⁶, the North West Bicester Masterplan has been considered from as early as March 2013¹⁷. In addition, Hyder Consulting (UK) produced the NW Bicester Masterplan – Interim Access and Travel Strategy (March 2014) [CD-8-2.2], which demonstrated how the wider Masterplan (6,000 new homes) would be accessed by all modes of travel, introduced the measures proposed to meet the Eco town targets, and anticipated the impacts of travel, generated by the wider development of the Masterplan.
- 5.36 I note that as the Elmsbrook Section 38 Agreement [CD-8-2.3] was signed in July 2014, after the initial consideration of the North West Bicester Masterplan in March 2013 and the Hyder Consulting Report [CD-8-2.2] dated March 2014, OCC would have been aware that a substantial amount of additional development would be predicted to have an impact on Charlotte Avenue.
- 5.37 For ease of reference, an extract of the North West Bicester Masterplan – Masterplan Framework is presented in **Figure 5-4**.

Figure 5-4: Extract of the North West Bicester Masterplan – Masterplan Framework



Figure 10: North West Bicester Masterplan –

- 5.38 I do not consider that the additional vehicular activity associated with the Proposed Development that would utilise Area 1 would result in any new types of vehicles using Area 1 that are not already present or associated with the existing Elmsbrook scheme. These vehicles would include cars associated with residents, refuse vehicles, buses, and

¹⁶ North West Bicester SPD – Figure 10, page 16 [CD-4-5]

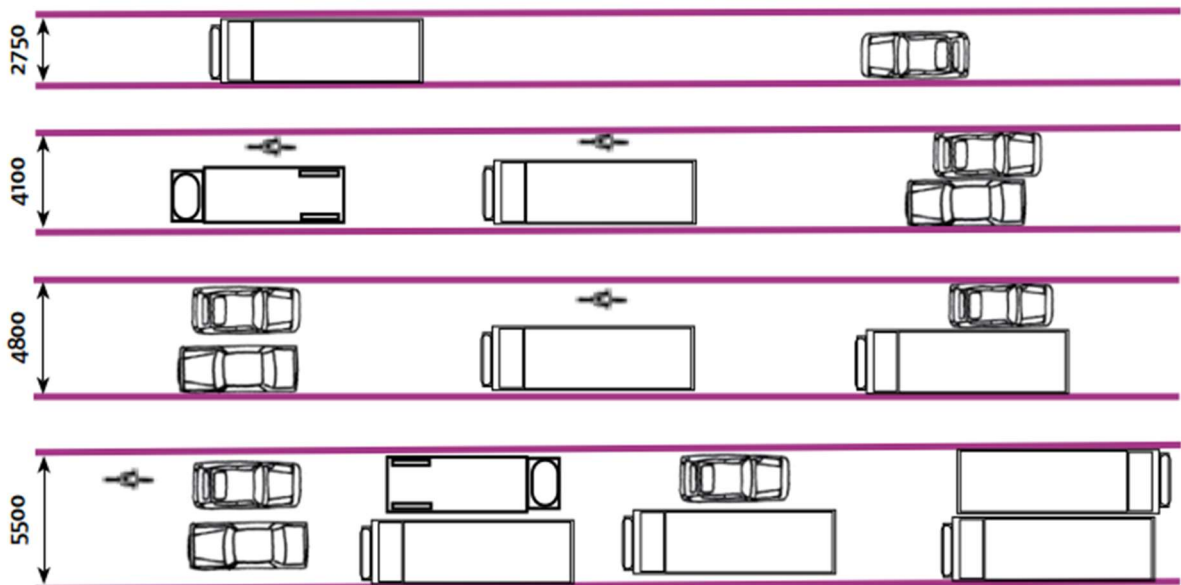
¹⁷ North West Bicester Masterplan – Interim Access and Travel Strategy, page 2 [CD-8-2.2]



delivery vehicles associated with both the existing and proposed residential dwellings. As no commercial uses are proposed as part of the new development, there is not expected to be an increase in HGVs using Charlotte Avenue as a result of the Proposed Development.

- 5.39 On the basis that OCC signed the Section 38 Agreement [CD-8-2.3] in July 2014 for the future adoption of Braeburn Avenue and Charlotte Avenue, which included this narrow section referred to as Area 1 that currently accommodates a bus route, access for refuse vehicles, access for a limited number of HGVs and LGVs; it is assumed that OCC has accepted the design parameters and carriageway widths as built today, including any increased activity that might utilise Charlotte Avenue as part of the wider North West Bicester Masterplan proposals for up to 6,000 new dwellings in the future.
- 5.40 However, whilst not considered to be required as this existing section within Area 1 of Charlotte Avenue was accepted by OCC¹⁸ within the context of any additional impact associated with the wider North West Bicester Masterplan, which includes the Proposed Development, I identified a possible improvement scheme¹⁹ that has been acknowledged by OCC²⁰, which have requested a Section 106 contribution to allow OCC to carry out future highway works that might improve this section of Charlotte Avenue.
- 5.41 As set out within TN009 [CD-2-43], and with reference to Figure 7.1 of Manual for Streets (MfS) [CD-8-2.9]²¹, which was published in March 2007, a carriageway width of 4.1m can only accommodate two cars passing each other simultaneously, or a single HGV (or bus) and a cyclist passing each other. A carriageway width of 4.8m can accommodate a car and an HGV (or bus) passing each other simultaneously. For ease of reference, the extract from MfS is presented in **Figure 5-5**.

Figure 5-5: Extract from MfS



- 5.42 I accept that as a result of the potential widening of the existing carriageway from 4.1m to 4.8m that OCC may undertake in the future, there could be a consequential impact on the available width of footway(s) along this stretch within Area 1 of Charlotte Avenue.

¹⁸ Elmsbrook Section 38 Agreement [CD-8-2.3]

¹⁹ TN009 – VTP Drawing 4600-1100-T-073 Rev A, Attachment A [CD-2-43]

²⁰ OCC – Transport Schedule #4, 1st paragraph, page 2 [CD-5-4]

²¹ DfT – MfS Figure 7.1, page 79 [CD-8-2.9]



The proposal that I have suggested²² identifies that this widening could be accommodated on the eastern side of the carriageway, which would result in an available width of at least 3.0m of the footway, which is considered to be in excess of the 2.0m provision that is considered to be acceptable²³. As per the suggested improvement scheme presented, this option would not propose a change to the footway provision on the western side.

- 5.43 As Charlotte Avenue is not currently adopted, any works to the road cannot currently be undertaken by the Appellant (or a future developer) under a Section 278 Agreement but rather would need to be carried out by OCC once the road is adopted. OCC has acknowledged this and has requested that a Section 106 financial contribution be identified to contribute towards the cost of these works²⁴.
- 5.44 I would draw attention to the fact that whilst an improvement scheme has been suggested to address OCC's concerns, local residents concerns as presented by the NWBA²⁵, and the BBUG²⁶ in this location, and subsequent correspondence with OCC²⁷ notes that OCC has *"advised CDC that there probably would be some loss of trees, but in fact I [OCC] think a suitable solution could be found without removing the trees"*.
- 5.45 Whilst this "suitable solution" has yet to be confirmed by OCC, even if the trees were to be impacted upon, it is acknowledged within the CDC Committee Report²⁸ [CD-3-4] that once Charlotte Avenue is adopted, the loss of any trees required to accommodate the potential improvement scheme could be offset and provided elsewhere within the wider Site.
- 5.46 I would note that whilst OCC have considered and accepted the potential improvement scheme in principle, by requesting a financial contribution, funds would be made available to OCC to implement an alternative scheme at this location, should they deem this appropriate in the future.
- 5.47 As OCC considered this section of Charlotte Avenue to be acceptable for the Elmsbrook development, as assessment that would have included the future development associated with the wider North west Bicester Masterplan, I maintain my view that no harm would arise from the Proposed Development to Area 1 in its current form. However, I have demonstrated that there are potential improvements possible to address the concerns raised within putative Reason for Refusal 2, to which a Section 106 contribution has been requested, facilitating the future potential highway improvement works by OCC to the section of Charlotte Avenue within Area 1, once this road is adopted.

Cyclists and LTN 1/20

- 5.48 As a sensitivity test of the impact of the Proposed Development on Area 1 for cyclists, I refer to the 'first-principles' assessment presented in Table 2-1 of TN007 [CD-2-40], which sets out an assessment of the multi-modal trips along Charlotte Avenue at Area 1 using the agreed trip rates, agreed trip generation methodology, and the calculated number of dwellings anticipated to have traffic movements along this stretch of Area 1.

²² TN009 – VTP Drawing 4600-1100-T-073 Rev A, Attachment A [CD-2-43]

²³ TN004 – Spine Road Assessment, VTP Drawing 4600-1100T-025 Rev A, Attachment 4 [CD-2-37]

²⁴ OCC – Transport Schedule #4, 1st paragraph, page 2 [CD-5-4]

²⁵ NWBA – SoC, paragraph 2.27, page 5 [CD-9-3]

²⁶ BBUG – SoC, paragraph 4.5 (page 2) & 5.3 (page 3) [CD-9-4]

²⁷ Appendix B – Email from OCC dated 09/03/2023

²⁸ CDC – Appeal Report to Committee, paragraph 9.96, page 94 [CD-3-4]



- 5.49 This robust assessment identified the predicted number of total two-way person trips by the appropriate modes that could pass through Area 1 of Charlotte Avenue. The assessment considered the existing 52 dwellings²⁹ associated with the Elmsbrook Development, the 69 dwellings associated with the Proposed Development accessed from Site Access B, and the 138 dwellings associated with the Proposed Development accessed from Site Access A, equating to a total of 259 dwellings that could have an impact on Area 1.
- 5.50 For ease of reference, these figures are presented at **Figure 5-6**.

Figure 5-6: Two-Way Total Person Trips Along Elmsbrook Spine Road (Area 1)

Table 2-1: Two-Way Total Person Trips Along the Elmsbrook Spine Road (North of Gagle Brook School)

Method of Travel	Adjusted Split	52 Dwellings		69 Dwellings		138 Dwellings		259 Dwellings	
		AM	AADT	AM	AADT	AM	AADT	AM	AADT
Driver	40%	28	211	37	279	75	557	140	1,050
Passenger	13.1%	9	69	12	91	24	183	46	344
Rail (walk)	4.7%	3	25	4	33	9	66	17	123
Rail (other)	4.7%	3	25	4	33	9	66	17	123
Bus (walk)	9.1%	6	48	8	63	17	127	32	238
Cycle	7.2%	5	38	7	50	13	100	25	189
Walk	19.4%	14	102	18	135	36	271	68	510
Other	1.8%	1	9	2	13	3	25	6	47
Total	100.0%	70	527	93	697	186	1,394	351	2,625

- 5.51 This assessment methodology has been utilised instead of the traffic data available from the Bicester Transport Model (BTM), as the BTM data did not extend to this area, and it would not have been possible to only extract the required quantum of development that would have an impact on Area 1 in isolation.
- 5.52 For clarity, the BTM was commissioned by OCC and originally developed by WYG, now Tetra Tech. The BTM is a Traffic Model that considers the potential traffic impacts on the highway network that would be associated with the increased growth proposals being considered within the CDC Local Plan (2031). The potential traffic impacts and broad brush economic assessment of the increased growth due to further development is required to enable OCC and CDC to establish if there are transport reasons why the growth within the Bicester area should not happen as the speed that is proposed, and if it were to happen, that the highway network can accommodate this level of growth within the identified timescales.
- 5.53 As part of the traffic assessments work included within the Transport Assessment [CD-1-28], I obtained access to the current BTM data at the time, which is identified as being the 2016 Base, 2026 Interim Year, and 2031 Future Year assessments data, which included turning counts at key junctions, including the B4100 junctions with Charlotte Avenue and Braeburn Avenue, and junctions along the A4095 towards M20 Junction 9, and the B4100 towards the A43 and M20 Junction 10.
- 5.54 Following the submission of the Planning Application, and as a result of the OCC consultation responses [CD-5-2 to CD-5-7], I obtained revised traffic data from the BTM in March 2022 and then again in November 2022 to undertake further traffic impact assessments of the Proposed Development Traffic (in the context of the identified development within the CDC Local Plan) on the off-site junctions, including the key junction of the A4095 with Bucknell Road. These further assessments were set out within

²⁹ TN007 – Response to OCC Comments, VTP Drawing 4600-1100-T-070 Rev A, Attachment B [CD-2-40]



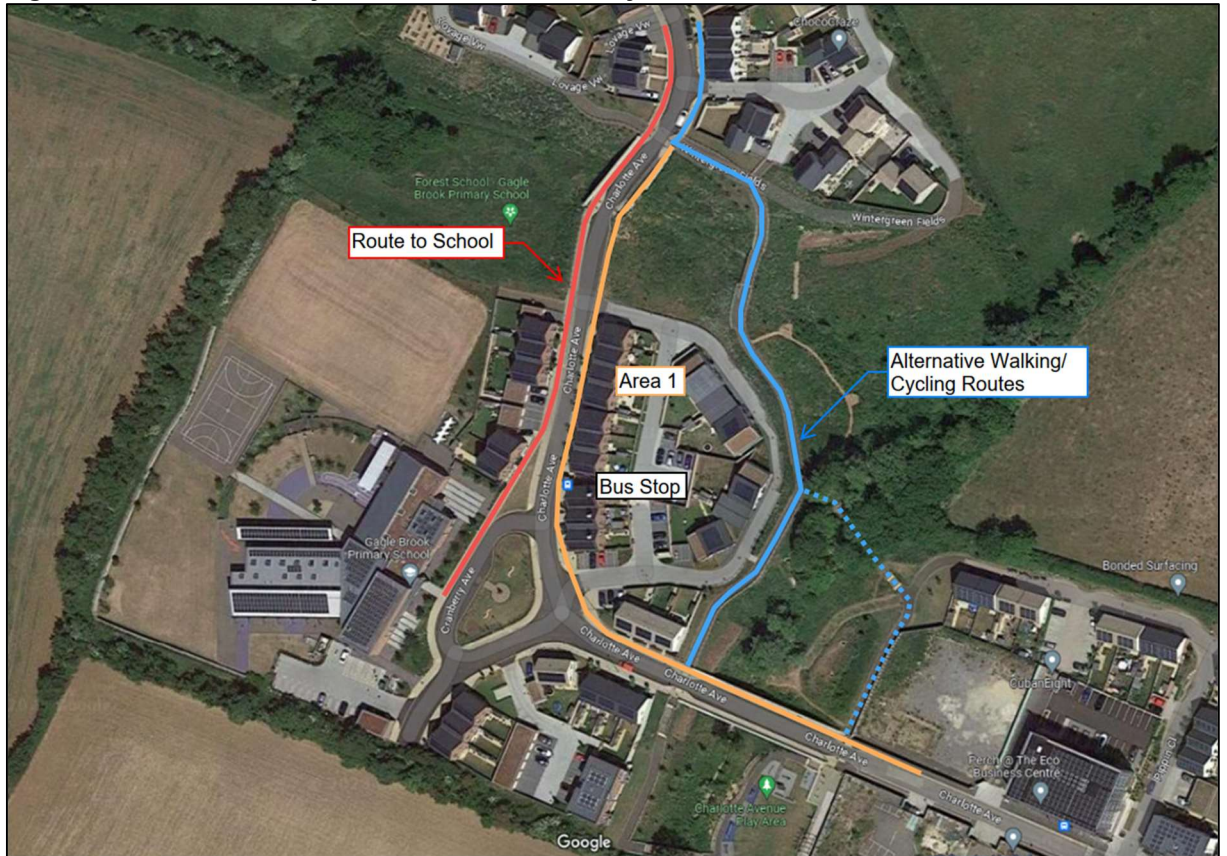
a series of VTP Technical Notes [CD-2-38 to CD-211], which resulted in OCC confirming that the “*traffic impact [of the Proposed Development] would not be considered severe, subject to planning obligations and conditions.*”³⁰

- 5.55 I note that the sensitivity test within TN007 [CD-2-40], as summarised in Figure 5-6, identified a total of 1,050 two-way daily driver trips, a total of 189 two-way cycle trips, and a total of 871 two-way walking trip associated with the 259 dwellings which could pass through Area 1. An additional 514 two-way trips are identified by modes other than driving, cycling, or walking, which could be as passengers in a car or motorcycle trips. However, even if a further robustness is considered and these “other” two-way daily trips are assumed to be walking trips, this would equate to a maximum of 1,041 daily two-way walking trips.
- 5.56 Vehicular traffic specifically associated with the Gagle Brook Primary School is not included in this sensitivity test due to the proximity of the Bus Gate to the north of Charlotte Avenue and the prevention of through traffic to/from Braeburn Avenue. As such, no vehicular traffic associated with the Gagle Brook Primary School would utilise this short stretch of Charlotte Avenue, unless as part of a “linked trip”, i.e. a parent dropping their child off at the school as part of a driving trip to work, the shops, a leisure activity, etc.
- 5.57 It must be reiterated that this is a robust assessment as alternative routes are available for pedestrians and cyclists associated with the Proposed Development and the Elmsbrook Development to the north of Area 1 that could avoid the narrow carriageway section of Area 1. For ease of reference, the alternative routes available for pedestrians and cyclists are presented in **Figure 5-7**.

³⁰ OCC – Transport Schedule #8, 1st paragraph, page 2 [CD-5-8]



Figure 5-7: Pedestrian/Cycle Routes in the Vicinity of Area 1



5.58 To identify whether this level of predicted traffic is suitable for on-carriageway cycling, I refer to the parameters set out within Figure 4.1 of LTN 1/20 [CD-8-2.8], an extract of which is presented in **Figure 5-8**.



Figure 5-8: Extract of LTN 1/20 ‘Figure 4.1’

Speed Limit ¹	Motor Traffic Flow (pcu/24 hour) ²	Protected Space for Cycling			Cycle Lane (mandatory/ advisory)	Mixed Traffic
		Fully Kerbed Cycle Track	Stepped Cycle Track	Light Segregation		
20 mph ³	0	Green	Green	Green	Green	Green
	2000	Green	Green	Green	Green	Green
	4000	Green	Green	Green	Yellow	Yellow
	6000+	Green	Green	Green	Yellow	Yellow
30 mph	0	Green	Green	Green	Yellow	Yellow
	2000	Green	Green	Green	Yellow	Yellow
	4000	Green	Green	Green	Yellow	Yellow
	6000+	Green	Green	Green	Yellow	Yellow
40 mph	Any	Green	Yellow	Yellow	Pink	Pink
50+ mph	Any	Green	Pink	Pink	Pink	Pink

- Provision suitable for most people
- Provision not suitable for all people and will exclude some potential users and/or have safety concerns
- Provision suitable for few people and will exclude most potential users and/or have safety concerns

- Notes:
1. If the 85th percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
 2. The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow
 3. In rural areas achieving speeds of 20mph may be difficult, and so shared routes with speeds of up to 30mph will be generally acceptable with motor vehicle flows of up to 1,000 pcu per day

- 5.59 I note that Figure 4.1³¹ of LTN 1/20 [CD-8-2.8] identifies that a carriageway that accommodates total two-way daily traffic flows of less than 2,000 vehicles and traffic speeds of 20mph, on-carriageway cycling (referred to as ‘Mixed Traffic’) is suitable for most cyclists.
- 5.60 In relation to the carriageway widths required for on-carriageway cycling, I note that Table 7-2³² of LTN 1/20 [CD-8-2.8], identifies an absolute minimum width of 4m, which allows riders to travel in the centre of the road in the ‘primary position’.
- 5.61 Using the outcomes of the ‘first principles’ assessment and in light of the guidance parameters in LTN 1/20 [CD-8-2.8], I consider the following:
- a) Within Area 1, north of Gagle Brook Primary School, there is a predicted traffic flow demand of less than 2,000 two-way daily vehicles (1,050 two-way daily vehicles expected);
 - b) There is a 20mph speed limit in place along Charlotte Avenue; and
 - c) There is currently a minimum 4.1m carriageway width along Charlotte Avenue in this location (excluding any additional width that might be achieved from any potential improvement schemes that OCC might implement in the future, as discussed within my Proof of Evidence).

³¹ LTN 1/20 – Figure 4.1, page 33 [CD-8-2.8]

³² LTN 1/20 – Table 7-2, page 76 [CD-8-2.8]



- 5.62 In light of the above, I conclude that Charlotte Avenue complies with the requirements of LTN 1/20 [CD-8-2.8] in this location (Area 1), and on-carriageway cycling would be appropriate for most cyclists.
- 5.63 My conclusion is considered to have been agreed with by OCC³³ within their consultation comments to the Planning Application dated 11th May 2022 [CD-5-3], which states:

“Additionally a contribution should be made towards minor improvements on Charlotte Avenue to protect pedestrians from overrunning vehicles. Paragraph 2.4.10 states that the level of cycle demand makes it suitable for cycling to be on carriageway in accordance with LTN 1/20. I agree this is suitable for the traffic volumes on this section of Charlotte Avenue, between the school and the Bus Gate.”

Area 2 – Charlotte Avenue – East of Gagle Brook Primary School

- 5.64 With respect to Area 2, the North West Bicester SPD [CD-4-5] identifies a Masterplan Framework at Figure 10³⁴. This Masterplan includes Area 2 of Charlotte Avenue and identifies the route from Cranberry Avenue (which provides a link to the future wider North West Bicester Masterplan site to the immediate south of the Gagle Brook Primary School) to the B4100, as being a *“Primary Road with segregated footpath/cycleway”*.
- 5.65 As such, it is considered reasonable for a proportionate contribution to be identified from the Proposed Development to assist with the improvement of the existing Charlotte Avenue arrangement within Area 2 to ensure that the aspirations of the Masterplan are achieved.
- 5.66 Notwithstanding the above, I prepared TN004 [CD-2-37] to address the concerns raised by OCC³⁵, which are reiterated by the BBUG³⁶, at the location of the existing bridge along Charlotte Avenue located to the west of the existing Eco Business Centre.
- 5.67 VTP Drawing 4600-11-T-029 Rev A – Bridge Footway Provision³⁷ identifies that the existing total width across the Charlotte Avenue bridge is 10m (back of footway to back of footway), with 2m footways currently provided on both sides of the existing carriageway as it crosses the existing bridge. The existing carriageway width is generally 6.0m. I note that the existing carriageway narrows to 4.1m between the kerb buildouts, which provide informal pedestrian crossings on either side of the bridge.
- 5.68 In a ‘Do Nothing’ scenario, i.e. without the traffic associated with the Proposed Development, TN004 [CD-2-37] identifies that the existing Charlotte Avenue bridge is expected to experience in the order of 5,040 two-way daily vehicle movements³⁸ in the 2031 Reference Case.
- 5.69 The 2031 Reference Case considers the Local Plan development that would come forward by the end of the Local Plan Period (2031), which includes the Proposed Development, yet it is considered that no adjustments were made for this, and the 2031 Reference Case traffic flows assume that traffic flows associated with the Proposed Development are not included. This is considered to be a very robust assessment and could potentially lead to double counting the traffic flows from the Proposed

³³ OCC – Transport Schedule #3, 2nd last paragraph, page 5 [CD-5-3]

³⁴ North West Bicester SPD – Figure 10, page 16 [CD-4-5]

³⁵ OCC – Transport Schedule #2, 4th bullet/key point, page 3 [CD-5-2]

³⁶ BBUG – SoC, paragraph 4.5, page 2 [CD-9-4]

³⁷ TN004 – Spine Road Assessment, Attachment 4 [CD-2-37]

³⁸ TN004 – Spine Road Assessment, Table 3-6, page 12 [CD-2-37]



Development. For completeness, the traffic data from the 2031 Reference Case was provided by OCC in the BTM.

- 5.70 In accordance with Figure 4.1 of LTN 1/20³⁹ [CD-8-2.8] requirements, traffic flows in excess of 4,000 two-way daily movements suggests that a cycle lane should be provided as on-carriageway cycling “*provision suitable for few people and will exclude most potential users and/or have safety concerns*”.
- 5.71 This is discussed in detail within section 4.3 of TN004 [CD-2-37], which acknowledges that this section of Charlotte Avenue was designated within the NW Bicester SPD’ (2016) as a ‘*Primary Road with segregated footpath/cycleway*⁴⁰’.
- 5.72 As the NW Bicester SPD [CD-4-5] was adopted after the Elmsbrook development had not only achieved planning consent, but this section of Charlotte Avenue had been constructed and achieved technical approval from OCC (Section 38 Agreement [CD-8-2.3]), the need to improve this existing stretch of Charlotte Avenue had already been identified by CDC. However, the NW Bicester SPD does not propose any mitigation to improve this stretch of Charlotte Avenue to ensure that it could be a ‘*Primary Road with segregated footpath/cycleway*’. Hence the expectation that a proportionate contribution would be requested to improve this stretch of Charlotte Avenue from all the potential developments that would have an impact on Area 2 of Charlotte Avenue.
- 5.73 Notwithstanding the above, I note within TN004 [CD-2-37]⁴¹ that with the addition of the traffic flows associated with the Proposed Development, the total traffic flows along Charlotte Avenue increase to 6,115 two-way vehicle movements (an increase of approximately 17%), which could again result in on-carriageway cycling to only be suitable for a few people and could exclude most cyclists, as identified by the thresholds set out within Figure 4-1 of LTN 1/20 [CD-8-2.8].
- 5.74 As demonstrated in VTP Drawing 4600-11-T-029 Rev A – Bridge Footway Provision⁴², an improvement scheme is proposed which seeks to introduce a 3.0m wide segregated shared footway/cycleway on the northern side of the bridge, which would provide an enhanced shared footway/cycleway route, thus creating an improved environment for cyclists.
- 5.75 The carriageway width could be reduced to 5.5m with vertical traffic calming measures in the form of raised tables provided at each end of the Charlotte Avenue bridge. In accordance with Figure 7.1⁴³ of MfS [CD-8-2.9], a 5.5m carriageway width is suitable to accommodate two HGVs passing each other simultaneously, which is considered to be an appropriate minimum width for this stretch of Charlotte Avenue through Area 2, where a higher demand for HGVs would be expected as a higher frequency of larger vehicles is expected to be associated with the Gagle Brook Primary School, the mixed-use development on the permitted Elmsbrook development (some of which is yet to be implemented), buses using the existing route, and any additional HGV traffic associated with the wider North West Bicester Masterplan.
- 5.76 The existing 2.0m wide footway on the southern side of the bridge could be reduced to 1.5m to provide for pedestrian access only. I have justified this reduced footway width within section 4.3 of TN004 [CD-2-37]. However, Figure 6.8⁴⁴ of MfS [CD-8-2.9] identifies

³⁹ LTN 1/20 – Figure 4.1, page 33 [CD-8-2.8]

⁴⁰ North West Bicester SPD – Figure 10, page 16 [CD-4-5]

⁴¹ TN004 – Spine Road Assessment, Table 3-6, page 12 [CD-2-37]

⁴² TN004 – Spine Road Assessment, Attachment 4 [CD-2-37]

⁴³ DfT – MfS Figure 7.1, page 79 [CD-8-2.9]

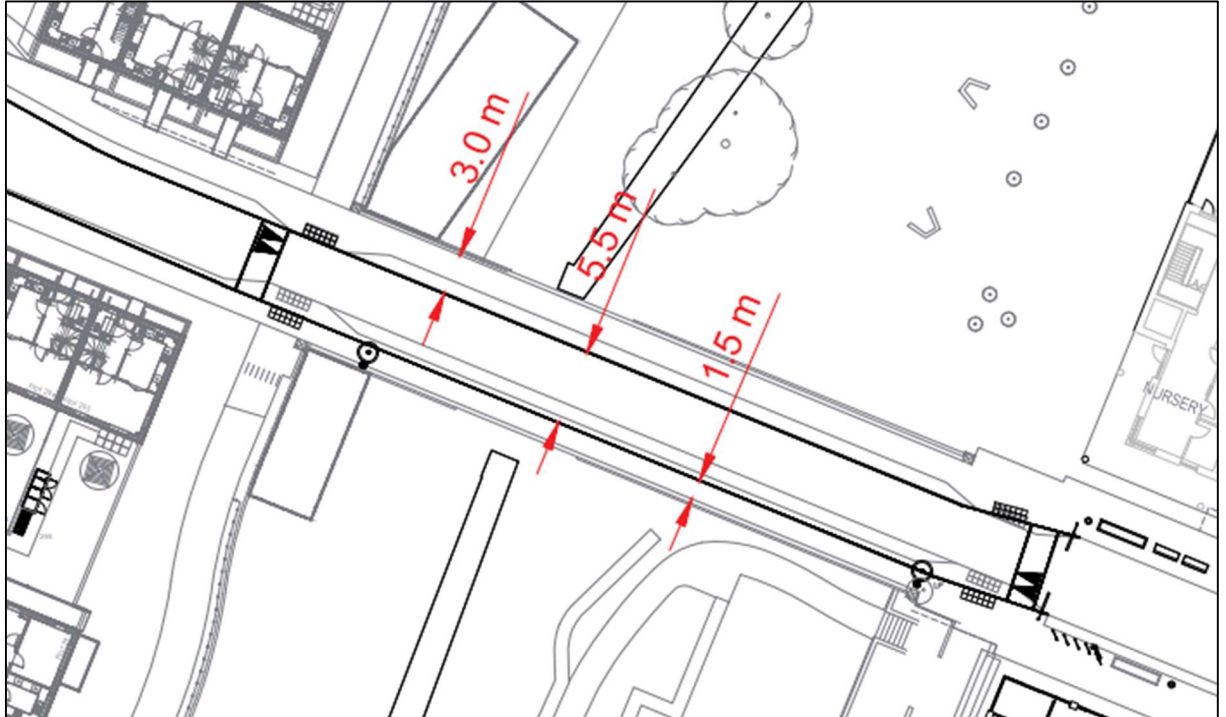
⁴⁴ DfT – MfS Figure 6.8, page 68 [CD-8-2.9]



that a footway width of 1.5m is suitable for a person and pushchair to pass each other simultaneously.

- 5.77 For ease of reference, an extract from VTP Drawing 4600-11-T-029 Rev A – Bridge Footway Provision, is presented in **Figure 5-9**.

Figure 5-9: Extract from VTP Drawing 4600-11-T-029 Rev A – Bridge Footway Provision



- 5.78 OCC has accepted the principle of a Section 106 contribution from the Appellant towards potential improvement works at the Charlotte Avenue bridge, which would be able to be implemented by OCC once Charlotte Avenue is adopted. As above, such works would be required to be carried out by OCC who may choose to implement a different improvement scheme in the future.
- 5.79 As I have acknowledged earlier in my Proof of Evidence, the requirements of LTN 1/20 [CD-8-2.8] are considered to be intended as guidance for the development of new routes and are, therefore, not considered appropriate in the assessment of existing infrastructure. This is confirmed by OCC in the recent correspondence dated 09th March 2023⁴⁵.

Summary of Putative Reason for Refusal 2

- 5.80 I set out a summary of the responses to putative Reason for Refusal 2, in relation to both Area 1 and Area 2 of Charlotte Avenue for pedestrians, cyclists and vehicles, within **Table 5-1**.

⁴⁵ Appendix B – Email from OCC dated 09/03/2023



Table 5-1: Summary of Putative Response to Reason for Refusal 2

Location	Elmsbrook Spine Road Suitability					
	Pedestrians		Cyclists		Vehicles	
	Summary	Action	Summary	Action	Summary	Action
Area 1: Charlotte Avenue – North of Gagle Brook School	Existing infrastructure is sufficient for pedestrians, with a minimum 2m footway provided.	No mitigation is required.	Existing carriageway width and flows are sufficient to accommodate on-carriageway cycling.	No mitigation is required, although cyclists will benefit from the proposed improvement scheme, which seeks to widen the carriageway from 4.1m to 4.8m.	The existing Elmsbrook Spine Road narrows to 4.1m in this area, which was noted by OCC as requiring mitigation to prevent vehicles from overrunning the kerb and conflicting with pedestrians.	Whilst not considered to be required as OCC accepted this narrow arrangement as acceptable by signing the Section 38 Agreement in 2014, a mitigation scheme in the form of carriageway widening to 4.8m has been identified, which the Appellant has agreed to provide a financial contribution towards.
Area 2: Charlotte Avenue Bridge	Existing infrastructure is sufficient for pedestrians, with minimum 2m footway provided on both sides, but would require cyclists to use the existing carriageway, which narrows to 4.1m at the pinch points on either side of the existing bridge.	No mitigation is required.	The existing footways are not sufficient in width to accommodate a shared footway/cycleway, which would require a minimum width of 3.0m in accordance with LTN 1/20.	A mitigation scheme is proposed, which increases the width on the northern side of the carriageway to 3.0m to better accommodate a shared footway/cycleway, which the Appellant has agreed to provide a financial contribution towards.	There is sufficient width for vehicles to pass each other along the majority of Charlotte Avenue in this area, with the exception of the pinch points.	No mitigation is required.

Response to Putative Reason for Refusal 3

- 5.81 I consider that putative Reason for Refusal 3 relates to the traffic impact of the Proposed Development on the existing priority junction of Charlotte Avenue with the B4100, suggesting that the Proposed Development would result in a “severe” traffic impact at this existing junction. I note that no justification has been made as to the reasons why the impact of the traffic associated with the Proposed Development would be considered “severe”
- 5.82 For completeness, **Figure 5-10** presents the existing priority junction layout.



Figure 5-10: Charlotte Avenue/B4100 Existing Priority Junction Layout



- 5.83 With regards to the junction modelling that has already been undertaken to determine the impacts of the traffic associated with the Proposed Development, combined with the future traffic associated with the wider North West Bicester Masterplan (as identified within the BTM data), the results of the operation of the existing priority junction at the Charlotte Avenue/B4100 junction are detailed within Section 9⁴⁶ of the Transport Assessment [CD-1-28] that supported the Planning Application.
- 5.84 For the existing priority junction arrangement, in the 2031 'Do Something' scenario (which is the 2031 Reference Case + Proposed Development), I observe that the junction is expected to experience a maximum Ratio of Flow to Capacity ('RFC') of 0.87 in the AM peak on the Charlotte Avenue approach, which exceeds the recommended RFC threshold of 0.85, which is general accepted as being the 'practical capacity' of a junction within the industry. The RFC on all other approaches, including on Charlotte Avenue in the PM peak, falls well below an RFC of 0.85.
- 5.85 For information, an RFC value of 1.00 is considered to be reached when a junction reaches what is generally accepted to be a 'theoretical capacity' and essentially fails.
- 5.86 Nonetheless, I consider that even where the recommended RFC of 0.85 is exceeded, this still suggests that some spare capacity is available within the junction before it is at full theoretical capacity (e.g. 87% capacity used up with a spare capacity of 13%).
- 5.87 I refer to the consideration of severity thresholds originally identified in the Hyder Consulting Memorandum dated 12th December 2014, a copy of which is included at APPENDIX C of my Proof of Evidence, in which discussions with OCC had identified that the length of a queue associated with the operation of a junction, should not extend to a point where a downstream junction becomes blocked⁴⁷.

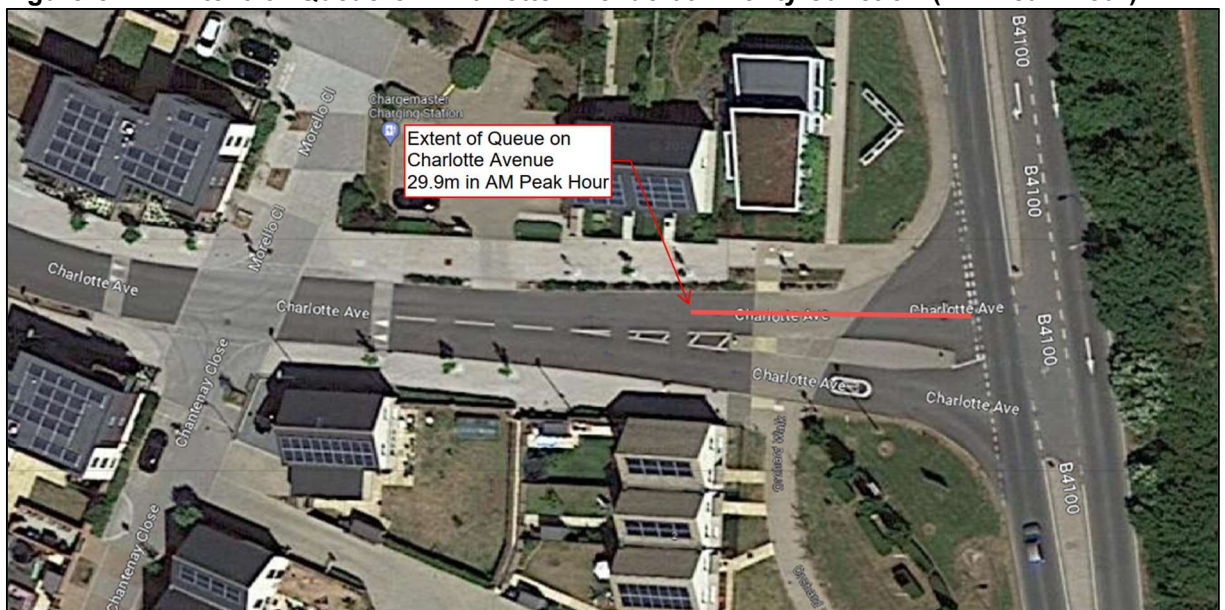
⁴⁶ Transport Assessment – Table 9.1, page 62 [CD-1-28]

⁴⁷ APPENDIX C – Hyder Memorandum, 3rd last paragraph, page 3



- 5.88 TN006 [CD-2-39] referred to the Hyder Consulting Memorandum to establish a means of identifying severity thresholds⁴⁸, which suggests that the impact at a junction could be considered “severe” if the queue that is formed on an approach to that junction extends back to a point whereby the queue blocks back through and impacts upon a downstream junction.
- 5.89 TN006 [CD-2-39] refers to queues being formed on the A4095 and potentially blocking back to Shakespeare Drive. However, in this instance, vehicles on approach to the existing priority junction of Charlotte Avenue with the B4100 would experience a maximum queue of 5.2 vehicles during the AM peak (equivalent to a 29.9m queue, assuming one [average] vehicle is measured as 5.75m), which does not block back or interact with any junctions along Charlotte Avenue, the nearest junctions being that of Charlotte Avenue with Morello Close and Chantenay Drive, which are located approximately 70m from the B4100.
- 5.90 For ease of Reference, **Figure 5-11** presents the expected queue that would be generated by the operation of the existing priority junction on the Charlotte Avenue approach in the AM peak hour, which is identified as being the more onerous peak hour.

Figure 5-11: Extent of Queue on Charlotte Avenue at Priority Junction (AM Peak Hour)



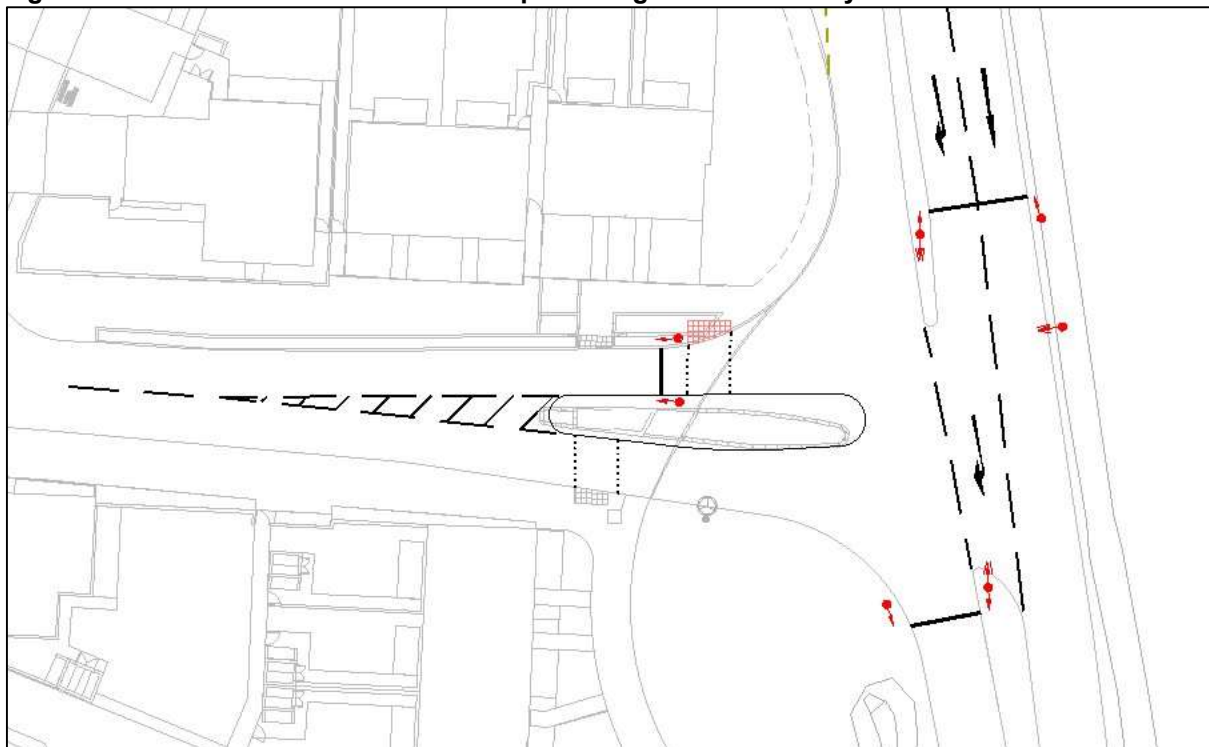
- 5.91 On that basis, I do not consider that the impact of the Proposed Development on the existing priority junction of Charlotte Avenue with the B4100 would be “severe” in the future year of 2031.
- 5.92 Notwithstanding the above, following discussions with OCC during the pre-application period, a mitigation scheme in the form of a traffic signal arrangement⁴⁹ was agreed with OCC to improve traffic capacity at the junction of Charlotte Avenue with the B4100, as well as improving the amenity and crossing provisions for non-motorised users.
- 5.93 For completeness, an extract of VTP Drawing 4600-1100-T-016 Rev B is presented at **Figure 5-12**.

⁴⁸ TN006 – A4095 Interim Improvement, paragraphs 3.7.10, page 15 [CD-2-39]

⁴⁹ VTP Drawing 4600-1100-T-016 Rev B [CD-1-12]



Figure 5-12: Charlotte Avenue/B4100 Proposed Signal Junction Layout



- 5.94 As set out with OCC's consultation response dated 6th July 2021 [CD-5-1]⁵⁰, the Appellant has agreed to provide a Section 106 contribution towards this traffic signal scheme, which would also allow for coordination with the recently approved traffic signal scheme proposed by OCC to the south of the Site that would replace the existing roundabout junction of the B4100 Banbury Road with the A4095 Lords Lane (Planning Ref: 21/02457/OCC).
- 5.95 I note that the modelling of the proposed signalised junction of Charlotte Avenue with the B4100 presented within Table 9-3 of Transport Assessment [CD-1-28] identifies that the Degree of Saturation (DoS) on all approaches in both the AM and PM peak hours would fall below the typical DoS capacity threshold of 90% and would provide an improvement from the existing arrangement in the future year of 2031. I also note that the signal timings could be optimised further to improve traffic capacity by increasing the cycle time above 90 seconds, subject to the demand requirements in the future.
- 5.96 For information, a DoS value of 100% is considered to be reached when a signal junction reaches what is generally accepted to be a 'theoretical capacity' and essentially fails. It is generally considered good practice to ensure that the design of a traffic signal junction operates within a DoS of 90%.
- 5.97 The traffic data used within the Transport Assessment [CD-1-28] was obtained from the BTM prior to the submission of the Planning Application. I acknowledge that additional data was extracted from a later iteration of the BTM and provided by OCC in relation to the off-site impact assessments that were undertaken at the junctions along the A4095 corridor prior to determination, although the additional extracts from the BTM did not extend to include traffic flows at the junction of Charlotte Avenue with the B4100.

⁵⁰ OCC – Transport Schedule #1, 3rd paragraph, page 12 [CD-5-1]



- 5.98 On that basis, I consider that the assessments presented within the Transport Assessment [CD-1-28] utilise the most up-to-date traffic data available from the BTM for the purposes of this assessment.
- 5.99 In summary, I conclude that it has been demonstrated that the residual cumulative impacts of the Proposed Development, and that associated with the wider North West Bicester Masterplan, in a future year of 2031 on the existing priority junction of Charlotte Avenue with the B4100 are not “severe”.
- 5.100 Nevertheless, an improvement scheme in the form of a traffic signal junction has been presented and agreed upon with OCC, which I consider would further improve any perceived residual cumulative traffic impacts of the Proposed Development and the wider North West Bicester Masterplan. In addition, the introduction of the traffic signal arrangement would improve the amenity and crossing provisions for non-motorised users, thus addressing any concerns in relation to highway safety.

Review of Relevant Policies

- 5.101 I set out below my review of the relevant policies referred to with the highways and access putative Reasons for Refusal a & 3 given by CDC within their SoC [CD-9-2] within **Table 5-2**.

Table 5-2: Review of Relevant Highways and Transport Policies

Source:	Policy:	Comment:
DfT – LTN 1/20 – Cycle Infrastructure Design (July 2020) [CD-8-2.8]	Various	<p>LTN 1/20 provides guidance on the design of new cycle infrastructure. As the application is in outline, the details of the new infrastructure within the Proposed Development will be set out within a future reserved matters application.</p> <p>Consideration has been given to LTN 1/20 with respect to the potential off-site impacts associated with cyclists from the Proposed Development on existing infrastructure.</p> <p>OCC have requested financial contributions towards off-site improvements that would provide enhanced facilities for cyclists, in line with the LTN 1/20 design parameters.</p>
OCC – Local Transport and Connectivity Plan (July 2022) [CD8-2.7]	<p>Policy 1: In order to deliver these benefits a new approach is required that prioritises walking and cycling. We will put this approach into practice through our transport user hierarchy. The transport user hierarchy translates our vision into policy and sets the direction for the rest of the LTCP.</p>	<p>In line with the North West Bicester SPD [CD-4-5] and the Transport Scoping Report [CD-8-1], 60% of total person trips associated with the Proposed Development are expected to travel by modes other than the private car.</p> <p>As the application is in outline, the details of the new pedestrian and cycle infrastructure within the Proposed Development will be set out within a future reserved matters application.</p>



	<p>Policy 2b: We will ensure that all new developments have safe and attractive walking and cycling connections to the site, include a connected attractive network for when people are walking and cycling within the development and that the internal routes connect easily and conveniently to community facilities and the local cycle and walking network.</p>	<p>As the application is in outline, the details of the new pedestrian and cycle infrastructure within the Proposed Development will be set out within a future reserved matters application.</p> <p>Parameter Plan: Access and Movement [CD-1-8] identifies where future pedestrian and cycle links could be provided to connect to the wider network along routes that are expected to be adopted by OCC in the future.</p>
	<p>Policy 8: We will embed the Healthy Streets Approach and Design Check Tool into relevant guidance and decision making processes to improve the human experience of streets and encourage walking and cycling.</p>	<p>Walking and cycling trips are to be encouraged through the introduction of a Travel Plan, which is expected to be the subject of a planning condition.</p>
	<p>Policy 9: We will require transport plans and infrastructure schemes to deliver health benefits and to mitigate any negative impacts by:</p> <ol style="list-style-type: none"> a. Requiring all major schemes or plans where potential health issues are likely to arise, to screen for possible health and wellbeing impacts. b. Requiring a Rapid or Full HIA to be submitted for larger-scale infrastructure proposals 	<p>Walking and cycling trips are to be encouraged through the introduction of a Travel Plan, which is expected to be the subject of a planning condition.</p> <p>A full Highways Impact Assessment (HIA) has been submitted with the Planning Application. This included assessments undertaken within the Transport Assessment [CD-1-28] and subsequent Technical Notes [CD-2-35 to -45] that were provided for consultation.</p>
	<p>Policy 11: We will:</p> <ol style="list-style-type: none"> a. Work with schools, to develop a programme of walking and cycling measures for travel to and from school. b. Work with employers and businesses in the county to improve promotion and education of travel choices 	<p>Walking and cycling trips are to be encouraged through the introduction of a Travel Plan, which is expected to be the subject of a planning condition.</p>
	<p>Policy 35: We will investigate demand management measures, where appropriate, in order to discourage private car use, engaging with key stakeholders during the development of any schemes</p>	<p>Walking and cycling trips are to be encouraged through the introduction of a Travel Plan, which is expected to be the subject of a planning condition.</p>
	<p>Policy 45: We will:</p> <ol style="list-style-type: none"> a. Promote the use of OMM for both developers and planners. b. Continue to develop OMM including: <ul style="list-style-type: none"> • The integration of monitoring tools when ready • Expanding the OMM 	<p>The Oxfordshire Mobility Model (OMM) combines features of different models to provide the geographical spread of a strategic model, with the level of detail provided by microsimulation models. It is also multimodal allowing modelling of cars, public transport and active travel.</p>



	<p>capabilities and use cases as needed rather than create new isolated models</p> <p>c. Use modelling to support a 'decide and provide' approach rather than 'predict and provide' to support our transport vision.</p>	<p>Whilst the OMM may not have been available for use on this application, OCC did provide details from the Bicester Transport Model (BTM) for use on the traffic modelling assessments.</p>
	<p>Policy 46b: We will: Use monitoring and evaluation tools to support policy formation and other relevant guidance to ensure learning is disseminated and acted on in future schemes and developments.</p>	<p>Noted. Details of the monitoring regime are expected to be agreed through appropriate planning conditions or S106 obligations.</p>
<p>OCC – Tree Policy for Oxfordshire (April 2022) [CD-8-3.14]</p>	<p>Policy 11: The County Council will retain and maintain existing, healthy OCC trees and removal will only be considered for the following reason(s):</p> <ul style="list-style-type: none"> • Dead, dying and / or dangerous • Proven to be causing significant structural damage • Considered by the Tree Service to be an inappropriate species for the location. <p>Or: When removal is required as part of an agreed tree management programme.</p>	<p>With respect to highway matters, it is not proposed to remove any existing trees along the local highway network.</p> <p>A potential improvement scheme along Charlotte Avenue has been identified, which OCC have requested that a contribution be made towards a scheme, the full details of which are yet to be agreed.</p> <p>As noted within the recent correspondence from OCC⁵¹, there is the potential for a suitable solution that would not result in the removal of any trees along Charlotte Avenue.</p>
	<p>Policy 18: Highway improvement projects will be used as an opportunity to (re)introduce street trees as part of the overall design with the aim of maximising canopy cover in urban areas.</p>	<p>Noted. It is not considered that the Development Proposals would contravene this Policy.</p>
	<p>Policy 19: New highways that are to be adopted or may be considered for adoption in the future must have tree cover as a core part of the design, including consideration of tree-lined avenues either side of carriageways or along central reservations, as required by Section 131 of the National Planning Policy Framework (NPPF). The design must deliver canopy cover of at least 30% after 10 years across the streetscape for adoption.</p>	<p>As the application is in outline, the details of the new highways that are to be adopted or may be considered for adoption within the Proposed Development will be set out within a future reserved matters application.</p>
	<p>Policy 20: Planning application submissions by Oxfordshire County Council for projects - such as major new roads or school buildings - will prioritise</p>	<p>As the application is in outline, the details of the provision of new trees within the Proposed Development will be set out within a future reserved matters application.</p>

⁵¹ Appendix B – Email from OCC dated 09/03/2023



	retention of trees of high amenity value taking consideration of both their individual merit and their interaction as part of a group or broader landscape feature. The projects must prioritise the introduction of trees as a component of the design.	
CDC – The Cherwell Local Plan 2011-2031 (July 2015) [CD-4-1]	Policy SLE4: Improved Transport and Connections	OCC have requested a number of financial contributions towards strategic and local highway improvement schemes.
	Policy Bicester 1: North West Bicester Eco-Town	It is considered that the highways and transport elements of Policy Bicester 1 are addressed within the supporting technical reports, including the Transport Assessment [CD-1-28].
MHCLG – National Planning Policy Framework (July 2021)	Policy 111: Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.	<p>OCC have confirmed within their consultation response dated 2nd December 2022 [CD-5-8] that that “[OCC] can remove our highway objection on the basis that the traffic impact would not be considered severe, subject to planning obligations and conditions as previously set out.”</p> <p>No justification or evidence has been provided by CDC or the Rule 6 parties that would suggest that as a result of the development proposals, there would be a residual cumulative impact on the road network that would be severe.</p> <p>Based on the above, it is considered that NPPF Policy 111 has been addressed.</p>



6 Summary of Highways and Access Issues Raised by the Rule 6 Parties

- 6.1 In addition to addressing the putative Reasons for Refusal raised by CDC, my Proof of Evidence also identifies, and addresses comments raised by the respective Rule 6 Parties, namely the NWBA and the BBUG.
- 6.2 I note that the majority of the comments raised within the Rule 6 Parties SoC are already addressed within my Proof of Evidence as part of the response to the CDC putative Reasons for Refusal.
- 6.3 However, I consider that there are a further four transport comments raised by the Rule 6 Parties that are not addressed in my response to the CDC putative Reasons for Refusal, which I regard to be as follows:
- (a) **Alternative Access onto the B4100** from the Eastern Parcel, as set out in section 7 of the BBUG SoC [CD-9-4], which requests further information on the feasibility of an alternative access point;
 - (b) **Off-site impacts along the A4095**, as set out in paragraph 2.27 of the NWBA SoC [CD-9-3], which refers to the off-site impacts of the Proposed Development at the junctions along the A4095;
 - (c) **Public Transport Connectivity**, as set out in paragraph 3.17 of the NWBA SoC [CD-9-3], which refers to the lack of consideration towards the funding of future public transport enhancements or upgrades; and
 - (d) **Pedestrian and Cycle Connectivity**, concerns have been raised by the NWBA within the SoC [CD-9-3], which refers to possible permeability into Elmsbrook for cycle lanes and pedestrian access outside of the Road Access points⁵².

⁵² NWBA – SoC, paragraph 3.15, page 7 [CD-9-3]



7 Response to Highways and Access Issues Raised by the Rule 6 Party

7.1 I set out below my respective responses to the additional comments raised by the Rule 6 Parties that are not already addressed within my responses to the CDC putative Reasons for Refusal.

Alternative Access to the B4100 from the Eastern Parcel

7.2 In response to the comments raised by the BBUG⁵³, which I note is also identified within the Planning Committee Report date 9 March 2023 [CD-3-4]⁵⁴ a series of additional access options have been developed to demonstrate the potential suitability of a possible alternative access for the Eastern Parcel, which might access directly to the B4100, in turn reducing the amount of traffic that might access directly onto Charlotte Avenue via Site Access A.

7.3 Whilst I have demonstrated within my Proof of Evidence that Charlotte Avenue is considered suitable to accommodate the expected levels of traffic associated with the 138 dwellings that have been identified on the Eastern Parcel, three options have been investigated to demonstrate the feasibility of an alternative access to the B4100.

7.4 In the email correspondence with OCC dated 09th March 2023⁵⁵, I set out a summary of the three access options that have been developed in **Table 7-1**, with a copy of the drawings included within APPENDIX D of my Proof of Evidence.

Table 7-1: Alternative Access onto B4100 Option Summary

Drawing Reference	Design Summary	Design Comments	Suitable
VTP Drawing: 4600-1100-T-075-A	Ghost Island Right Turn Lane	<ol style="list-style-type: none"> 1. The Design Manual for Roads and Bridge (DMRB) CD 123 identifies that a ghost island right turn lane is required for any access point with flows greater than 300 AADT from the minor arm (i.e. the site access). The 138 dwellings proposed on the Eastern Parcel would generate over 500 AADT vehicle trips, meaning a right turn lane is required from the Major Arm (i.e. the B4100). 2. There is insufficient land available within land under the control of the Applicant and/or OCC Highway land to deliver a right turn lane that complies with DMRB CD 123 requirements. 3. Visibility splays to the current road speed (40mph) are not achievable within land under the control of the Applicant and/or OCC Highway Land. Whilst visibility splays for a 30mph road might be achievable, this would require a Traffic Regulation Order (TRO) to change the speed limit - the success of which would 	No

⁵³ BBUG – SoC, Section 7, pages 4 & 5 [CD-9-4]

⁵⁴ CDC – Appeal Report to Committee, paragraph 9.102, page 195 [CD-3-4]

⁵⁵ APPENDIX B - Email from OCC dated 09/03/2023



Drawing Reference	Design Summary	Design Comments	Suitable
		be subject to further consultation and not certain, meaning it would not be safe to design to 30mph whilst the TRO outcome is uncertain.	
VTP Drawing: 4600-1100-T-076-A	Simple priority junction (Option 1)	<ol style="list-style-type: none"> DMRB CD 123 identifies that a ghost island right turn lane is required for any access point with flows greater than 300 AADT from the minor arm. The eastern parcel for 138 dwellings would generate over 500 AADT vehicle trips, meaning a right turn lane is required. As mentioned above, the visibility splays for a 40mph road are not achievable within land under the control of the Applicant and/or OCC Highway Land. There would be scope to limit the amount of development that could be accessed from the Eastern Parcel by approximately half, i.e. 70 dwellings. However, this would still require that the traffic associated with approximately 70 dwellings would still be required to access the Elmsbrook Spine Road, and as it has been identified (and agreed with OCC) that the full quantum of development proposed from the Eastern Parcel can be accommodated on the Elmsbrook Spine Road, there is no need to reduce the impact on the Elmsbrook Spine Road. 	No
VTP Drawing: 4600-1100-T-077-A	Simple priority junction (Option 2)	<ol style="list-style-type: none"> As mentioned above, with the simple priority junction Option 1, DMRB CD 123 requires that a ghost island right turn arrangement is provided if the full development of the Eastern Parcel were to be accessed directly from the B4100. The appropriate visibility splays are not achievable for a 40mph speed limit along the B4100 without the need for a TRO. In addition, the location of the simple priority junction Option 2 would adversely impact the existing access arrangements to the listed Home Farm development, potentially requiring further highway works to deliver this alternative access arrangement on land that is outside of the Appellant's control. 	No

7.5 In summary, I do not consider that any of the proposed alternative access options are suitable or deliverable, as there is insufficient land available within land under the control



of the Appellant and/or OCC Highway Land for a ghost island right turn lane that would comply with the design requirements of DMRB CD 123 [CD-8-2.11].

- 7.6 In addition, the visibility splays for the current speed limit along the B4100 (40 mph) would extend over third-party land and require a TRO to change the speed limit of the B4100 to 30mph in order to be deliverable, the delivery of which could not be guaranteed as the TRO would be subject to further consultation, even if the Planning Application were to be considered acceptable as a result of the Planning Inspectorate's decision to the Appeal.

Off-site impacts along the A4095

- 7.7 With respect to the potential traffic impacts of the Proposed Development along the A4095 corridor, I note that this was discussed at length with OCC during the determination period and set out within a number of VTP Technical Notes and supporting assessments.
- 7.8 The position reached with OCC was that the Proposed Development would not lead to a "severe" impact on the A4095 junctions, as recognised within paragraphs 9.74 to 9.95 of the CDC Committee Report [CD-3-4] and OCC's consultation response dated 02nd December 2022 [CD-5-8].
- 7.9 A financial contribution has been requested by OCC towards the recently permitted signal junction improvements at the A4095/B4100 junction, effectively mitigating any perceived impacts of the Proposed Development at this junction of the A4095.
- 7.10 In addition, a financial contribution has been requested by OCC towards the Strategic Highway Improvements, which is considered to be associated with the scheme that will include the realignment of the A4095 Howes Lane.
- 7.11 In light of the above, I consider that the Proposed Development would not lead to a "severe" highways impact on the junctions along the A4095, a conclusion which is also shared by OCC, acting as LHA, and as set out in their consultation response dated 02nd December 2022 [CD-5-8].

Public Transport Connectivity

- 7.12 The Proposed Development is considered to be well located to the existing bus provision along the Elmsbrook Spine Road. This existing service, the E1 route which currently operates 2 services an hour from approximately 07:00 in the morning to approximately 19:00 in the evening, access the existing Elmsbrook Development from the north via the B4100 junction with Braeburn Avenue, stops at several locations along the Spine Road, and exists the Elmsbrook Development via from the B4100 junction with Charlotte Avenue.
- 7.13 The E1 bus service currently provides bus connections from the Elmsbrook Development to Bicester town centre and Bicester Village Rail Station.
- 7.14 I consider the statement made by the NWBA⁵⁶ to be incorrect, as a Section 106 financial contribution towards 'Bus Provision and Infrastructure Improvements' has been requested by OCC.

⁵⁶ NWBA – SoC, paragraph 3.17, page 7 [CD-9-3]



- 7.15 In addition, OCC requested that the developer participate in the North West Bicester Bus Forum⁵⁷, the details and mechanisms of which are yet to be agreed but is expected to form the subject of a suitably worded obligation.
- 7.16 On that basis, I consider that public transport connectivity has been accounted for and considered as part of the Proposed Development and is not a valid ground for objection in highway terms.

Pedestrian and Cycle Connectivity

- 7.17 The NWBA SoC [CD-9-3] suggests⁵⁸ that the potential pedestrian and cycle links identified from the Eastern Parcel⁵⁹ would not provide a suitable connection to Charlotte Avenue via Caraway Fields or Wintergreen Fields as these minor access roads are “*slated to be unadopted roads*”.
- 7.18 Notwithstanding the signed Section 38 Agreement [CD-8-2.3] for the main Spine Road through the Elmsbrook Development, which comprises Braeburn Avenue and Charlotte Avenue, Condition 60⁶⁰ of the Decision Notice for the Elmsbrook Development [CD-8-1.4], which was granted Planning Permission by CDC on 10th July 2012, stated as follows:

“Prior to the commencement of a phase, identified in condition 2 and notwithstanding the details shown on drawing nos. 7154 -UA001881-3 & 7155-UA001881-3 a revised plan of adoptable highways including vision splays shall be submitted to and approved in writing prior to the commencement of development of that phase. The roads, lanes and community streets shall thereafter be constructed in accordance with the proposed details.

Reason: To ensure an adequate construction and maintenance of roads, lanes and Community Streets in accordance with TRI of the Cherwell Local Plan.”

- 7.19 As both Caraway Fields and Wintergreen Fields formed part of this review, the revised plans that were considered by OCC to discharge Condition 60⁶¹ on 8th August 2016, included Drawing 15-1859 20-2 Rev P01 – Section 38 Agreement Plan (Sheet 2/2), an extract of which is presented in **Figure 7-1**.

⁵⁷ OCC, Transport Schedules #1, #2, #3 [CD-5-1, CD-5-2, and CD-5-3]

⁵⁸ NWBA – SoC, paragraph 3.15, page 7 [CD-9-3]

⁵⁹ Parameter Plan 3 – Access and Movement [CD-2-27]

⁶⁰ CDC – Elmsbrook Decision Notice, Condition 60, page 12 [CD-8-1.4]

⁶¹ CDC – Elmsbrook Decision Notice, Confirmation of Clearance of Condition 60 [CD-8-1.5]



Figure 7-1: Extract of S38 Plan – Caraway Fields and Wintergreen Fields



- 7.20 The coloured aspects on the plan presented in Figure 7-1 represent the extent of highway that is agreed to be adopted by OCC, as referenced by the Confirmation of Clearance Notice for Condition 60.
- 7.21 It is acknowledged that OCC have yet to adopt any of the internal roads within the Elmsbrook Development, but the fact that these minor access roads are identified for future adoption, would mean that pedestrian and cycle access could be provided via these roads in the future.



7.22 Due to the low level of vehicular demand along these minor access roads⁶², which is identified as 18 parking spaces associated with Caraway Fields, and 28 parking spaces at Wintergreen Fields, the anticipated level of pedestrian, cycle and vehicular activity is considered to be acceptable to allow for a shared surface arrangement.

⁶² TN007 – Response to OCC Comments, VTP Drawing 4600-1100-T-070 Rev A, Attachment B [CD-2-40]



8 Response to National Highways and Gagle Brook Primary School

- 8.1 For completeness I now turn to the objections raised by National Highways and Gagle Brook Primary School as part of the decision making process on the Planning Application.

Highways England

- 8.2 Highways England, in their consultation response dated 28th July 2021 [CD-5-10], recommended that Planning Permission not be granted for a specified period⁶³ until further assessment was provided.

- 8.3 This request for further assessment was as follows:

“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.”

- 8.4 VTP responded to Highways England by email dated 21st September 2021⁶⁴, providing the further information that was requested, which included details of the predicted level of traffic associated with the Proposed Development that would have an impact on the SRN⁶⁵.

National Highways

- 8.5 Highways England became National Highways in August 2021. Further to the additional information that was provided to Highways England, then National Highways, in their further consultation response dated 21 September 2021 [CD-5-12], National Highways again recommended that Planning Permission not be granted for a specified period⁶⁶ until further assessment was provided.

- 8.6 This request for further assessment was as follows:

“Since this time, we have not received a re-consultation on additional information provided. National Highways are concerned with proposals that have the potential to impact on the safe and efficient operation of the SRN in this case the M40, A34 and A43.”

- 8.7 VTP responded to National Highways by email dated 14th October 2021⁶⁷, providing the further information that was requested, which included further details of the predicted level of traffic associated with the Proposed Development that would have an impact on the SRN⁶⁸.

⁶³ HEPR 16-01, 2nd last paragraph, page 3 [CD-5-10]

⁶⁴ TN003 – Consultation Responses, Attachment 8, page 175 [CD-2-36]

⁶⁵ TN003 – Consultation Responses, Attachment 8, Diagrams 11 & 12, pages 180 & 181 [CD-2-36]

⁶⁶ NHPR 21-09, 2nd last paragraph, page 3 [CD-5-12]

⁶⁷ TN003 – Consultation Responses, Attachment 8, page 175 [CD-2-36]

⁶⁸ TN003 – Consultation Responses, Attachment 8, page 173 [CD-2-36]



- 8.8 Following receipt of this further information, a meeting was held with National Highways on 5th November 2021, and subsequent correspondence between VTP and National Highways⁶⁹ identified a more detailed assessment of the potential traffic impacts on the SRN.
- 8.9 National Highways considered this further information and responded formally to the Planning Application on 23rd November 2021 [CD-5-14], confirming that National Highways has no objection⁷⁰ to the Planning Application subject to proposed planning conditions.

Gagle Brook Primary School

- 8.10 Drew Price, understood to have been the headmaster at the Gagle Brook Primary School at the time, provided an online comment (objection) to the Planning Application on 29th June 2021 [CD-5.22]. The following are considered to be the key points that were raised within this online comment:
- (a) Concerns over additional traffic flows caused by the development;
 - (b) The school is woefully underprovided for in terms of parking facilities for safe drop off and pick up;
 - (c) There are currently no road markings at the pedestrian crossing points; and
 - (d) The traffic flow build up will lead to queuing back up to the school gates from the B4100 junction.
- 8.11 Dealing with these points individual, I set out below how I consider that these points have been addressed as part of the Planning Application.

Additional Traffic Flows

- 8.12 My Proof of Evidence has addressed the potential concerns in relation to the additional traffic flows along Charlotte Avenue. However, I understand from liaising with the local residents (the NWBA SoC [CD-9-3]⁷¹), through discussions with OCC and within their initial consultation response [CD-5-1]⁷², as well as within the Planning Committee Report dated 9 March 2023 [CD-3-4]⁷³ that concerns have been raised as to the level of vehicular activity currently associated with the school from outside of the Elmsbrook Development, including parents who drive to/from the school from Caversfield and the wider Bicester Area.
- 8.13 I would note that a substantial S106 financial contribution⁷⁴ towards the provision of additional capacity at the Gagle Brook Primary school is expected to be provided to OCC in their capacity as Education Authority from the Appellant to accommodate the additional primary school aged children that will be associated with the Proposed Development. As such, it is expected that once fully occupied, the Gagle Brook Primary School catchment area will exclude children from Caversfield and the wider Bicester Area and only accommodate primary school aged children from the North West Bicester Masterplan. This in turn would allow for the majority of school trips to be made by more

⁶⁹ TN003 – Consultation Responses, Attachment 8, page 171 [CD-2-36]

⁷⁰ NHPR 21-09, 2nd paragraph, page 3 [CD-5-14]

⁷¹ NWBA – SoC, paragraph 2.27, page 5 [CD-9-3]

⁷² OCC – Transport Schedule #1, last paragraph, page 12 [CD-5-1]

⁷³ CDC – Appeal Report to Committee, paragraph 7.2, page 66 [CD-3-4]

⁷⁴ CDC – Appeal Report to Committee, paragraph 9.248, last bullet point, page 117 [CD-3-4]



sustainable modes, such as walking and cycling, and any car borne trips are likely to be “linked trips”.

- 8.14 As such, based on my professional judgement, I do not consider that any additional traffic flow along Charlotte Avenue associated with the Proposed Development would have a detrimental impact on the Gagle Brook Primary School. In fact, there is every prospect that existing traffic flows associated with the existing activity at the Gagle Brook Primary School will actually reduce once the school has been improved through the contributions made by the Appellant and the catchment is reduced to only provide places for primary school aged children from the North West Bicester Masterplan development.

School Parking Provision

- 8.15 As noted within my Proof of Evidence, a substantial S106 financial contribution towards improvements to the Gagle Brook Primary School is expected to be required from the Appellant. These contributions will assist with the expansion of the school, which is expected to be the subject of a future Planning Application to CDC.
- 8.16 Details of how the existing parking arrangements associated with the future Gagle Brook Primary School proposals will be identified as part of the future Planning Application associated with the expansion proposals. However, as set out within the previous paragraphs of my Proof of Evidence, it is expected that once the Proposed Development is fully occupied, and the catchment of the existing school is revisited, the demand for parking during the peak drop off and pick periods will actually reduce.

Road Markings

- 8.17 OCC have requested S106 financial contributions towards pedestrian and cycle improvements between the site and the town centre/stations. In addition, a road widening scheme has been suggested for Area 1 of Charlotte Avenue⁷⁵ that could provide an improved arrangement for all users of Charlotte Avenue, as well as a suggested improvement to the existing bridge along Area 2 of Charlotte Avenue⁷⁶.
- 8.18 I considered that once Charlotte Avenue is adopted, any improved road markings at existing informal pedestrian crossing points, can be incorporated within the future highway works that will be undertaken by OCC, which will be supported through the financial contributions to be agreed.

Queueing Traffic on Charlotte Avenue to the School Gates

- 8.19 No evidence has been provided in relation to the suggested queueing of vehicular traffic along Charlotte Avenue from the junction of the B4100 to the school gates. The distance from the junction of Charlotte Avenue to the school gates is identified as being in the order of 400m. Based on a measurement of 5.75m for an [average] vehicle (as set out in Section 5 of my Proof of Evidence), a maximum of 70 vehicles would have to be queuing to lead to a queue back to the school gates.
- 8.20 Details of the maximum queueing predicted in the future year of 2031, including the traffic associated with the Proposed Development and that associated with the wider North West Bicester Masterplan that might use Charlotte Avenue, identify a maximum queue of 7.9 average vehicles⁷⁷ would be identified in the AM peak hour for the traffic signal

⁷⁵ TN009 – VTP Drawing 4600-1100-T-073 Rev A, Attachment A [CD-2-43]

⁷⁶ TN004 – VTP Drawing 4600-1100-T-029 Rev A, Attachment 4 [CD-2-37]

⁷⁷ Transport Assessment – Table 9.3, page 63 [CD-1-28]



junction arrangement. As noted previously within my Proof of Evidence, the AM peak hour is considered to have the most onerous levels of traffic on the approach to the Charlotte Avenue junction with the B4100.

- 8.21 Based on the evidence provided within the Transport Assessment [CD-1-28], and my professional judgement, I do not consider that there would ever be a scenario where as many as 70 vehicles would be queuing on the Charlotte Avenue approach to the B4100 so as to have any impact on the operation of the Gagle Brook Primary School.

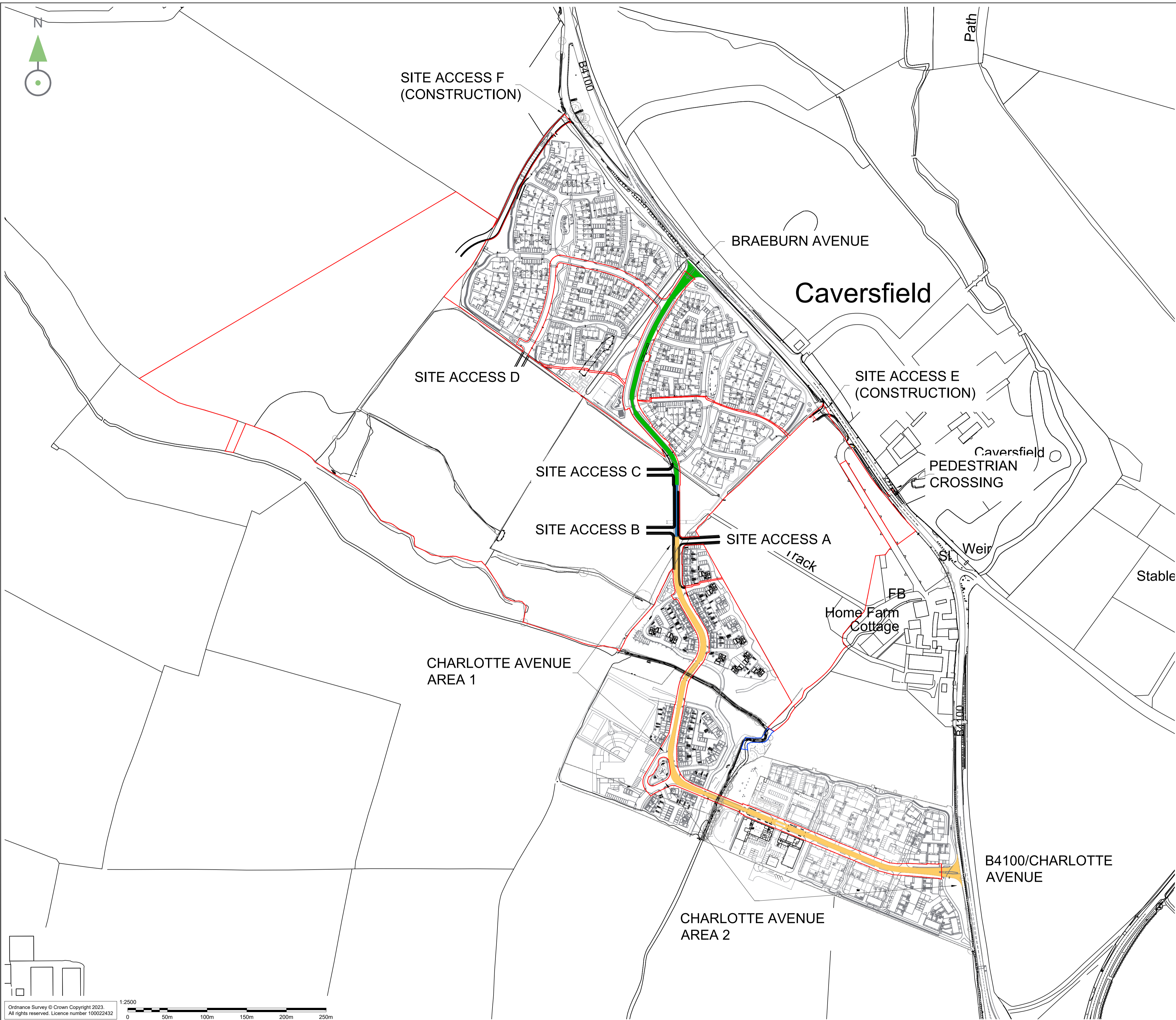


9 Conclusions

- 9.1 I have set out in my evidence a summary of the key transport matters that were given by Cherwell District Council (CDC) as putative Reasons for Refusal, in addition to the comments raised by the two Rule 6 Parties, the North West Bicester Alliance (NWBA), and the Bicester Bike Users Group (BBUG).
- 9.2 My Proof of Evidence addresses each of the CDC putative Reasons for Refusal and provides a response to the additional matters raised by the respective Rule 6 Parties.
- 9.3 Based on my professional judgement, I consider that the Appellant has more than adequately demonstrated that the concerns raised by CDC and the Rule 6 Parties have been addressed within the original documentation that supported the Planning Application, the further Technical Notes, and summarised within my Proof of Evidence.
- 9.4 I would conclude that, in my view, there would not be an unacceptable impact on highway safety, nor would the residual cumulative impacts on the road network be considered “severe”.
- 9.5 In addition, I consider that safe and appropriate access to the Proposed Development has been demonstrated for all users of the highway network.
- 9.6 As such, and in accordance with paragraph 111 of the NPPF, there should be no reason to prevent or refuse the Proposed Development on highway grounds.



APPENDIX A
SITE ACCESS PLAN



KEY:

- SITE ACCESS A - EASTERN PARCEL (4600-1100-T-040 REV A)
- SITE ACCESS B - WESTERN PARCEL (SOUTH OF BUS GATE) (4600-1100-T-041 REV A)
- SITE ACCESS C - WESTERN PARCEL (NORTH OF BUS GATE) (4600-1100-T-042 REV A)
- SITE ACCESS D - WESTERN PARCEL (4600-1100-T-010 REV A+)
- SITE ACCESS E - EASTERN PARCEL (CONSTRUCTION) (4600-1100-T-011 REV F)
- SITE ACCESS F - WESTERN PARCEL (CONSTRUCTION) (4600-1100-T-027 REV B)
- POSSIBLE B4100/CHARLOTTE AVENUE TRAFFIC SIGNALS (4600-1100-T-016 REV B)
- PROPOSED PEDESTRIAN CROSSING TO CHURCH (4600-1100-T-004 REV D)

— APPLICATION BOUNDARY

ELMSBROOK SPINE ROAD:

- BRAEBURN AVENUE
- BUS GATE
- CHARLOTTE AVENUE

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 1:2500
 0 50m 100m 150m 200m 250m

Notes:

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B	24/04/23	SPINE ROAD DETAILS INCLUDED	GSF	CR	MK						
A	17/04/23	FIRST ISSUE	GSF	CR	MK						
Rev	Date	Description	Dm	Chk	App	Rev	Date	Description	Dm	Chk	App

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Drawing Status S2 - FOR INFORMATION	Project Title NW BICESTER										
Client	Drawing Title SITE ACCESS PLAN										
Architect	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Scale @ A1 1:2500</td> <td>Date 17/04/23</td> <td>Designed/Drawn GSF</td> <td>Checked CR</td> <td>Approved MK</td> </tr> <tr> <td>Project Ref 4600-1100</td> <td>Drawing Number 4600-1100-T-078</td> <td>Rev B</td> <td colspan="2"></td> </tr> </table>	Scale @ A1 1:2500	Date 17/04/23	Designed/Drawn GSF	Checked CR	Approved MK	Project Ref 4600-1100	Drawing Number 4600-1100-T-078	Rev B		
Scale @ A1 1:2500	Date 17/04/23	Designed/Drawn GSF	Checked CR	Approved MK							
Project Ref 4600-1100	Drawing Number 4600-1100-T-078	Rev B									

APPENDIX B

OXFORDSHIRE COUNTY COUNCIL CORRESPONDENCE

Mark Kirby

From: White, Joy - Oxfordshire County Council <Joy.White@Oxfordshire.gov.uk>
Sent: 09 March 2023 13:03
To: Mark Kirby
Cc: Caroline Ford
Subject: RE: NW Bicester - Alternative Access to the Eastern Parcel

Categories: Blue category

[EXTERNAL] This message was sent from outside your organization

Hi Mark,

I can't share this without his consent. However, his concerns were about loss of trees on the narrow section of the Elmsbrook spine road north of the school and the fact that it would be contrary to OCC's Tree Policy to remove them – I had advised CDC that there probably would be some loss of trees, but in fact I think a suitable solution could be found without removing the trees – we're investigating further.

He was also reiterating his argument about it not being possible to get a 3m path at the bridge south of the school and how this would be contrary to OCC's Cycling Design Standards to allow a substandard width path. I have pointed out that those standards relate to new roads.

I hope that helps,

Kind regards
Joy

From: Mark Kirby <mkirby@velocity-tp.com>
Sent: 09 March 2023 11:23
To: White, Joy - Oxfordshire County Council <Joy.White@Oxfordshire.gov.uk>
Cc: Caroline Ford <Caroline.Ford@Cherwell-DC.gov.uk>
Subject: RE: NW Bicester - Alternative Access to the Eastern Parcel

CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi Joy,

I believe that Peter Turner from the Bicester Bike User Group (BBUG) has provided some further correspondence to OCC in relation to the proposals, which I expect will be discussed at the planning committee meeting this afternoon.

Are you able to share these with me so that I have an opportunity to consider these prior to this afternoon?

Kind regards,

Mark Kirby

Director, Velocity Transport Planning
Mob: 07385 382 701
DDI: 020 3336 7320

From: White, Joy - Oxfordshire County Council <Joy.White@Oxfordshire.gov.uk>
Sent: 09 March 2023 09:11
To: Mark Kirby <mkirby@velocity-tp.com>
Cc: Caroline Ford <Caroline.Ford@Cherwell-DC.gov.uk>
Subject: RE: NW Bicester - Alternative Access to the Eastern Parcel

[EXTERNAL] This message was sent from outside your organization

Hi Mark

Thanks for this explanation. If a simple priority junction had been proposed we would have looked at the capacity assessment and taken a view on whether it was acceptable. Also in the current climate of speed restrictions across the county, it's quite possible that a 30mph speed limit here might have been considered. Anyway, we are where we are.

I am attending but not to present – only to answer questions of the committee or officers if required. Have you booked to speak? If not I don't think you will get the opportunity to say anything.

Kind regards

Joy

From: Mark Kirby <mkirby@velocity-tp.com>
Sent: 09 March 2023 08:07
To: White, Joy - Oxfordshire County Council <Joy.White@Oxfordshire.gov.uk>
Subject: NW Bicester - Alternative Access to the Eastern Parcel

CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Morning Joy,

As I am sure that you are aware, the NW Bicester planning application (21/01630/OUT) is being discussed at the Planning Committee meeting this afternoon/evening and I have reviewed the Committee Report that will be presented. I have attached a copy of this for your info.

I'm not sure if you are attending, but we have been informed that members of the public (including Rob Fellows) are being offered the opportunity to present to the Planning Committee for 5 minutes, and as such, the Appellant has asked that I attend to comment on highway related matters that might arise.

Whilst I appreciate that OCC's position is one of 'No Objection', I did notice that Paragraph 9.102 introduces the suggestion that an alternative access from the eastern parcel for some or all of the development traffic from the identified 138 dwellings (para 9.98) could be directly accessed from the B4100, which would be preferable (subject to the detail). I appreciate that we have discussed this option, on a number of occasions, but having reviewed the Transport Scoping correspondence, there was no formal request from OCC for us to consider this as part of the application. You may recall that I did raise this with the team as part of the design process, and whilst the temporary construction access has been identified directly to the B4100, we took the view that a permanent access would not be an option that we pursued.

I note that OCC consider that the current access arrangements are acceptable and therefore there is 'No Objection' to the fact that this alternative access arrangement was not considered further. However, I wanted to set out a high-level review of the potential for a permanent access at this location.

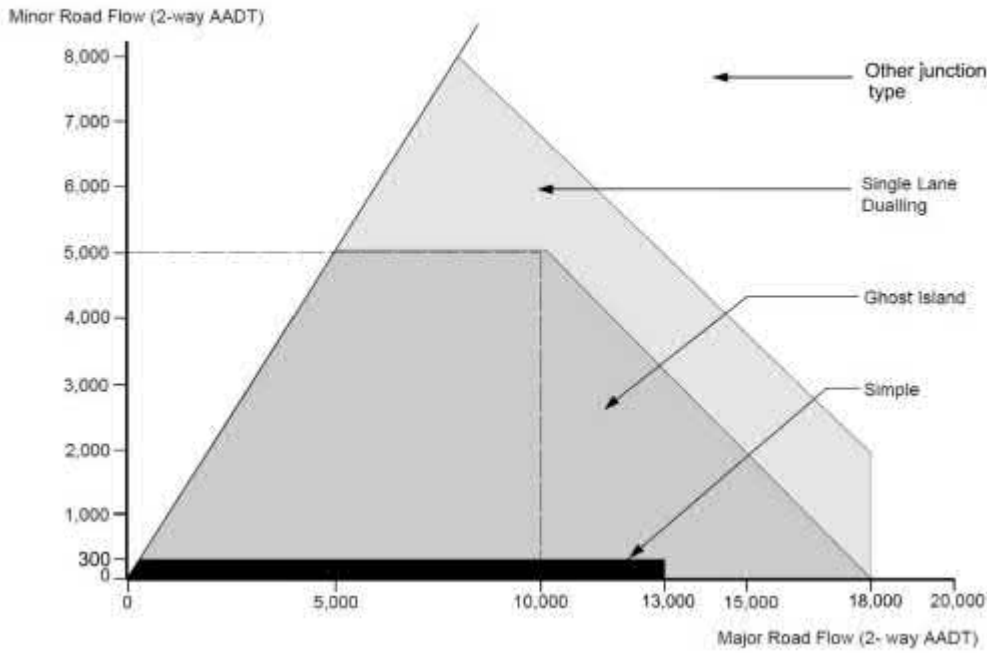
The temporary construction access that has been permitted by OCC does require a temporary restriction of the speed limit along the B4100 from 40mph to 30mph for the duration of the construction phase in order to ensure that the appropriate visibility splays can be achieved that will avoid ditches and third-party land. The temporary junction has also been designed to accommodate large construction vehicles and as such, is much wider (7.0m) than would normally be appropriate for a site access (5.5m) and includes a 15m radius on the southern side and a 10m radius on the northern side of the junction. normally these radii would be 6.0m. The construction access is designed to be a simple priority junction and whilst it is close to the Home Farm access (50m), this is considered acceptable. It should be noted that there is a listed building on the Home Farm site and therefore the character of this building, and its surrounds are to be protected. As such, we consider that an alternative access arrangement to this listed building may not be acceptable.

Whilst I note the suggestion that some traffic could directly access the B4100 from the Eastern Parcel, surely the suggestion to reduce traffic on the Spine Road would be to accommodate all traffic from the Eastern Parcel directly onto the B4100. Based on the agreed trip rates for the proposals, which only account for 40% of all trips being by car as stipulated by Policy Bicester 1, 138 dwellings would generate approximately 559 two-way movements in a 12-hour period. For info, 100 dwellings would generate 405 two-way movements in a 12-hour period. 70 dwellings would generate 284 two-way movements in a 12-hour period.

DMRB CD 123 – Geometric design of at-grade priority and signal-controlled junctions identifies the type of junction that is suitable to accommodate the predicted levels of traffic. Figure 2.3.1 (extract below) identifies that a simple priority junction can accommodate up to 300 two-way AADT flows from the minor arm (the site access). As I have identified that 138 dwellings would generate over 500 two-way movements within 12-hours (not 24-hours), it is clear that a simple priority junction would not be suitable to accommodate all of the Eastern Parcel development traffic, and a ghost island arrangement would be required. A ghost island junction cannot be accommodated on the B4100 without requiring third party land.

A simple priority junction could accommodate approximately half of the expected traffic from the Eastern Parcel, but having considered the fact that the temporary construction access requires that the speed limit along the B4100 has to be reduced temporarily to ensure appropriate visibility splays for the temporary construction access, this would mean that the same would be required for the permanent access. Whilst not a major concern and it is acknowledged that the introduction of the new traffic signal crossing would likely benefit from the reduced speed limit, a permanent TRO would still be required and having considered the potential impact on the existing access to Home Farm, to ensure appropriate junction spacing, all of which is weighed up by the fact that no more than half of the units could be accessed directly from the B4100, this option was not considered to be pursued.

Figure 2.3.1 Approximate priority junction provision on single carriageway roads based on flows only

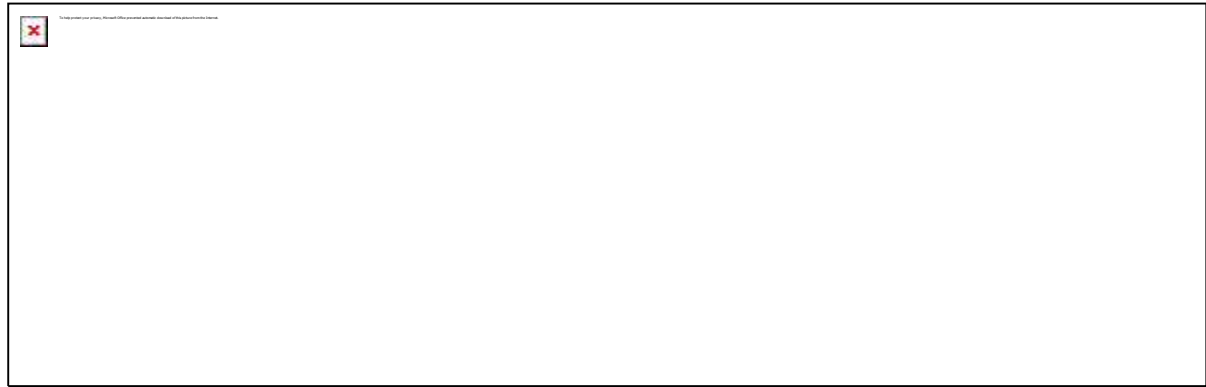


Mark Kirby | Associate Director

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APPENDIX C

**HYDER CONSULTING MEMORANDUM
(12 DECEMBER 2014)**

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.

-
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.

-
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).

-
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 acceptable on the highway network in advance of the Link Road rail crossing.



APPENDIX A

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

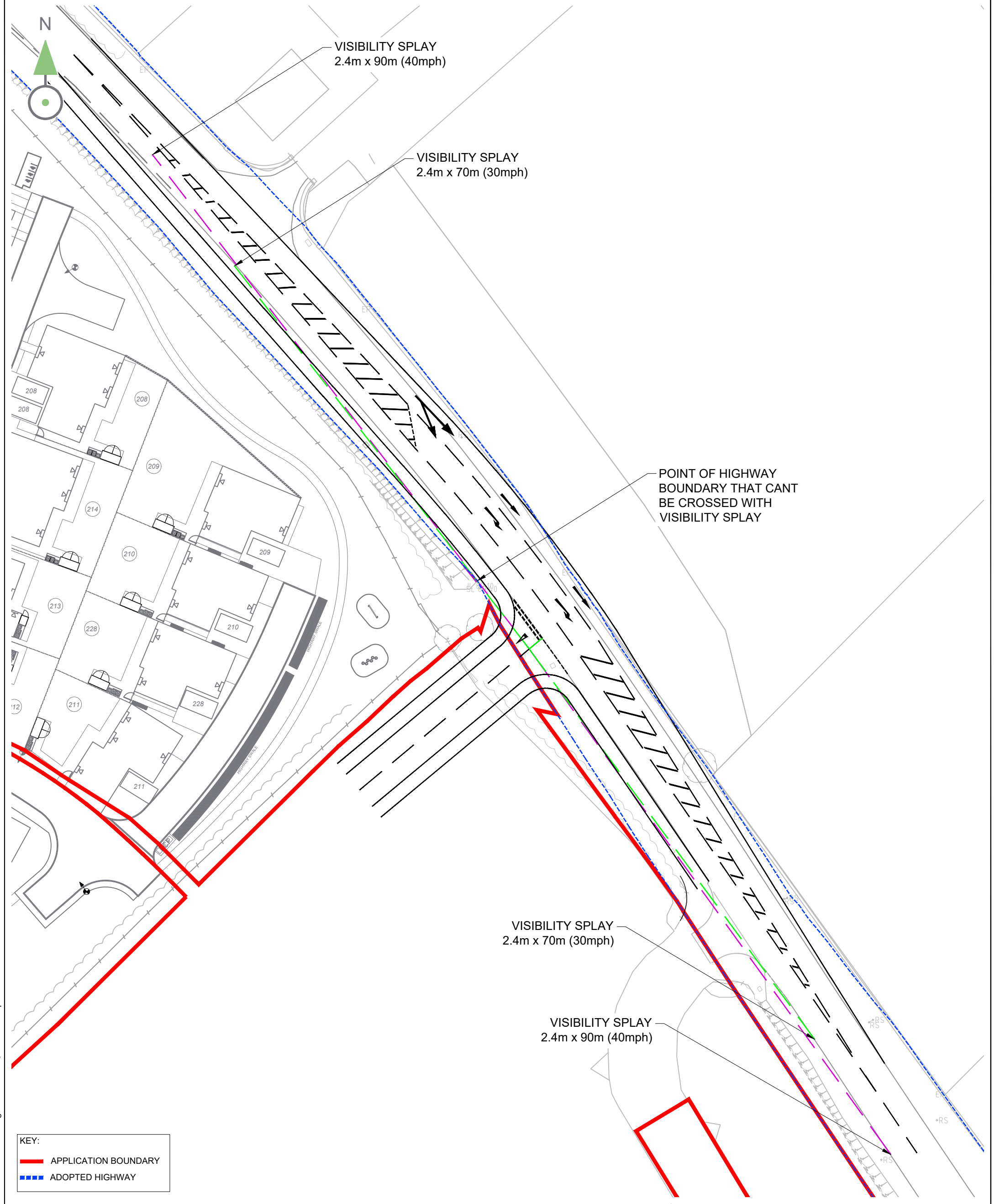
The discussion above has indicated trigger points for the various elements of transport infrastructure in relation to the NW Bicester development. These are summarised in Table 9 below.

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.

APPENDIX D

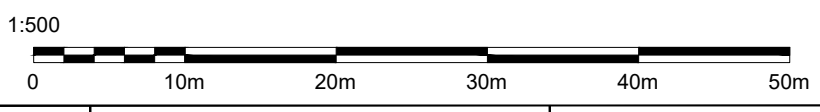
**ALTERNATIVE ACCESS PROPOSALS TO THE B4100 FROM THE
EASTERN PARCEL**



KEY:

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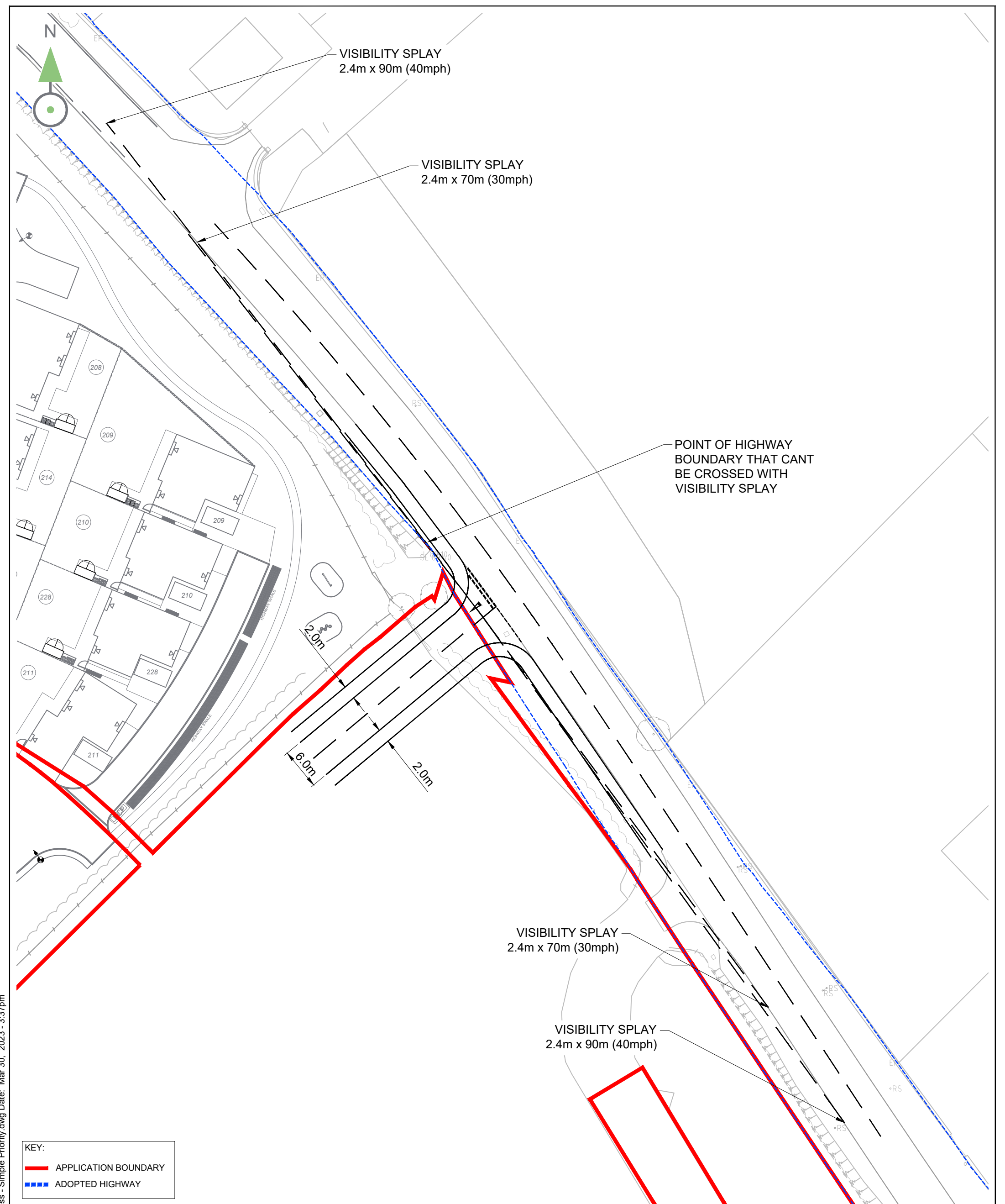
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Client
FirethornTRUST

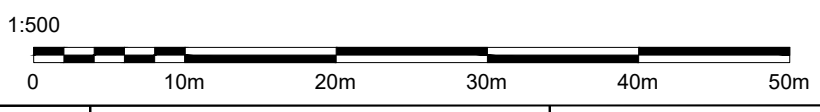
Architect

A	30/03/23	FIRST ISSUE	GSF	CR	MK
Rev	Date	Description	Drn	Chk	App
Project Title			LAND AT NORTH WEST BICESTER		
Drawing Title			ALTERNATIVE ACCESS GHOST ISLAND RIGHT TURN LANE		
Scale @ A3	Date	Designed/Drawn	Checked	Approved	
1:500	30/03/23	GSF	CR	MK	
Project Ref	Drawing Number		Rev		
4600-1100	4600-1100T-075		A		

Drawing file: 4600-1100-T-075-A - Alternative Site Access - Ghost Island.dwg Date: Mar 30, 2023 - 3:33pm



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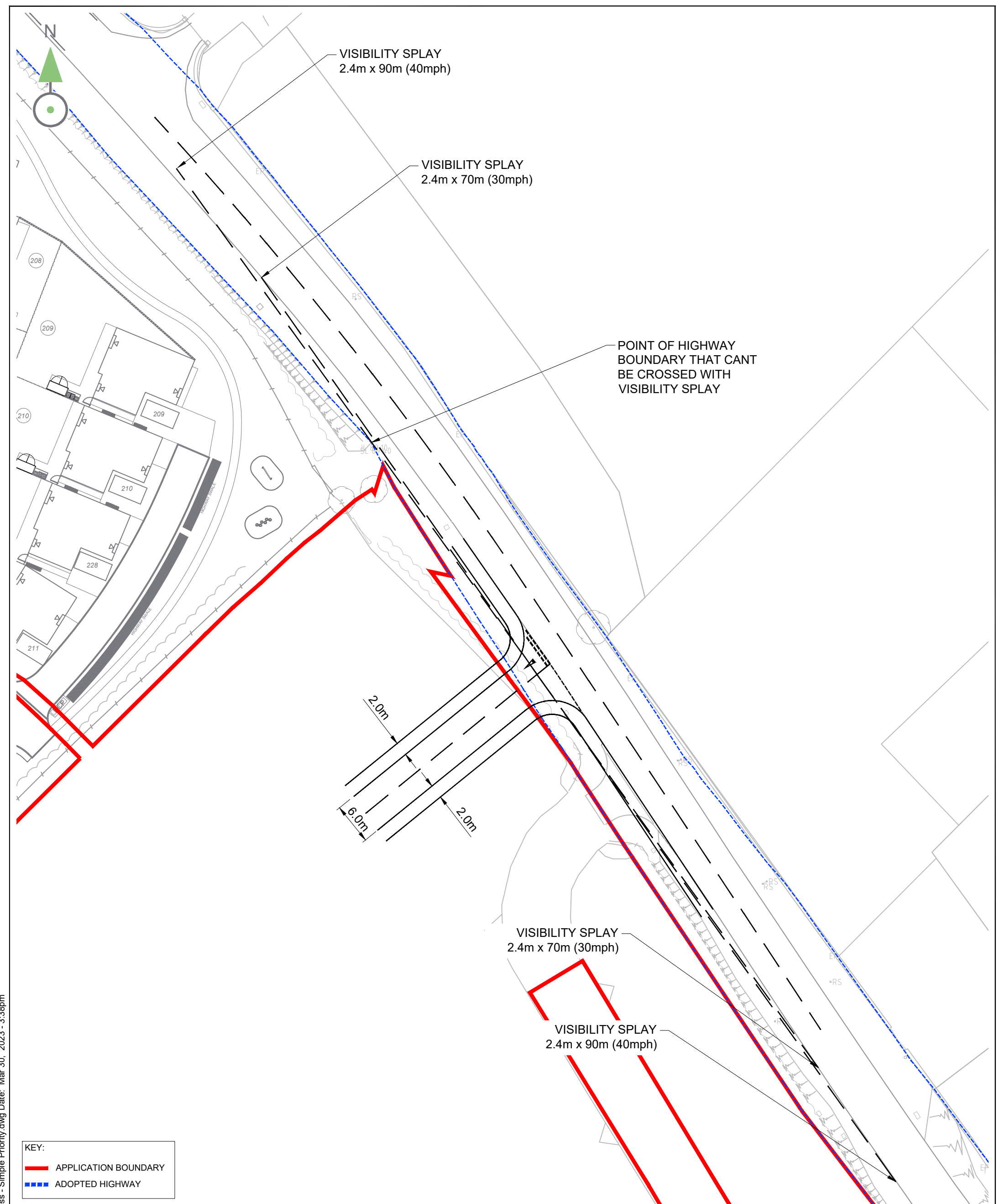
Drawing Status
S0 - WORK IN PROGRESS

Client
FirethornTRUST

Architect

A	30/03/23	FIRST ISSUE	GSF	CR	MK
Rev	Date	Description	Drn	Chk	App
Project Title			LAND AT NORTH WEST BICESTER		
Drawing Title			ALTERNATIVE ACCESS SIMPLE PRIORITY JUNCTION OPTION 1		
Scale @ A3	Date	Designed/Drawn	Checked	Approved	
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4600-1100	4600-1100T-076		A		

Drawing file: 4600-1100-T-076-A - Alternative Site Access - Simple Priority.dwg Date: Mar 30, 2023 - 3:37pm



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A	30/03/23	FIRST ISSUE	GSF	CR	MK
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Drawing Title ALTERNATIVE ACCESS SIMPLE PRIORITY JUNCTION OPTION 2					
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