



Land East of Newgate Lane East, Fareham

Transport Assessment Addendum

Client: Miller Homes & Bargate Homes

i-Transport Ref: TW/ITB10353-024a

Date: 09 August 2022

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i-Transport LLP

The Square
Basing View
Basingstoke
Hampshire
RG21 4EB

Tel: 01256 637940

www.i-transport.co.uk

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SECTION 1 Introduction and Context

- 1.1 Miller Homes and Bargate Homes submitted a planning application to Fareham Borough Council (FBC) (P/22/0165/OA) for the development at Land East of Newgate Lane East, comprising:
- “Outline application with all matters reserved (except access) for residential development of up to 375 dwellings, access from Newgate Lane East, landscaping and other associated infrastructure works.”***
- 1.2 A Transport Assessment (TA) and Framework Travel Plan (FTP) were submitted with the application to assess the transport impacts of the proposed development.
- 1.3 Hampshire County Council (HCC) is the statutory consultee for transport and highway matters which affect the local highway network in the area of the Site, and provided its consultation response by letter dated 8 April 2022 (**Appendix A**), raising objection on the basis that:
- a The applicant has failed to demonstrate the development would not result in an unacceptable impact on highway operation and safety. On this basis the proposed development would be contrary to Paragraph 111 in that it would result in a severe impact on the road network.***
 - b The applicant has failed to demonstrate that the development can be accommodated in a manner that would not cause increased danger and inconvenience to highway users, including those travelling by sustainable modes. On this basis the proposed development would be contrary to NPPF paragraph 110.***
- 1.4 In providing its Recommendation, HCC identified that it may be possible for the proposed Reasons for Refusal (RfR) to be overcome following the receipt of additional information.
- 1.5 An Appeal against the failure by FBC to determine the application was made, and the Appeal will be considered by Public Inquiry in October 2022 (APP/A1720/W/22/3299739).
- 1.6 FBC considered the proposals at its June 2022 Committee, where it determined that had it considered the application, it would have Refused the application for various reasons including RfR (i) relating to transport concerns, reflecting the HCC response:
- i) The applicant has failed to demonstrate the development would not result in an unacceptable impact on highway operation and safety, nor that the development can be accommodated in a manner that would not cause increased danger and inconvenience to highway users, including those travelling by sustainable modes. On this basis the proposed development would result in a severe impact on the road network***
- 1.7 This Transport Assessment Addendum (TAA) is provided to address and respond to the comments raised by HCC, and to supply further assessments. The TAA demonstrates that, in transport terms, the proposals are acceptable and compliant with relevant transport policies, and that there should be no transport reason that the scheme is refused.

1.8 The TAA has been structured around the key issues that are raised, and does not repeat the information presented in the TA where this is agreed:

- **Section 2** – Considers the Development Proposal and associated Access Strategy
- **Section 3** – Explains the Accessibility of the site and off-site connections
- **Section 4** – Assesses the transport impacts of the proposal.

SECTION 2 **Development Proposal and Access Strategy**

2.1.1 The application is made for Outline consent only, for development of up to 375 dwellings, with means of access a matter to be determined. Matters of layout, scale and appearance are reserved matters for later determination.

2.2 **Site Layout and Parking Provision**

2.2.1 The HCC response raises various comments that are provided to assist in developing the internal layout of the site as part of any future Reserved Matters applications. These comments are noted and will be addressed at that stage should planning permission be granted. No further assessment of the internal layout matters is required at this stage.

2.3 **Access Strategy**

2.3.1 The HCC response raised various comments in relation to the proposed access strategy, primarily in relation to detailed matters where additional information was requested.

2.3.2 The proposed site access strategy (described in TA Section 4.4) comprises:

- 1 Pedestrian and cycle access is prioritised and provided in various locations:
 - (i) To PROW 76 to the north of the site (in two locations) which comprises a dedicated footway / cycleway linking Tukes Avenue and Newgate Lane
 - (ii) To Tukes Avenue (in the east) at the service road access for 143 Tukes Avenue, which is due to be improved
 - (iii) To Brookers Lane (to the south) through the consented development site, where multiple points of connection are proposed
 - (iv) To Newgate Lane East (to the west) at:
 - (a) The proposed roundabout junction leading to Newgate Lane, using connecting pedestrian and cycle infrastructure proposed
 - (b) The north-western corner, leading to the Newgate Lane East Bus Stops where a new footway link is proposed
- 2 Vehicular access to Newgate Lane East in the form of a 'normal roundabout' junction;
- 3 Emergency vehicle access is provided to Tukes Avenue (through the Service Road to 143 Tukes Avenue) and through the consented development to the south.

2.4 Pedestrian and Cycle Access Arrangements

2.4.1 HCC raise various comments in relation to each of the proposed arrangements for pedestrian and cycle access (as depicted on TA **Drawing ITB1053-GA-031A**). These are addressed in turn.

Access Points 1 and 2 (North to the PROW)

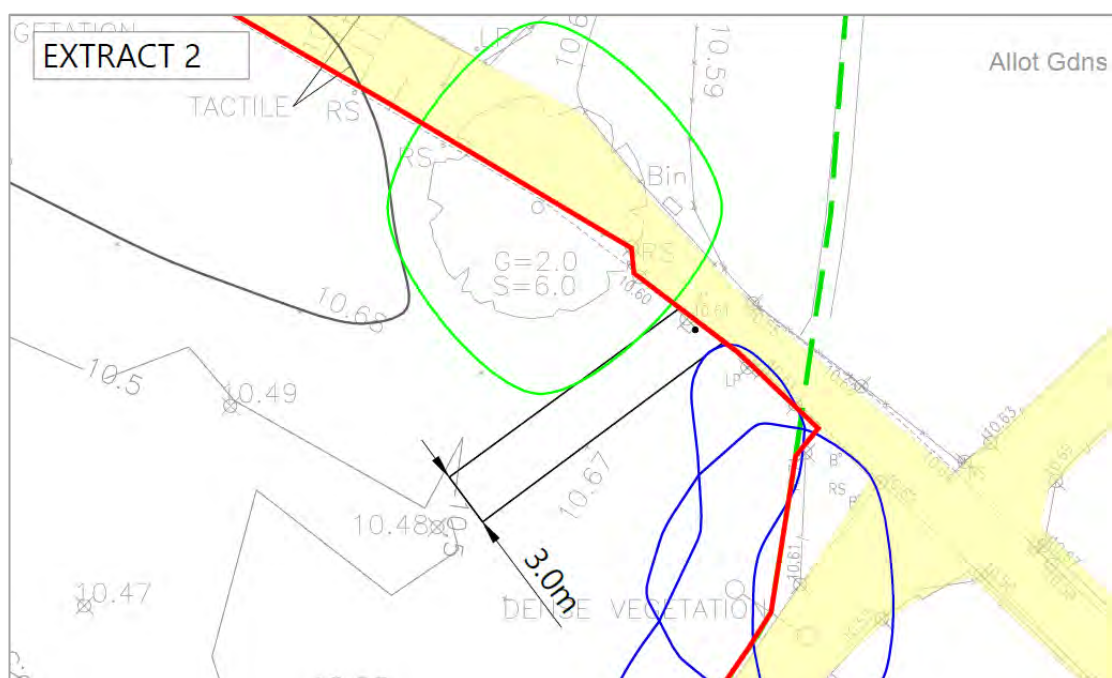
2.4.2 Access to the PROW 76 running along the northern boundary of the site (a surfaced and lit part shared / part segregated footway / cycleway) is proposed in two locations, in the north-east corner (Access Point 1) and north-west corner of the site (Access Point 2).

2.4.3 HCC requested further design detail for Access Point 2, and confirmation that the connections can be achieved, as well as identifying that the arboriculture / ecological impacts will need to be considered (noting these concerns are surmountable).

2.4.4 **Drawing ITB10353-GA-031A**, provided in the TA (extract at **Image 2.1**), identifies sufficient detail to consider the delivery of the access connection, demonstrating a 3m shared footway / cycleway linkage to the PROW.

2.4.5 This includes consideration of impacts on adjacent trees and vegetation with the tree survey included in the drawing. The proposed connection is shown to be provided outside of the Root Protection Areas of Tree T29 (A-Category Tree) and Group G21 (group of B-Category Trees). The Arboricultural and Ecological assessments supporting the application consider the proposed connections and raise no concerns, in particular that no significant tree loss is required.

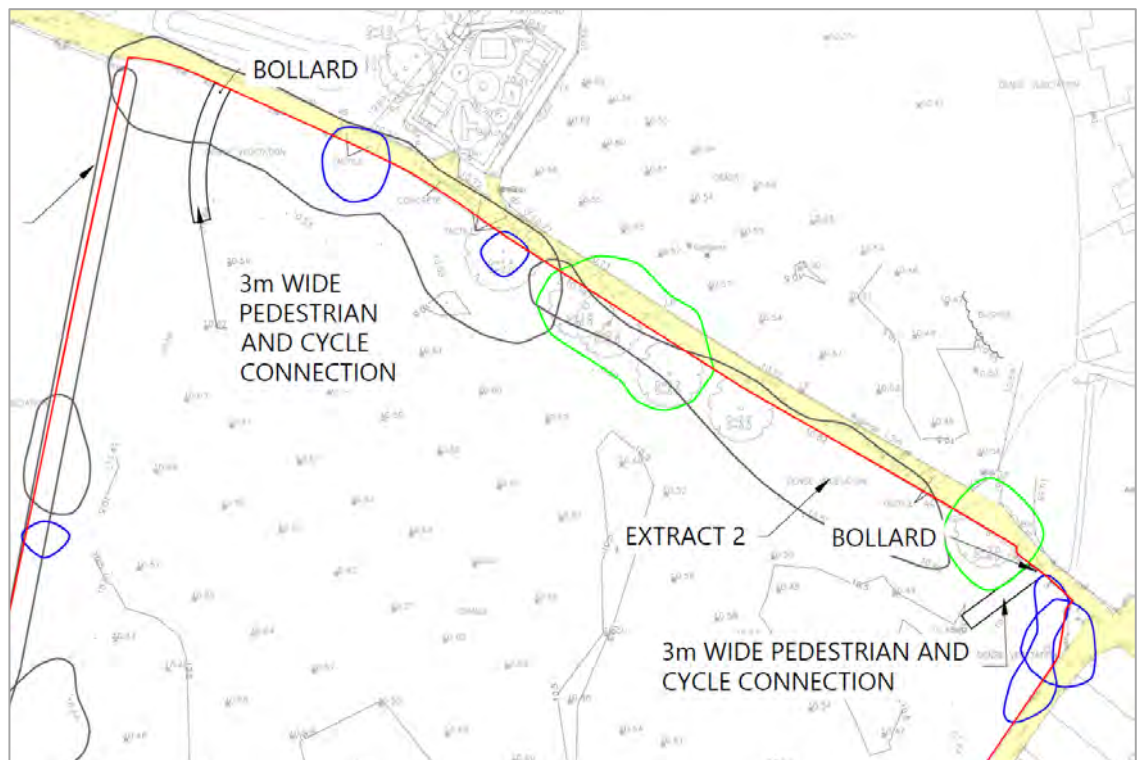
Image 2.1 – Extract of Access Point



Deliverability of Access Points 1 and 2

2.4.6 On **Drawing ITB10353-GA-031A** the public highway boundary is depicted in a yellow shade, obtained from HCC records, shown against the planning application boundary, depicted in a red edged line. This demonstrates how the access connection is formed between the application site and the public highway, as extracted at **Image 2.2**.

Image 2.2 – Northern PROW Connections (Access Points 1 and 2)



Access Point 3 (East to Tukes Avenue via the Service Road)

2.4.7 Access to Tukes Avenue is promoted via the Service Road at 143 Tukes Avenue which is proposed to be improved.

2.4.8 HCC proposed a series of amendments to the TA scheme and requested that the scheme is considered by Road Safety Audit (RSA). An RSA has now been carried out and a transport survey was completed over 3 days (10/05-12/05 2022) at the service road to better understand usage.

2.4.9 In response to HCC's comments the scheme proposals have been amended. **Appendix B** provides the RSA, transport survey and revised scheme proposals, comprising:

- **Drawing ITB10353-GA-032 B** – General Arrangement
- **Drawing ITB10353-GA-038 B** – Visibility Assessment
- **Drawing ITB10353-GA-046** – Swept Path Analysis (Fire Tender and Panel Van)

2.4.10 **Table 2.1** presents a summary of the transport survey information which demonstrates that usage of the service road is light, but that it is currently used by a variety of users.

Table 2.1 – Travel Demands – Service Road to Tukes Avenue (Three Day Average)

Time Period	Existing Usage			Development Demand		
	Veh	Peds	Cycles	Veh	Peds	Cycles
Morning Peak (0745 – 0845)	3	6	<1	0	36	4
Evening Peak (1600 – 1700)	4	1	<1	0	26	2
Daily (0700 - 1900)	48	19	2	0	291	17

2.4.11 **Table 2.2** provides a summary of the HCC comments raised and the design response demonstrating how each matter has been addressed. The final details of the improvement scheme would be subject to agreement with HCC as part of the Section 278 process.

Table 2.2 – Design Response to HCC Comments on Access Point 3

HCC Comment	Design Response
Clarify the priorities between pedestrians, cyclists and motor vehicles	As a shared surface route, there is deliberately no priorities provided between users. The route is designed as a space for all users. Future usage would be dominated by non-vehicle movements.
Reconsider the use of surface materials to reinforce the shared nature of the route	The drawing demonstrates a change in material for the shared surface section of the route (illustrated as block paving). The final material choice will be subject to discussions with HCC during the S278 process.
Provide adequate signage and cord paving to deal with the changing status of the route	Transitions to the shared surface are provided at the Appeal Site and Tukes Avenue entrances to the link. Signage in accordance with the Traffic Signs Manual will be identified and delivered at the Section 278 Stage.
Provide suitable visibility between cyclists and vehicles	Drawing ITB10353-GA-038B demonstrates minimum visibility between users of 9m, consistent with a Design Speed of 10mph (MfS) and sufficient SSD for a vehicle to stop safely on a slow speed link. Significantly greater forward visibility is achievable. Cyclists stop significantly quicker than vehicles. The scheme improves visibility from the side roads (for existing users) and is adequate for the intended use of the connection.
Amend the existing bellmouth to Tukes Avenue to a cross-over junction	The bellmouth is amended to a cross-over, shown on Drawing ITB10353-GA-032B .
Provide crossing points at Tukes Avenue to address the new desire lines	A new crossing point is proposed at Tukes Avenue directly south of the service road connection, on the desire line between the Appeal Site and School. This is formed by build outs to improve pedestrian visibility.
Progress a Traffic Regulation Order to prevent parking on the service road	The design of the connection will dissuade parking from occurring. In the event that a Traffic Regulation Order is required to enforce this, it will be progressed.
Provide wayfinding signage to the BRT	Wayfinding signage has been added.

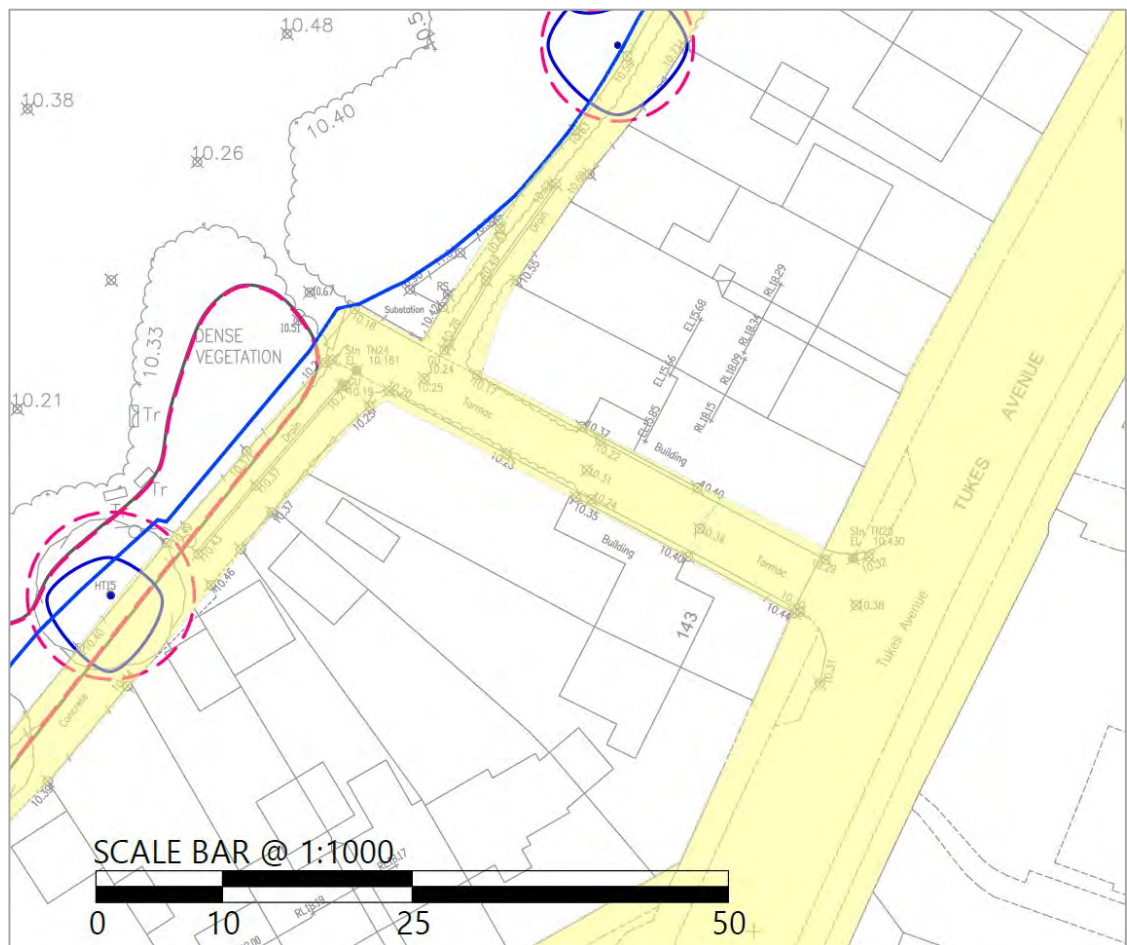
Road Safety Audit of Access Point 3

2.4.12 An independent Stage 1 RSA was carried out of the revised scheme proposal. The RSA raised various matters relating to the swept path of vehicles, visibility between users and of the build-outs, parking protection and pedestrian crossing arrangements. The Designers Response, provided in the RSA, addressed each of these matters, accepting each recommendation and the scheme has been updated to reflect the RSA. The Auditor has confirmed that the Design Response and amended scheme addresses all matter raised adequately.

Deliverability of Access Point 3

2.4.13 **Drawing ITB10353-GA-032B** demonstrates the public highway boundary (shaded yellow), obtained from HCC records, against the planning application boundary, depicted in a blue edged line. This demonstrates how the access connection is formed between the Appeal Site and the public highway and that the application boundary and public highway are contiguous.

Image 2.3 – Public Highway at Access Point 3



2.4.14 The scheme is within the control of the Appellants to deliver, subject to completing works on the public highway, to be achieved through a Section 278 Agreement with HCC.

Consideration of Additional Access Points to the East

- 2.4.15 HCC requested that consideration be given to establishing further access points to the east of the site, to reduce the distance required to be travelled to local facilities. No further connections to the east are deliverable within the Applicants land control.
- 2.4.16 **Figure 2** of the TA and the associated Facilities Table (Table 5.1) demonstrate the relationship between the site and local facilities and services. This demonstrates that the majority of facilities are located north and south of the site, and that there are limited facilities provided on the eastern boundary of the site, really only comprising the Woodcote School and convenience store.
- 2.4.17 The Site Access Strategy provides access to destinations in the east in three locations, at the PROW 76 to the north (Access Point 2), to the east to Tukes Avenue at Woodcote School (Access Point 3) and at Brookers Lane (Access Point 4). Collectively these connections provide good permeability between the site and Tukes Avenue, enabling residents to access facilities to the east (i.e. Woodcote Primary School, local bus stops, local retail) conveniently and acceptably.
- 2.4.18 There is no requirement for further connections to the east. This matter was addressed in the FBC Committee Report (15 June 2022) where the accessibility of the site was determined to be acceptable, taking account of the access strategy and specifically the singular connection east.

Access to Brookers Lane (south) – Access Points 4 and 5 / Access Points A, B and C

- 2.4.19 No concerns were raised with the delivery of Accesses 4 and 5 to Brookers Lane which were consented as part of the planning permission for the adjacent site (P/19/1260/OA).
- 2.4.20 Connections between the Appeal Site and Brookers Lane are proposed in three locations (indicatively A, B and C). As an outline application the precise location and form of these connections will be determined later as part of the Reserved Matters Submissions.
- 2.4.21 HCC raised a concern about how connections to the Consented Site can be secured, and the potential to deliver these connections should the Consented Development not proceed.
- 2.4.22 The planning permission on the adjacent land was achieved by Bargate Homes (one of the Appellants) who pursued a consent through the Appeal process. Significant time and effort was expended achieving this consent and Bargate Homes is committed to deliver it. Indeed, a Reserved Matters application (P/22/0841/RM) has been submitted and is under consideration by FBC. There is no reasonable prospect that the consented development will not come forward.

2.4.23 A suitably worded planning condition can ensure the delivery of adequate connections between the two sites, and the Appellants have no objection to such a condition being imposed.

Access Point 6 (north-west to Newgate Lane East bus stops)

2.4.24 In relation to Access Point 6, HCC requested:

- i A Road Safety Audit be carried out
- ii Confirmation the path connecting to Newgate Lane East will be lit and surfaced
- iii Consideration to accommodate cyclists on the connection (compliant with LTN 1/20).

2.4.25 The RSA that supports the access proposal (*TA Appendix L*) included Access Point 6 and its connection to the bus stops within the scope of assessment and this has already been considered. The RSA raised no safety issues with this connection. The works to form Access Point 6 have been further considered in the updated RSA for the site access proposals (**Appendix D**), again with no issues raised.

2.4.26 It is confirmed that the access connection within the site to Newgate Lane will be surfaced and an assessment has been carried out by Tetra Tech (**Appendix C**) to demonstrate how lighting can be delivered in this location, in a manner sensitive to the adjacent ecological mitigation area.

2.4.27 Taking the active travel access strategy comprehensively (**Drawing ITB10353-GA-031 A**), there is little justification to upgrade Access Point 6 for cycle usage, which would require upgrading of the associated crossing of Newgate Lane East. There are six proposed cycle connections serving the site, provided in all directions, with two to the south at the eastern and western corners of the site, two to the north, again at the eastern and western boundaries, to the east (to Tukes Avenue) and to the west at the proposed access roundabout. This ensures high-levels of permeability specifically to prioritise pedestrians and cyclists.

2.4.28 A further connection to the east at Access Point 6, some 150m north of the site access, would do little to make cycling more attractive and would have detrimental impacts on the open spaces to be provided in this part of the site, and result in unnecessary further works to the Newgate Lane East corridor. This is particularly the case when considering the relatively limited demand that would be generated for cycle use to the east (**Table 3.1** projects 4 daily cyclists)

Access Point 7 (to Newgate Lane via the Proposed Access Roundabout)

2.4.29 HCC requested that the following matters be considered for access at Access Point 7:

- 1 Consideration be given to a LTN 1/20 segregated cycle route from the access roundabout into the proposed development and connecting to Newgate Lane.

2 The arrangement for cyclists leaving the cycle route to Newgate Lane may require further consideration at the detailed design stage.

3 That a 0.5m buffer be shown adjacent to shared routes next to 40mph roads.

2.4.30 Engagement with HCC following receipt of the response confirmed that, whilst an LTN 1/20 compliant connection between the Appeal Site and the Newgate Lane East roundabout is desirable, the connection between the proposed roundabout and (old) Newgate Lane would be appropriate to remain as a shared footway / cycleway connection, taking account of the limited use expected and the impact that its conversion would have on the adjacent drainage system. **Tables 3.1** and **3.2** identifies that this connection is expected to attract 4-5 cyclists daily, which considered against expected pedestrian flows (35-50) is suitable in the context of LTN 1/20.

2.4.31 **Appendix D** provides an updated suite of drawings related to the proposed roundabout design, and in relation to pedestrian and cycle facilities, incorporates a 0.5m margin / hard strip on both the Newgate Lane and site access arm to separate vulnerable users from motor vehicles, and provides a segregated footway / cycleway on the site access arm.

2.5 Vehicular Access

Access to Newgate Lane East

2.5.1 The Appeal Scheme proposes access to the site from a four-arm 'normal' roundabout to Newgate Lane East, incorporating (old) Newgate Lane as its western arm. The scheme therefore proposes the modification of an existing junction to deliver access to the site.

2.5.2 The HCC response raises various matters in relation to the principle of this access, and its design and operation. The operation of the proposed roundabout is considered in Section 4, assessing the impacts that the scheme may create. Matters of principle and design are considered below.

Principle of Access

2.5.3 HCC raises concern that the proposed access roundabout may conflict with its draft policy objectives set out in the consultation version of LTP4. Draft policy DM2 states that:

*'We will...only support requests for **NEW accesses onto A roads, the principal road network or traffic sensitive streets** where the strategic flow of traffic is prioritised and not compromised and when all other reasonable options (such as taking access from nearby side roads) has been considered;'*

2.5.4 In this case, it is noted HCC's LTP 4 DM2 Policy is in draft format only, and also that.

- a The junction would comprise a modification to an existing junction, rather than the creation of a wholly new junction onto the network.
- b Newgate Lane East is not an A Road, and HCC does not have a defined primary route network. Notwithstanding this, it is accepted that it is a traffic sensitive route.
- c The roundabout design has been prepared to ensure that the strategic flow of traffic (i.e. north-south on Newgate Lane East) is not materially affected. The assessments in Section 4 demonstrate the junction is forecast to operate in '**Free Flow**' conditions, and with de-minimus delays occurring to mainline traffic (<10 seconds).
- d Other reasonable options to deliver access to the site were explored but are not available. The site has only a single frontage to the road network at Newgate Lane East, with no opportunities for access to the north (PROW 76) or east where there is continuous private residential development. During the promotion of the site and preparation of the application for the Consented Site to the south, HCC made clear that it would only accept vehicular access to Brookers Lane for a '*limited*' number of dwellings, ultimately established as 100 dwellings.

2.5.5 Whilst it is understood that HCC must protect the utility of Newgate Lane East, that is what the scheme achieves, and does so in a manner that ensures safe and free flow of traffic.

Access Design Considerations

2.5.6 The HCC response confirms that the geometry of the proposed roundabout is acceptable and that the safety considerations raised as part of the Stage 1 RSA have been suitably addressed.

2.5.7 Various matters of further detail were requested in relation to the access, comprising:

- 1 Additional detail on the Newgate Lane East speed surveys, and speed measurement on Newgate Lane to be carried out to inform visibility requirements.
- 2 Additional visibility of 9-12m to be demonstrated on the Newgate Lane East approaches.
- 3 Drainage concept design to be provided to demonstrate sufficient land is available for the attenuation of surface water.

2.5.8 **Table 2.3** provides a summary of the HCC comments raised and the design response demonstrating how each matter has been addressed.

Table 2.3 – Design Response to HCC Comments on Site Access Roundabout

HCC Comment	Design Response
Speed Data in the TA lacks detail (location, weather information and raw data).	TA Appendix H presented the ATC data used to inform the access design. This included the location of the surveys and the raw data. Weather information was also included at TA Appendix, having formed part of the PADR submission. The information is re-provided as Appendix D .
Using the out of date speed data, applying a 2.5mph uplift for wet weather, would result in a visibility requirement of 129m northbound and 132m southbound, exceeding the 120m shown. Visibility based on HCC TG3 should be demonstrated.	<p>The speed data was collected over 7 days in November 2021 (03/11 – 09/11), a recent and neutral period.</p> <p>The weather during the 7-day survey (Appendix D) was dry, other than for a ~1 hour period on 3 November. On that basis, it is not appropriate to apply a wet weather adjustment.</p> <p>Notwithstanding this, the scheme drawings have been amended to demonstrate SSD in line with a wet weather adjusted speed (which is 130m northbound and 133m southbound, in line with HCC’s TG3 calculator. (Drawing ITB10353-GA-106C).</p>
No speed data has been provided for the old Newgate Lane Approach.	<p>Speed data has been obtained for the Newgate Lane approach (9-15 May 2022) and is presented in Appendix E, along with survey location and weather information. Weather was generally dry, with some limited rain events on the 10/11 and 15/11. On that basis it is not appropriate to apply a wet weather adjustment to calculate SSD.</p> <p>The speed survey identified an average 24 hour 85%ile speed of 38.9mph. Applying HCC TG3 SSD requirements, this results in an SSD of 96m. Drawing ITB10353-GA-106C demonstrates an SSD envelope of 96m on approach to the junction (Appendix D).</p>
<p>The roundabout geometry (on Drawing ITB10353-GA-102B) is acceptable at this in principle stage.</p> <p>However, the approach gradients appear very flat. The applicant should demonstrate suitable land is available to provide attenuation for surface water drainage, which is not appropriate within the roundabout itself.</p>	<p>The Appeal Site in the location of the access is relatively flat, but at the detailed design stage the vertical design of the roundabout will be developed and will ensure an appropriate drainage strategy is delivered, with suitable road levels achieved.</p> <p>Appendix F provides an evolution of the wider Drainage Strategy Plan prepared by CEP and which identifies an area of land north east of the roundabout available within the boundaries of the Appeal Site that would be suitable to accommodate attenuation if this is required. In practice, the site boundary surrounding the access is substantial and there are various opportunities for drainage solutions if required. This is a matter for the Detailed Design Stage.</p>
The items raised in the RSA have been satisfactorily addressed. Confirmation from the Auditor should be provided following any further design amendments.	The RSA has been updated (Appendix D) to take account of the revised scheme, comprising minor modifications proposed to the southern approach arm and to pedestrian and cycle provisions. The Auditor has confirmed that there are no new safety issues arising and that all matters raised as suitably addressed.
OWC consent will be required for the diverting and culverting of the ditch system	Noted and any OWC consent would be progressed, as is normally the case, post application.

Emergency Vehicle Access

- 2.5.9 The TA set out that emergency access to the site could be achieved to the east to Tukes Avenue and to the south through the Consented Development to Brookers Lane.
- 2.5.10 Emergency access would only be required if the primary access (to Newgate Lane East) were to become completely obstructed and impassable, which is highly unlikely to occur.
- 2.5.11 Nevertheless, the proposed access to Tukes Avenue is to be provided as an emergency access and meets the access requirements of the Approved Document B5. Swept path analysis of a fire tender passing across the access is presented at **Appendix B (ITB10353-GA-046)**.
- 2.5.12 Further emergency access can be achieved to the south to Brookers Lane through the Consented Site. Bargate Homes controls this land, and it is within their control to enable this connection should that be required at the reserved matters stages. A condition can be provided as needed.
- 2.5.13 The Hampshire Fire Service has been engaged to confirm their position on the provision of access to the site. Hampshire Fire did not object to the application. Confirmation of their position was requested, based only on the provision of access to Newgate Lane East (at the site access roundabout) and to Tukes Avenue. The response states that they have no further comments to make (**Appendix G**).
- 2.5.14 Overall, the scheme provides adequate emergency access.

SECTION 3 Site Accessibility and Off-Site Improvements

3.1.1 In relation to accessibility, the HCC response confirms that:

- 1 There is an adequate range of amenities within a suitable walking and cycling distance of the site including schools, retail facilities, employment sites, healthcare, transport opportunities and leisure facilities;
- 2 The site is acceptably close to existing public transport facilities with a number of regular bus services operating within reasonable walking distance from the site. Access to the rail network at Fareham Rail Station is acceptable.
- 3 The Framework Travel Plan is acceptable and of a good standard.
- 4 The TA identifies a series of improvements to local walking and cycling provision and HCC is supportive of these measures being delivered, whilst also seeking consideration of further measures.

3.2 Pedestrian and Cycle Demand

3.2.1 The TA presented a detailed assessment of likely active travel generation and distribution and assignment. This forecast that pedestrian and cycle demand will be distributed across the proposed access connections, as repeated in **Table 3.1** (TA Appendix M).

Table 3.1 – Pedestrian / Cycle Demand and Assignment (12 Hour Day) – Local Schools

	Route A1	Route A2	Route B1	Route B2	Route C	Route D	Total Trips
	Brookers Lane	Woodcote Lane	PROW (West End)	PROW (East End)	Newgate Lane East	Tukes Avenue	
Walking Trips	204	52	44	109	35	291	735
Cycle Trips	7	3	4	8	4	17	42
Total Trips	211	54	48	117	39	307	777
% Trips	27%	7%	6%	15%	5%	40%	100%

3.2.2 HCC requested that the pedestrian and cycle demand assessment is revised to consider the influence on active mode movement by including the Catchment Schools for education trips. The TA assessment has included an assumption that all education trips from the site (by walking and cycling) would be made to the more proximate schools to the south and east of the Site

3.2.3 The Appeal Site falls across two separate catchment areas. **Table 3.2** considers the difference in walking / cycling distance (in line with TA Table 5.1) between the Catchment Schools and those considered in the TA assignment of pedestrian and cycle demands from the Appeal Site.

Table 3.2 - Distance to Education Facilities

	TA Assessment		Catchment School	
	School	Distance (m)	School	Distance (m)
Primary Education	Woodcote Primary School	285	Wallisdean County Junior School	3,160
	Peel Common Junior School	920	Wallisdean Infant School	3,460
			Crofton Anne Dale Infant School	3,750
			Crofton Anne Dale Junior School	4,015
Secondary Education	Bridgemary School	1,565	Crofton Secondary School	2,515
	Baycroft School	2,415	Fareham Academy	2,660

3.2.4 School preferences and admissions are complex decisions for families to make and will take account of various factors including admissions policies, school performance, personal preferences, reputation, and ease of access. For many families the ease of access, i.e. being able to enable their child to walk or cycle comfortably to school, is a significant factor.

3.2.5 Moreover, in view of the distances between the Appeal Site and the Catchment Schools, which for younger children (<8 years old) exceed the DfE Guidelines (2 miles – 3.2km), it would appear likely that should the Appeal site be consented:

- i HCC will consider a revision to its school catchment areas
- ii Families will choose to send children to the more local schools which can be accessed comfortably on foot and by cycle
- iii Children attending the catchment schools would be more likely to travel by alternative means, whether that be bus, or car. This is likely to limit the amount of pedestrian and cycle demand between the Appeal Site and the Catchment Schools.

3.2.6 On this basis, an assessment which assumes that all education trips made by walking and cycling will be directed to the catchment schools is unlikely to represent a realistic scenario.

3.2.7 Nevertheless, a Sensitivity Test has been carried out to consider an alternative assignment of pedestrian and cycle demand which considers education provision at the Catchment Schools rather than more locally to the site (**Table 3.3 / Appendix H**). This assumes two thirds of the development would fall within the northern catchment, and the remaining third the southern, based on the Illustrative Masterplan assumptions about how the site may be brought forward.

Table 3.3 – Pedestrian / Cycle Demand and Assignment (12 Hour Day) – Catchment Schools

	Route A1 Brookers Lane	Route A2 Woodcote Lane	Route B1 PROW (West End)	Route B2 PROW (East End)	Route C Newgate Lane East	Route D Tukes Avenue	Total Trips
Walking Trips	161	96	66	119	51	241	735
Cycle Trips	6	4	4	8	5	15	42
Total Trips	168	100	69	127	56	256	777
% Trips	22%	13%	9%	16%	7%	33%	22%

3.2.8 The impact of this change in pedestrian / cycle assignment is relatively minor, redistributing some walking and cycling trips from accesses to the east (i.e. Tukes Avenue / Brookers Lane) of the site to those to the west (Woodcote Lane / Newgate Lane East).

Table 3.4 – Pedestrian / Cycle Demand and Assignment - Difference

	Route A1 Brookers Lane	Route A2 Woodcote Lane	Route B1 PROW (West End)	Route B2 PROW (East End)	Route C Newgate Lane East	Route D Tukes Avenue	Total Trips
TA Assessment	211	54	48	117	39	307	777
Sensitivity Test	168	100	69	127	56	256	777
Difference	-43	46	21	10	17	-51	0

3.2.9 HCC confirmed by email (**Appendix J**) that the methodology used to derive the Sensitivity Test Pedestrian and Cycle Demand assessment was agreed.

3.3 Pedestrian and Cycle Connectivity

3.3.1 Connections between the Appeal Site and the local highway network have been addressed in Section 2. This Section considers the off-site connections that HCC has identified within its response and presents updated assessment and a package of further improvements.

3.3.2 HCC requested that the WCHAR be extended to include access to the Catchment Schools.

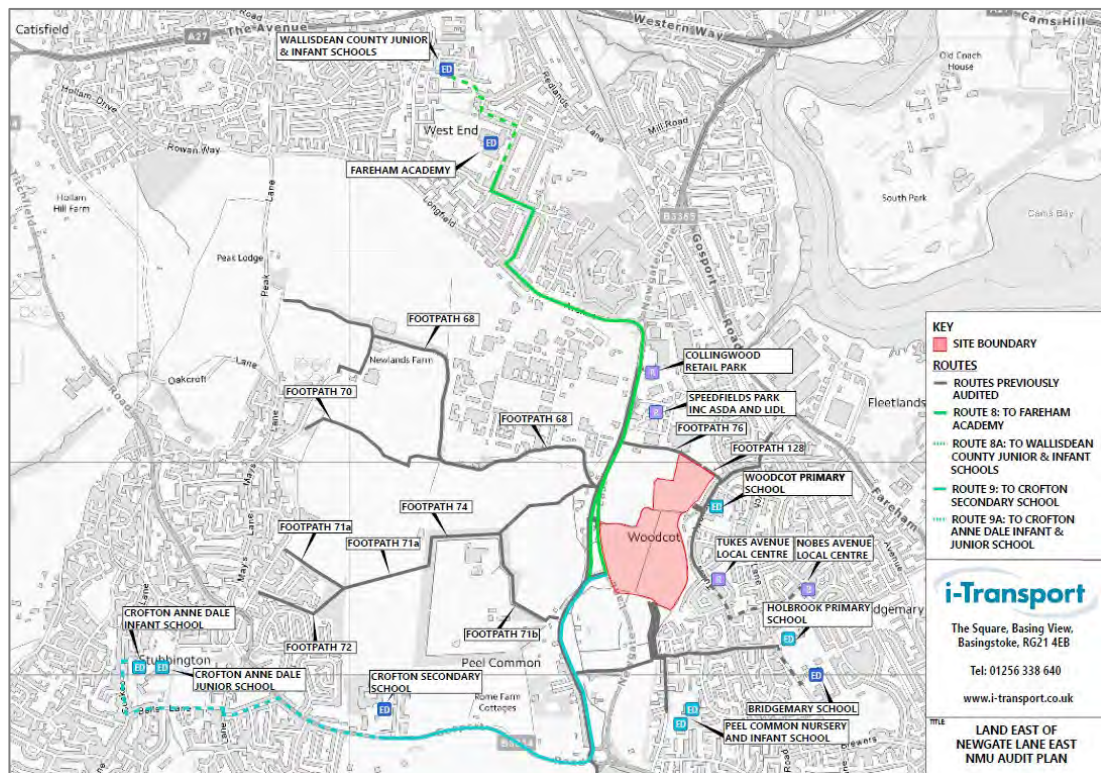
3.3.3 HCC also identified further off-site connections that should be assessed in further detail to consider if any improvements are necessary to accommodate the development, comprising:

- 1 Wych Lane – between Tukes Avenue and Henry Court Way (for access to the BRT)
- 2 Redlands Lane – between Henry Court Way and The Gillies
- 3 Longfield Avenue, leading to Catchment Schools
- 4 Brookers Lane and Woodcote Lane to consider the potential for lighting

Walking, Cycling and Horse-riding Assessment Report (WCHAR)

- 3.3.4 The TA WCHAR considered access to the most proximate schools to the site (south and east) where the Appellants consider resident pupils will primarily access.
- 3.3.5 It is however acknowledged that some pupils may still choose to attend the Catchment Schools and that HCC has no current plans to revise school catchments; therefore, the WCHAR has been extended to consider these routes and identify any improvements needed to ensure safe access to education is available to residents of the Appeal Site.
- 3.3.6 In doing so it is recognised that in the most part, the routes considered by the extended WCHAR already fall within the catchment areas of existing pupils of these schools who already rely on these routes for daily access to school. If these routes were inherently unsafe or unsuitable, HCC would have rectified this. It is not for the Appellants to remedy existing network deficiencies.
- 3.3.7 **Appendix K** presents the extended WCHAR with the scope presented at **Image 3.1**, as well as identifying the other educational establishments for context.

Image 3.1 - Scope of WCHAR Extension



- 3.3.8 In general terms, the WCHAR Extension concludes that there are good quality facilities available between the Appeal Site and Catchment schools for pedestrians, with continuous, lit and well observed footways along the routes, as well as a variety of route choices.

3.3.9 The WCHAR Extension identified that there are some deficiencies in the cycle network leading to these schools and identifies a series of potential improvements to enhance access to local schools and to improve connections between the Site and education facilities.

- 1 In relation to **Route 8** (north-west towards Fareham Academy, Wallisdean Infant and Junior Schools), the WCHAR recommends that:
 - (a) Improvements are considered on Longfield Avenue between Newgate Lane and Fort Fareham Road to enhance cycle accessibility
 - (b) Improvements are considered to local roads north of Longfield Avenue leading to the local schools to improve pedestrian and cycle provision, comprising cycle protection markings and crossing enhancements.
- 2 On **Route 9** (south west to Stubbington for access to Crofton Infant, Junior and Secondary Schools), the WCHAR recommends that:
 - (a) Improvements are considered between Gosport Road and Crofton Anne Infant and Junior Schools to enhance pedestrian and cycle provisions. This comprises crossing improvements as well as the potential for footway conversion.

Potential Improvements to Wych Lane

3.3.10 HCC requested that improvements for cyclists are considered on Wych Lane between Tukes Avenue and Henry Cort Way, to enhance access between the Appeal Site and the BRT.

3.3.11 Along Wych Lane, there is a dedicated footway on the northern side connecting Tukes Avenue to the BRT. There are no cycling facilities until the immediate approach to Henry Court Way at the traffic signal junction where a shared use facility is developed, this is despite HCC having delivered the cycle route and BRT in recent years and Wych Lane forming a key access connection to it. It is already well used by pedestrians and cyclists and there is no pattern of accidents to identify a particular safety issue under present conditions (TA Appendix I).

3.3.12 Traffic Surveys (ATC survey on Wych Lane (south of its junction with Tukes Avenue and MCC survey at Tukes Avenue / Wych Lane) in October 2019 (**Appendix L**) identifies that:

- a Daily Weekday traffic flows are some 4,675 vehicles (2,354 SB 2,321 NB), with lorries accounting for 4-5% of total flow, and vehicle speeds of some 35mph.
- b In the Morning Peak Hour, traffic flows on Wych Lane north of Tukes Avenue were 471 vehicles, with 24 cycles recorded travelling on road.
- c In the evening Peak hour, traffic flows on Wych Lane were 465 vehicles with 8 cyclists.

3.3.13 For most residents on the site, walking would be an attractive and realistic option, with the BRT accessible in some 10 minutes from the site and offering very frequent services. Some residents may choose to cycle to access the BRT, or to access Henry Court Way which is a cycle route.

3.3.14 Highway boundary information obtained from HCC (provided at **Appendix L**) demonstrates that there is limited highway land available at Wych Lane (**Image 3.2**) (on the frontage of 12-24 Wych Lane) to allow the delivery of a comprehensive off-road cycleway to design standards.

Image 3.2 – Highway Boundary on Wych Lane between Tukes Avenue and BRT



3.3.15 Therefore, taking account of the limitations and constraints, three options have been developed, to explore with HCC the most appropriate solution, presented in **Appendix L**:

- 1 **Option 1 – Drawing ITB10353-GA-039A** - Provision of an off-road shared footway / cycleway between Tukes Avenue and Henry Court Way, comprising a reduced width 2.5m shared facility on the frontage to 12-24 Wych Lane. The width of Wych Lane itself would be reduced to a some 5.5m to achieve the improved shared use facility. Junction protection measures for cyclists would be introduced at the Wych Lane junctions to Tukes Avenue and Morris Close and cycle transitions provided.
- 2 **Option 2 - Drawing ITB10353-GA-040A** - Provision of an off-road shared footway cycleway between Tukes Avenue and 24 Wych Lane, transitioning to on-road cycle lanes to Henry Court Way. In line with LTN 1/20 Section 6, these would be advisory cycle lanes with the centre line removed (traffic flows <500vph in peak times). Junction protection measures for cyclists would be introduced and cycle transitions provided.

- 3 **Option 3 - Drawing ITB10353-GA-041A** – Provision of cycle markings on the Wych Lane carriageway to identify their presence to drivers, improved connection to Henry Court Way and junction protection and cycle transitions.

3.3.16 An independent Road Safety Audit of the three options was carried out and is presented in **Appendix L**. The RSA raised various safety considerations with each scheme, all of which are addressed in the Designers Response to the satisfaction of the Auditor.

3.3.17 This section of Wych Lane forms part of the proposed 'Secondary Route 347' within the draft Gosport Local Cycling and Walking Infrastructure Plan (LCWIP) and is targeted for improvement. In view of these emerging plans, a financial contribution towards the delivery of an improvement in this location would be appropriate and enable HCC to deliver the most appropriate scheme.

Potential Improvements to Redlands Lane

3.3.18 HCC identified that there is a missing cycle connection on Redlands Lane, between Henry Court Way and the Gillies, which provides a designated cycle route to the town centre.

3.3.19 There is expected to be limited use of Redlands Lane by cyclists of the development. In the event users were to seek access to The Gillies, cyclists would be more likely to travel via Newgate Lane (where there are off-road cycleways) and Longfield Avenue, routing north to the Gillies through the quiet residential roads (such as Fort Fareham Road / St Margaret's Road). As outlined in the following section, improvements have been identified for this route.

3.3.20 Notwithstanding this, the potential for improvement of Redlands Lane has been explored and scheme of potential improvements is included at **Appendix M**, alongside an RSA.

3.3.21 There is limited highway availability at Redlands Lane (**Image 3.3**), and steep embankments aside that support a raised footway, making delivery of cycle improvements within the boundaries of the public highway very constrained.

Image 3.3 – Highway Boundary at Redlands Lane



- 3.3.22 An improvement scheme has been developed (**Drawing ITB10353-GA-042**) which includes:
- i Provision of cycle protection markings at side roads.
 - ii Cycle markings on road to identify the presence of cyclists.
 - iii Provision of Advanced Stop Lines at the signal junction with Henry Court Way.
 - iv Provision of a short section of shared footway / cycleway north of Redlands Lane at The Gillies to aid crossing and transitions.

3.3.23 This section of Redlands Lane forms part of the proposed 'Primary Route 350' within the draft Fareham LCWIP and is targeted for improvement. In view of these emerging plans, a contribution towards the delivery of cycle improvements in this location would be appropriate.

3.3.24 A Road Safety Audit of the potential improvements is provided. The RSA raised various matters which have been addressed in the Designer's Response to the satisfaction of the Auditor.

Potential Improvements to Longfield Avenue

3.3.25 HCC requested that improvements for cyclists are considered between the Site and the Catchment Schools at Wallisdean Infant and Junior school and Fareham Academy, all located to the north west of the site. The WCHAR extension considered there to be potential to deliver an off-road improvement for cyclists on Longfield Avenue.

3.3.26 A potential improvement is shown on **Drawing ITB10353-GA-043A** which would comprise the delivery of an off-road segregated facility (**Appendix N**). This would be achievable, in principle, within the limitations of the public highway without impacting on the width of Longfield Avenue, through the replacement of the existing verge with a cycle route.

3.3.27 Beyond Longfield Avenue, further enhancements for cyclists have been considered on Fort Fareham Road, Tudor Court and St Michaels Grove (**Drawing ITB10353-GA-044A**), comprising road markings, signage and the upgrading of a pathway to shared use. These roads are quiet residential streets that already observe a mixture of users where on-road cycling is appropriate.

3.3.28 Collectively, these improvements would enhance the route between existing cycle provision on Newgate Lane, schools at Wallisdean / Fareham Academy, and The Gillies / NCN 236.

3.3.29 A Road Safety Audit of the potential improvements is provided (**Appendix N**). All matters raised in the RSA have been addressed in the final scheme, as established through the Designer's Response to the satisfaction of the Auditor.

3.3.30 This section of Longfield Avenue has been identified as 'Secondary Route 271' within the draft Fareham LCWIP and is targeted for improvement. In view of these emerging plans, a contribution towards the delivery of improvements in this location would be appropriate.

Potential Improvements in Stubbington

3.3.31 As part of the WCHAR extension various opportunities to bring forward pedestrian and cycle improvements were identified to enhance existing facilities. These comprise improved crossings, providing dropped kerbs and tactile paving where absent, and the potential to consider dedicating the widened footway at Bells Lane / Cuckoo Lane as a continuation of the shared footway / cycleway provision already present.

3.3.32 **Drawing ITB10353-GA-047** at **Appendix O** presents the potential improvement schemes. The draft Fareham LCWIP identifies the Gosport Road through Fareham as a Secondary Route 265 for consideration of improvement. A financial contribution to assist HCC deliver improvements in the area is appropriate.

Potential Improvements to Brookers Lane and Woodcote Lane

3.3.33 HCC requested that consideration is given to improved lighting on Brookers Lane and Woodcote Lane to improve the utility of these connections. No such improvements were delivered when HCC delivered the cycle route as part of the Newgate Lane East improvements, or were required of the adjacent Consented Development, and the routes are already well utilised (**Table 4.8 / Appendix U**), seemingly without any issue.

3.3.34 Nevertheless, the Appellants have commissioned a lighting appraisal of the routes along Brookers Lane (and for the connection within the site to Access Point 6), provided at **Appendix B**. This identifies a scheme of lighting that could be considered. Engagement with the Appellants ecological and arboricultural advisors has not identified any overriding issues that would prevent such a scheme being delivered.

3.3.35 Additionally, as established in the TA, the Appellants remain committed to providing funding towards the improvement of the Brookers Lane / Newgate Lane East crossing. This is currently a refuge island cycle crossing but there is potential for this to be improved, most likely to provide Toucan crossing facilities. This was considered and agreed in principle in association with the recent Appeals at West of Newgate Lane East, and the consented scheme south of the site has committed to a similar contribution. This would enhance the safety of pedestrians and cyclists crossing Newgate Lane East and for access towards Stubbington and the Solent Enterprise Zone.

Impacts on Public Rights of Way

- 3.3.36 Within the HCC response, HCC Highways confirmed that the local Rights of Way the subject of the WCHAR provide important recreational routes, but in view of the alternative amenity connections (surfaced and lit) no improvements to the Rights of Way are required.
- 3.3.37 The HCC Countryside Services response of the same date (8 April 2022) noted that consideration was not given (in the WCHAR) to equestrian use of FP74 and FP68, which it is stated have permissive rights for equestrian users. The WCHAR considered both of these routes against their legal designation, which is confirmed as a Public Footpath. No equestrian usage of the routes was noted during the site visits and the WCHAR concluded that there were no horse-riding specific opportunities identified as part of the assessment.
- 3.3.38 HCC Countryside Services also confirmed that they would support proposals which added to the rights of FP68. The Appellants have no control or ownership of FP68 and are in no position to provide any additional rights to this PROW. Such higher rights would not be related to the development and are not required to make the development acceptable in planning terms.

3.4 Residential Travel Plan

- 3.4.1 The HCC response confirms the Framework Travel Plan is of a good standard and acceptable.

3.5 School Travel Plans

- 3.5.1 HCC has requested funding towards the development and delivery of school travel plans and identifies a funding request of £42,000. The Appellants recognise the need to ensure safe access between the Site and local schools and 'in principle' are prepared to contribute. Further detail regarding how the contribution has been calculated, and what it would fund, is required.

3.6 Public Transport Accessibility

- 3.6.1 The TA provides a full review of public transport facilities (*TA Section 3.4*), demonstrating that there are regular and appropriate bus services within acceptable reach of the Appeal Site, and adequate connectivity to the rail network. The HCC response confirms that:

- 1 Bus services in the vicinity are acceptable to adequately serve the development and routes to bus stops are appropriate (subject to implementing the access strategy) and subject to investigating opportunities to improve cycle connection to BRT at Wych Lane.

- 2 Improvements should be delivered (through contributions) to provide Real Time Information (RTI) at the Stones Close and Woodcote Primary School stops on Tukes Avenue. HCC seeks a contribution of £16,000 to achieve this.
 - 3 Rail services from Fareham Rail Station are acceptable to adequately serve the development, with adequate links to rail by bus and cycle.
- 3.6.2 The Appellants are prepared to contribute towards the delivery of RTI at local bus stops on Tukes Avenue as set out. Opportunities to improve access by cycle to the BRT has been explored in the preceding section, and again the Appellants are prepared to make a reasonable contribution to achieving improvement to this route.

SECTION 4 Traffic Impact Assessment

4.1.1 The HCC response raised various comments on the traffic assessments presented in the TA. Further dialogue has continued between the Appellant and HCC on this matter and has informed this TA Addendum. A detailed and full response to matters raised is provided.

4.2 Assessment Methodology

4.2.1 The HCC response confirms agreement to the traffic assessment parameters as follows:

- 1 The baseline traffic flow conditions to be used (utilising the 2019 traffic surveys)
- 2 The appropriate adjustments to traffic flows to account for the delivery of the Stubbington Bypass, based on matrix adjustments using HCC's SRTM Model.
- 3 The peak hours to be assessed, being 07:45-08:45 and 16:00 – 17:00.
- 4 Traffic generation of the development, robustly assuming 100% private dwellings.
- 5 The approach to distributing traffic on the network, utilising Census Journey to Work Data and a bespoke Gravity Model, disaggregated by TEMPRO Journey Purpose Data.
- 6 The assessment years, being 2021 and 2028, with a Sensitivity Test of 2037.
- 7 The traffic growth assumptions, including the TEMPRO growth rates and Committed Development sites to be included
- 8 The approach to modelling of junctions, using TRL Junctions 10 and JCT LinSig software

4.2.2 HCC raised queries within its response related to:

- a Development traffic assignment, principally considering the assignment of traffic flows to destinations west of Fareham and the use of the Stubbington Bypass;
- b Clarifications on the grouping of destinations in the assessment and of the raw data
- c Committed development traffic flows associated with the Welborne site.
- d The presentation of traffic flow diagrams in relation to the Speedfields Roundabout and the A32 Gosport Road / Palmerston Road junction.

4.2.3 A Technical Note (**Appendix I**) was submitted to HCC dated 23 June 2022 which addressed each of the above matters. This was based on further dialogue with HCC and a re-assessment of traffic routing opportunities between the site and key destinations, which included consideration of the impacts of the now opened Stubbington Bypass.

4.2.4 HCC provided its response by email and Technical Note dated 19/07/22 (**Appendix J**), which confirmed that the revised assumptions for traffic assignment were agreed for the purposes of assessment, and that the additional detail provided on the Census Data, traffic flow diagrams and committed development assumptions for Welbourne addressed concerns raised. Revised traffic distribution is provided at **Appendix P** and traffic flow diagrams in **Appendix Q**.

4.2.5 The agreed traffic assignment, when compared to the TA, has the impact of directing more traffic from the site to the north than had been estimated, with some 48% of traffic expected to route to and from the north and 52% to the south. **Table 4.1** presents the comparative assessment between the TA and revised assignment, and the revised assignment has been taken forward.

Table 4.1: Traffic Assignment Comparison – Revised vs TA

Link	Previous Model (TA)			Revisited Model			Total Difference
	Commuting	Non-Commuting	Total	Commuting	Non-Commuting	Total	
Newgate Lane East (North)	24.85%	13.91%	38.77%	31.09%	16.80%	47.88%	+9.11%
Newgate Lane East (South)	25.55%	35.69%	61.23%	19.31%	32.80%	52.12%	-9.11%
Total	50.40%	49.60%	100.00%	50.40%	49.60%	100.00%	0.00%

4.2.6 A further comment was raised related to the comparison of traffic flows used for modelling of the site access junction at Newgate Lane East between the MCC Survey and ATC surveys presented in the TA. This is addressed through a Sensitivity Test explained in **Section 4.6**.

4.3 Network Traffic Impacts

4.3.1 Taking account of the agreed traffic profiles, **Table 4.2** appraises the impact of the development on the local highway network, considering the expected change against 2037 conditions.

4.3.2 Traffic impacts of the development are modest in real terms, and are summarised as:

- i On Newgate Lane (north of Longfield Avenue) the development adds some 50 vehicles, less than one per minute, and represents a traffic flow increase of 2%.
- ii On Longfield Avenue, the development adds some 40 vehicles, around one vehicle every two minutes, and represents a traffic flow increase of 5%.
- iii On B3384 Rowner Road, the development adds some 55 vehicles, around one per minute, and represents a traffic flow increase of 3%.
- iv On B3384 Gosport Road, the development adds some 40 vehicles, less than one per minute, and represents a traffic flow increase of 1.5%.
- v On B3385 Broom Way, the development adds some 10 vehicles, around one every 6 minutes, and represents a traffic flow increase of less than 0.5%.

Table 4.2 – Highway Network Impacts

Road	Direction	Morning Peak Period (07:45-08:45)			Evening Peak Period (16:00-17:00)		
		2037 Traffic Flow	Dev Trips	% Impact	2037 Traffic Flow	Dev Trips	% Impact
Newgate Lane (North of Longfield Ave)	Northbound	1,320	39	3.0%	1,487	16	1.1%
	Southbound	1,135	13	1.1%	1,169	37	3.2%
	Two-Way	2,455	52	2.1%	2,656	53	2.0%
Longfield Avenue (West of Newgate Lane)	Eastbound	304	10	3.3%	381	28	7.3%
	Westbound	397	30	7.6%	475	12	2.5%
	Two-Way	701	40	5.7%	856	40	4.7%
B3384 Rowner Road (East of Peel Common)	Eastbound	579	40	6.9%	1,512	16	1.1%
	Westbound	1,312	14	1.1%	576	38	6.6%
	Two-Way	1,891	54	2.9%	2,088	54	2.6%
B3334 Gosport Road (West of Peel Common)	Eastbound	697	9	1.3%	1,677	26	1.6%
	Westbound	1,604	27	1.7%	929	11	1.2%
	Two-Way	2,301	36	1.6%	2,606	37	1.4%
B3385 Broom Way (South of Peel Common)	Northbound	1,706	2	0.1%	1,062	7	0.7%
	Southbound	870	7	0.8%	1,135	3	0.3%
	Two-Way	2,576	9	0.3%	2,197	10	0.5%

4.3.3 The HCC response raised various technical comments on the detail of the traffic modelling undertaken. These are addressed on a junction-by-junction basis and revised traffic modelling is provided to take account of the amendments made to the traffic assignment assessment.

4.4 Newgate Lane / Newgate Lane East (Existing Junction)

4.4.1 The TA presented assessment of the existing Newgate Lane / Newgate Lane east junction. HCC has commented that in its opinion the junction currently operates acceptably and seeking geometric measurement and validation of the model.

4.4.2 **Drawing ITB10353-GEOM-100 (Appendix R)** identifies the measured geometry for the junction, applied to the Junctions 10 model in line with the Junctions 10 User Guide.

Model Validation

4.4.3 The baseline modelled queues are compared to the observed queues from the 2019 turning count (TA Appendix G). During the Morning Peak Hour, the queue surveys demonstrate periods of queueing on Newgate Lane (up to 3 vehicles), with no material queueing on Newgate Lane East. Some modest queueing is observed on Newgate Lane in the Evening Peak hour.

Table 4.3 - Newgate Lane / Newgate Lane East – Model Validation – 2019 Baseline

Approach	Morning Peak Period		Evening Peak Period	
	Modelled Queue (Vehicles)	Observed Queue (Vehicles)	Modelled Queue (Vehicles)	Observed Queue (Vehicles)
Newgate Lane (North)	0.1	0	0.1	0
Newgate Lane	14.0	0.75	0.6	0.58

4.4.4 The model validates well for the Evening Peak hour, but during the Morning Peak hour the modelled queues (14 vehicles) are significantly greater than queuing observed. This is a function of the heavy flow of traffic on Newgate Lane East, constraining the minor road capacity, reflecting the practical difficulty in locating suitable gaps in traffic to exit the minor arm.

4.4.5 Within the PICADY module of Junctions 10 software, it is not possible to apply capacity adjustments for calibration. Neither is this appropriate based on a single time period, where demand and geometries have been correctly input, and there are no site-specific issues that need to be reflected. Whilst the model will overestimate real terms queues and delays in the morning, it remains appropriate to reflect the existing and forecast challenges at the junction.

Junction Operation

4.4.6 **Table 4.4** presents the updated assessment of the operation of the junction, with the Junctions 10 outputs presented in **Appendix R**.

4.4.7 In the Morning Peak Hour there are significant forecast issues on the Newgate Lane minor arm. Whilst the projections of queuing and delay should be treated with caution (when capacity is reached (RFC = 1.0) forecasts of queue and delay become unreliable) it demonstrates significant constraints at the junction, reflecting on site observations.

Table 4.4 - Newgate Lane / Newgate Lane East – Junction Operation

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2019 Baseline						
Newgate Lane East	0.08	0.1	12.44	0.05	0.1	7.17
Newgate Lane	99999	14	1,507.78	0.41	0.6	119.77
2037 Sensitivity Test						
Newgate Lane East	0.11	0.1	17.54	0.05	0.1	8.97
Newgate Lane	99999	15.5	1,692.02	0.45	0.7	150.09

4.4.8 Even in the evening peak period, where queues do validate well and the junction is forecast to operate within capacity, the projected delay at the minor arm junction is still very significant being 2-3 minutes on average for arriving vehicles. This is a very significant average time for vehicles to wait at a priority controlled junction and does and will continue to lead to instances where emerging vehicles accept smaller or less appropriate gaps than they should, leading to a potential safety concern.

4.5 **Proposed Site Access Roundabout**

4.5.1 HCC raised various detailed technical matters in relation to the assessment of the proposed Newgate Lane East roundabout junction, namely seeking:

- 1 Use of a 'One Hour' traffic demand profile (rather than 'Direct' as assessed in the TA)
- 2 Confirmation of HGV % assumed in the modelling
- 3 Sensitivity Testing to consider an uplift related to the 2021 ATC traffic flows
- 4 Explanation of the modelled geometry and flare warning

Modelling Profile

4.5.2 A 'One Hour' profile requested by HCC has now been adopted. This allows for a 'normal' profile of traffic within the middle of the peak hour and presents a robust modelling assumption.

HGV Proportions

4.5.3 HCC noted that the proportion of HGV's allowed in the modelling differed between 15 minute periods and that there was a high (15%) proportion of HGVs in one time period. This has been reviewed and is confirmed to be correct. The model loads traffic onto the junction in 15 minute periods, in line with the MCC survey results. Traffic flows on the Old Newgate Lane approach are very low, particularly when considered in 15 minute periods. The higher percentage of HGVs identified related to one HGV turning out of the junction against allow baseline flow.

ATC Traffic Flow Comparison

4.5.4 HCC identifies that there is a difference of 3-9% in traffic flows on Newgate Lane East between the MCC surveys used to inform the assessments and the 2021 ATC survey. It is noted that:

- a The 2019 MCC surveys have been accepted as a reasonable basis of assessment, as they were for the west of Newgate Lane schemes.
- b The Peak Hours for the network are agreed to be 07:45 – 08:45 and 16:00 – 17:00. ATC data is only provided in hourly profiles so no direct comparison can be made to the AM Peak period which falls across hour periods.

- c The 2021 ATC surveys were collected to establish the design speed of Newgate Lane East relative to the access design and not intended to be used to assess traffic capacity. This is primarily as these were conducted at a time when there was significant roadworks to deliver the Stubbington Bypass, with works impacting on the B3334 Gosport Road and its approaches to Peel Common Roundabout, affecting traffic patterns locally.
- 4.5.5 Nevertheless, the comparisons made in the HCC response were incorrect. The table compared the MCC traffic flows with the 'summary peak hours' from the ATC Survey. The Summary peak hours in the ATC are the busiest hour on that day and comprise a range of time periods. To compare these is not comparing the same time period or peak hour.
- 4.5.6 A comparison of the Peak Hour time periods has now been undertaken and is presented in **Appendix S**. This considered the MCC traffic flows on Newgate Lane East from the 2019 MCC of the Newgate Lane East / Newgate Lane junction, against the 2021 ATC recorded traffic flows both north and south of the junction. This finds that:
 - i Comparing the MCC Peak to ATC 0700 - 0800, there are negligible differences of 1-2%
 - ii Comparing the MCC Peak to ATC 0800 - 0900, there are modest differences of 5-6%
 - iii In the Evening Peak hour (1600-1700), there are differences of some 15%.
 - iv Sense checking against a further ATC survey on Newgate Lane from 2018, the MCC is shown to be significantly higher at 112-114% in the AM peak, and 93% in the PM peak.
- 4.5.7 Allowing for growth assumed through TEMPRO adjustments in the modelling (2% between 2019 and 2021), there is no material difference in the AM peak hour, modest differences in the PM.
- 4.5.8 However, to provide confidence to HCC on the operation of the proposed roundabout and to demonstrate that the scheme design is robust and can accommodate variance in traffic flows, a Sensitivity Test is produced which increases mainline (Newgate Lane East) traffic flows by:
 - a AM Peak – 5%, comfortably in excess of the differences between the MCC and ATC
 - b PM Peak – 15% - above the differences in flows observed.

Proposed Junction Operation

- 4.5.9 The proposed roundabout has been remodelled to take account of the traffic flow changes resulting from the revised distribution and to apply a One-Hour demand profile.
- 4.5.10 This has been iterated with the development of minor modifications to the roundabout design to provide HCC with greater comfort on its future operation and to address its engineering / design comments.

4.5.11 The scheme changes are shown on **Drawing ITB10353-GA-102 Rev E**, with a comparison plan between the TA and revised scheme provided as **Drawing ITB10353-SK-102**, all provided in **Appendix D. Drawing ITB10353-GA-105 Rev D** presents the geometric assumptions applied in the modelling, measured in accordance with the TRL Junctions 10 User Guide.

4.5.12 **Table 4.5** presents the summary assessment results for the Assessment year of 2028.

Table 4.5: Newgate Lane East / Site Access Roundabout

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2028 + Committed Development + Development						
Newgate Lane East (N)	0.45	0.8	3.41	0.59	1.4	4.53
Site Access	0.17	0.2	3.58	0.06	0.1	3.75
Newgate Lane East (S)	0.77	3.3	6.38	0.56	1.3	3.31
Newgate Lane	0.12	0.1	9.52	0.06	0.1	4.89

Source: Junctions 10

4.5.13 In the 2028 Future Assessment year, the roundabout is shown to operate comfortably within design capacity (taken as an RFC of 0.85), with the maximum RFC being 0.77 on Newgate Lane East (south) in the morning peak hour and 0.59 on Newgate Lane East (north) in the evening peak hour. The Level of Service for the junction is classified as 'A', constituting '**Free Flow**'.

4.5.14 Delays to the mainline traffic flows (Newgate Lane East) are minimal, being an average delay to approaching vehicles of 6.5 seconds in the AM Peak and 4.5 seconds in the PM Peak.

2037 Sensitivity Test

4.5.15 An assessment of operational conditions in 2037 is presented in **Table 4.6**. This demonstrates a maximum RFC of 0.81 in the Morning Peak Hour (0.62 in the Evening), and delays to mainline traffic of 7.5 seconds and 5 seconds. Again, the junction operates in **Free Flow** conditions.

Table 4.6: Newgate Lane East / Site Access roundabout

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2037 + Committed Development + Development						
Newgate Lane East (N)	0.46	0.9	3.52	0.62	1.6	4.86
Site Access	0.14	0.2	3.67	0.07	0.1	3.89
Newgate Lane East (S)	0.81	4.1	7.60	0.59	1.4	3.50
Newgate Lane	0.15	0.2	11.19	0.06	0.1	5.15

ATC Uplift Sensitivity Test

4.5.16 A further Sensitivity Test has been carried out at HCC’s request, uplifting the mainline (Newgate Lane East) traffic flows by 5% in the Morning Peak and 15% in the Evening Peak (see Para 4.6.8).

Table 4.7: Newgate Lane East / Site Access roundabout – 2037 ST with ATC Uplift

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2037 + Committed Development + Development + ST (Longfield) + ATC Uplift						
Newgate Lane East (N)	0.49	0.9	3.68	0.71	2.4	6.34
Site Access	0.14	0.2	3.78	0.07	0.1	4.41
Newgate Lane East (S)	0.84	5.3	9.39	0.67	2.0	4.37
Newgate Lane	0.17	0.2	13.43	0.08	0.1	6.29

4.5.17 Considering the Sensitivity Test assessment, appraising conditions in 2037 (end of Local Plan) and applying the uplifted traffic flows set out at Paragraph 4.6.8, the junction continues to operate within design capacity, with maximum RFCs of 0.84 and 0.71.

4.5.18 Junction Network delay is 7.52 seconds in the Morning Peak and 5.25 seconds in the Evening Peak. Under any reasonable assessment, such delays are limited and inconsequential to the operation of the network.

4.5.19 The assessment should be considered to be highly robust in view of the assessment parameters which consider a One Hour traffic profile, ATC uplift, Private Housing trip rates and inclusion of impacts from the Longfield Avenue proposal which does not benefit from planning consent.

4.5.20 The NPPF is clear that development should only be refused or prevented on transport grounds if the residual cumulative impacts are Severe (Para 111). That is a deliberately high bar.

4.5.21 The operation of the roundabout, presented in association with the Sensitivity Testing, is plainly below that level of impact.

4.5.22 It is noted that HCC originally objected to the recent appeals at West of Newgate Lane East (application refs: P/18/1118/OA and P/19/0460/OA) on the grounds of potential delay impacts to traffic on Newgate Lane East, as a result of the proposed traffic signalisation. The forecast delays in that case were some 7-12 seconds on Newgate Lane East.

4.5.23 HCC ultimately withdrew its evidence at the Inquiry on this matter, pursuing only safety concerns with the signal proposals, which ultimately succeeded. The level of forecast impacts of the roundabout are below that accepted by HCC for the traffic signalisation scheme.

4.5.24 Moreover, the roundabout will provide improvements by significantly enhancing access to and from Newgate Lane (old), and by helping to reducing traffic speeds to the posted speed limit.

ARCADY Flare Warning

4.5.25 HCC noted that the Junctions 10 Outputs in the TA identified a model warning in relation to the Effective Flare assumed on the southern arm. The original analysis and site investigations that informed the development of the ARCADY equations were based on site assessments of roundabouts that included only flares of up to 30m. TRL, the creators and owners of the Junctions 10 software, therefore advise that some caution should be used on the predictions of capacity on arms where the effective flare length exceeds 30m.

4.5.26 We contacted TRL to consider this matter and they responded to note:

“The warning that you mention just means that you should apply some caution when interpreting the results. The range of flares encountered in the original research went up to 30m, and so you see a warning if your flare length is longer than this. However you can usually ignore the warning (unless you have a particularly unusual layout) because it’s usually safe to assume that the relationship between flare length and capacity does not suddenly stop at 31m or any other value.”

4.5.27 Therefore, whilst an effective flare length of greater than 30m is outside of the original site investigations of ARCADY, and so the modelling software raises a warning / caution, there is no reason to doubt the veracity of the overall assessments.

Impacts on Air Quality

4.5.28 HCC commented that the increase in emissions due to the introduction of the site access roundabout (with traffic slowing then accelerating) had not been considered.

4.5.29 An Air Quality Assessment prepared by Tetra Tech, which takes account of the traffic flow profiles at the roundabout and models the associated impacts (during construction and operational phases), has been considered and is provided at **Appendix T**. This concludes that in the vicinity of the roundabout, there will be ‘negligible’ impacts in relation to emissions and air quality.

Construction Stage Impacts

4.5.30 HCC has raised concern about the potential construction stage impacts that will arise as a result of the construction of the roundabout junction, particularly the impact this may have on vehicles using Newgate Lane East.

4.5.31 This is not dissimilar to any other temporary roadworks on the local highway network which are required for most major developments, and where some periods of managed disruption is inevitable. These effects are temporary and can be managed effectively to minimise harms.

4.5.32 In the case of the proposed works, much of the roundabout construction is 'off-line' of Newgate Lane East, meaning that a significant part of the roundabout can be constructed without interfering with the free flow of traffic on the local network. The approach to construction would be confirmed with any appointed contractor and HCC, but is likely to comprise:

- 1 Stage 1 – Delivery of the eastern circulatory – off line within Appeal Site and maintaining existing operation of Newgate Lane East
- 2 Stage 2 – Delivery of the western circulatory - traffic to be diverted to the completed eastern roundabout circulatory to maintain traffic flow under traffic management

4.5.33 A Construction Traffic Management Plan (CTMP) would be developed to control the delivery of the scheme, for agreement with HCC and FBC. This would be a reasonable Condition to be attached to any planning permission, as is ordinarily the case.

4.6 **Newgate Lane East / Brookers Lane – Proposed Toucan Crossing**

4.6.1 As noted in the TA, there is an opportunity to improve the existing crossing of Newgate Lane East where it intersects with Brookers Lane / Woodcote Lane, to improve safety.

4.6.2 HCC has secured funding to improve the crossing from the adjacent Consented Site and sought similar funding from the dismissed appeals at West of Newgate Lane East, identifying that this would fund a Toucan Crossing. HCC has an aspiration to deliver improvement to the crossing, 'with' or 'without' the development at the Appeal Site. The only realistic improvement would be to deliver a Toucan crossing.

4.6.3 The HCC application response sought further information comprising projected crossing demands, a revised distribution of development pedestrian / cycle demand, and an amendment to the LinSig model to increase the intergreen period (from 5 to 6 seconds).

4.6.4 Crossing counts were carried out at the existing crossing across a three day period (10-12 May 2022 – **Appendix U**). This recorded the number of pedestrians and cyclists crossing Newgate Lane East over a 3 day period (between 0700-1900).

4.6.5 Detailed review of the video footage has determined the number of crossing events that occurred relative to the demands (i.e. pedestrians / cyclists often travel together and cross at the same time). This is used to determine the number of crossing calls expected in the event it is upgraded to a Toucan Crossing. The analysis is also presented at **Appendix U**.

4.6.6 **Table 4.8** presents the expected demands for the TA pedestrian/cycle distribution, and the Sensitivity Test Analysis (Section 3.2).

Table 4.8 – Observed and Forecast Crossing Demand at Brookers Lane

Time (Hour Starting)	TA Assessed Demand			Catchment School ST		
	Observed	Dev Trips	Total	Observed	Dev Trips	Total
07:00	15	2	17	15	4	19
08:00	33	7	40	33	13	45
09:00	4	4	8	4	8	12
10:00	2	4	6	2	7	9
11:00	3	3	6	3	6	9
12:00	3	3	6	3	6	9
13:00	2	3	5	2	5	7
14:00	11	4	16	11	8	20
15:00	23	7	30	23	13	36
16:00	10	5	15	10	9	19
17:00	11	6	17	11	10	21
18:00	9	5	14	9	10	19
Total (07-19)	125	54	180	125	100	226

4.6.7 Observations of peak period movements at the existing crossing identify that various people cross in groups, with the number of crossing events consistently 76% of total demand. Taking this assumption forward, it is assessed that:

- 1 Morning Peak Period - for the 40-45 crossing demands there will be some 34 crossing events, resulting in a junction cycle time of 107 seconds (3,600 seconds / 34 events).
- 2 Evening Peak Hour - there will be some 20 crossing demands, resulting in 15 crossing events and a cycle time of 236 seconds (3,600 seconds / 15).

4.6.8 The potential Toucan Crossing has therefore been remodelled to consider the projected peak period cycle times and to incorporate an intergreen period of 6 seconds. The results are summarised in **Table 4.9** and Outputs provided at **Appendix U**.

4.6.9 The assessment demonstrates that in the 2028 Future Year assessment, without development and assuming the crossing were to be improved in line with secured funding, the Toucan Crossing would operate within design capacity (<90% DoS).

4.6.10 With the addition of development traffic, northbound queues are increased by around 2 vehicles and delay by 2 seconds, and the crossing continues to operate in design capacity (+1.4% PRC).

Table 4.9 - Brookers Lane Toucan Crossing

Approach	Morning Peak Period			Evening Peak Period		
	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)
2028 with Committed Development						
Newgate Lane East (South)	87.2%	29.7	14.3	42.5%	7.0	3.1
Newgate Lane East (North)	48.9%	7.3	5.0	55.4%	11.3	3.8
PRC	+3.2%			+62.6%		
2028 with Committed Development + Development						
Newgate Lane East (South)	88.7%	31.9	15.7	46.4%	8.2	3.2
Newgate Lane East (North)	53.5%	8.6	5.4	57.0%	11.9	3.9
PRC	+1.4%			+57.9%		

4.6.11 Whilst there are long forecast queues on the northbound approach across each scenario (~30 vehicles), delays are limited to around 15 seconds. The forecast queues would have no impact on the operation of the downstream Peel Common roundabout with some 400m separation, sufficient to accommodate around 70 vehicles. Any such queueing is short lived, with average delays being some 15-20 seconds.

2037 Sensitivity Test

4.6.12 Assessment of the 2037 End of Local Plan Sensitivity Test demonstrates that the additional growth in traffic expected between 2028 and 2037 would mean the Toucan Crossing operating above design capacity in the Morning Peak period (92.9%) but in real terms the impacts on delay would be modest, with a total delay of some 21 seconds for northbound vehicles. Balanced against the safety benefits, this is considered to be an acceptable level of operation.

Table 4.10 - Brookers Lane Toucan Crossing

Approach	Morning Peak Period			Evening Peak Period		
	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)
2037 with Committed Development plus Development ST						
Newgate Lane East (South)	92.9%	39.6	21.3	49.8%	9.3	3.4
Newgate Lane East (North)	56.2%	9.5	5.7	60.5%	13.6	4.2
PRC	-3.2%			+48.8%		

4.6.13 It is notable that for the West of Newgate Lane appeals, HCC withdrew its evidence concerning the delay impacts of a Toucan Crossing. The Appellants presented a VISSIM model concluding that delay would likely be less than forecast through LINSIG, estimating delay of some 13 seconds northbound (6 seconds SB), consistent with the projected operation in **Table 4.9/4.10**.

4.7 Peel Common Roundabout

4.7.1 HCC requested updated assessment of Peel Common roundabout. The TA utilised an HCC model for the junction, which HCC now advise has been superseded.

HCC Model Assessment

4.7.2 The assessments have been revised using the updated HCC model as provided, with **Table 4.11** summarising the results (Outputs at **Appendix V**).

Table 4.11: Peel Common Roundabout (Fully Signalised) – HCC Updated Model

Approach	Morning Peak Period			Evening Peak Period		
	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)
2028 with Committed Development						
Gosport Road	90.9%	11.5	82.0	77.3%	15.0	21.3
Newgate Lane East	84.9%	10.3	53.2	74.4%	9.8	36.6
Rowner Road	91.5%	20.1	44.2	77.0%	8.5	41.4
Broom Way	91.5%	23.9	37.9	76.7%	12.7	26.5
PRC	-1.7%			+16.5%		
2028 with Committed Development plus Development						
Gosport Road	96.6%	14.1	112.0	85.1%	17.8	29.1
Newgate Lane East	78.9%	10.5	51.2	75.8%	10.2	37.1
Rowner Road	96.7%	25.2	64.5	81.9%	9.2	47.3
Broom Way	95.8%	28.6	53.0	85.4%	15.9	35.9
PRC	-7.4%			+5.4%		

Source: LinSig

4.7.3 The HCC model forecasts that the junction will operate above practical capacity in 2028, without any development coming forward on the Appeal Site in the morning peak period. The addition of traffic from the Appeal Site creates additional impacts, albeit these are relatively limited, comprising increased mean maximum queues of 2-3 vehicles on Gosport Road, 5 vehicles on Rowner Road and 4 vehicles on Broom Way. There are no forecast issues in the Evening Peak.

4.7.4 For reasons explained in the following section, this model is not considered to fairly reflect the geometry of the junction or its expected capacity and should be treated with significant caution.

Revised Model

4.7.5 In reviewing the HCC Model, various issues with the model assumptions and geometry (considered against the as built scheme drawing provided by HCC – **Appendix W**) were identified which serve to overestimate capacity issues at the junction.

4.7.6 A variant of the HCC model has therefore been prepared (**Appendix W**) which makes the following amendments to the HCC model, with the results presented in **Table 4.12**:

- i The flare lengths in the model were underestimated. A review of the as built drawing (ITB10353-GEOM-103) demonstrates flare lengths are achieved of 88m on Newgate Lane East, 30m on Rowner Road, 52/30m on Broom Way and 95m on Gosport Rd.
- ii The circulatory lane link lengths and cruise times in the model are adjusted to suit the as-built geometry to ensure the platooning / internal queues and signal co-ordination is accurately reflected.
- iii HCC applied saturation flows in the model for all approaches of 1,800 pcu/hr which is a conservative assumption – the model states they are used ‘For Robustness’.

LTN 1/09 para 5.2.4 “Otherwise, saturation flows on approaches calculated using RR67 (TRRL, 1986) and a nominal 1900 pcu/h per lane on circulating carriageways will usually provide a conservative estimate for initial assessment if spiral road markings are used to remove the need for lane changing.”

For example, the RR67 value for the Gosport Road offside lane entry would be 2,033 pcu/hr (3.65m lane on 35m radius) rather than 1,800 pcu/hr.

Rather than applying RR67 saturation flows, the revised model has assumed a modest increase consistent with the LTN advice, applying 1,900 pcu/hr per lane on entries.

Table 4.12: Peel Common Roundabout (Fully Signalised) – Revised Model

Approach	Morning Peak Period			Evening Peak Period		
	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)
2028 with Committed Development						
Gosport Road	79.3%	5.8	34.6	81.7%	9.8	18.5
Newgate Lane East	52.8%	4.0	14.2	79.1%	5.8	21.2
Rowner Road	76.3%	6.1	16.1	64.9%	4.0	21.9
Broom Way	79.9%	7.4	17.1	64.1%	5.1	12.6
PRC	+12.6%			+13.7%		
2028 with Committed Development plus Development						
Gosport Road	80.8%	6.0	36.1	82.0%	9.9	18.4
Newgate Lane East	43.3%	3.6	9.8	74.8%	5.6	19.3
Rowner Road	72.3%	5.6	13.4	59.7%	3.7	19.9
Broom Way	79.0%	7.3	16.6	60.6%	4.7	10.7
PRC	+9.7%			+9.0%		

4.7.7 It is demonstrated that the junction is forecast to operate within capacity, both ‘with’ and ‘without’ the Appeal Scheme. The impact of the additional traffic from the Appeal Site has a negligible impact on the operation of the junction.

2037 Sensitivity Test

4.7.8 **Table 4.13** presents the 2037 Sensitivity Test Assessments to identify a longer term forecast operation of the junction, including traffic associated with as yet unconsented development (including at Longfield Avenue). This demonstrates that ‘with’ and ‘without’ the Appeal scheme, the junction is expected to operate within design capacity, with limited development impacts.

Table 4.13: Peel Common Roundabout (Fully Signalised) – Revised Model – Sensitivity Test

Approach	Morning Peak Period			Evening Peak Period		
	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)	DoS (%)	MMQ (Vehicles)	Av. Delay (Sec)
2037 with Committed Development + ST						
Gosport Road	82.9%	6.4	38.0	85.5%	11.1	20.9
Newgate Lane East	38.2%	3.1	8.2	75.8%	5.7	19.6
Rowner Road	78.6%	6.6	16.8	58.3%	3.7	17.8
Broom Way	82.9%	8.4	18.4	62.9%	4.9	10.9
PRC	+8.6%			+4.3%		
2037 with Committed Development plus Development + ST						
Gosport Road	83.8%	6.7	39.2	85.5%	11.1	20.6
Newgate Lane East	37.9%	3.1	7.6	76.7%	6.0	20.0
Rowner Road	79.4%	6.7	17.1	59.0%	3.7	17.9
Broom Way	83.1%	8.4	18.6	65.5%	5.3	12.0
PRC	+7.0%			+2.7%		

Source: LinSig

4.8 HMS Collingwood / Speedfields Park

4.8.1 The TA utilised a linked traffic model for the two junctions (HMS Collingwood signalised junction and Speedfields Park roundabout with bypass lane) supplied by HCC and agreed as part of the recent appeals to the West of Newgate Lane East.

4.8.2 HCC comments in relation to the junction that:

- 1 Stage 2 is missing (relates to a pedestrian crossing stage on the south arm).
- 2 That AM peak period northbound flows had been locked in the lanes, thereby not allowing the model to enable lane choice.

- 3 That the PM peak southbound flows had been evenly split across the lanes, commenting that a 60% nearside / 40% offside split would be more appropriate.
- 4 Compare observed and modelled queues (of the 2019 Baseline) to validate models.

4.8.3 In response, the following amendments have been made to the model (**Appendix X**):

- 1 All scenarios run plan 2 with all four stages including for stage 2 every cycle.
- 2 The northbound flow lock onto the bypass lane has been removed, with the model allowed to reassign flows depending on delay.
- 3 The cycle time for all scenarios has been set at 90 seconds (to allow direct comparisons)
- 4 Geometry updated to reflect measured parameters – **Drawing ITB10353-GEOM-102**

Model Validation

4.8.4 **Table 4.14** provides a comparison of the 2019 modelled queues and observed queueing.

4.8.5 It is noted that the observations of queueing are taken as the maximum observed queue in a 5-minute period, averaged across the hour. This relies on the enumerators establishing what is a queue, compared to slow moving traffic. Furthermore, this is not directly comparable to the forecast Mean Maximum Queues (MMQ) forecast in LinSig, which relate to the signal operation of the junction and TRL (who own the LinSig software), advise against validating and calibrating models to queue lengths, instead preferring to ensure the geometry and demand data is correct.

Table 4.14 - Newgate Lane / HMS Collingwood Access / Speedfields Park – Validation

Approach	Morning Peak Period		Evening Peak Period	
	Modelled Queue (Vehicles)	Observed Queue (Vehicles)	Modelled Queue (Vehicles)	Observed Queue (Vehicles)
2019 Baseline				
Newgate Lane (North)	9	9	18	40
HMS Collingwood	<1	0	8	5
Newgate Lane (South)	20	11	13	20
Speedfields Park	<1	6	<1	8
Newgate Lane (South)	14	5	7	4

4.8.6 The comparison of observed and modelled queues demonstrates a broad correlation of projected performance, with a similar pattern and magnitude of queueing occurring on the junction approaches. Taking account of the limitations of the validation exercise, this supports the use of the model without any applied calibration. It is notable that the same model was utilised and agreed as part of the West of Newgate Lane assessments.

Junction Operation Results

4.8.7 **Table 4.15** presents the modelling assessment of the Future Assessment Year in 2028. This demonstrates that in all scenarios, the two junctions will operate within design capacity with a positive Practical Reserve Capacity (PRC).

Table 4.15: Newgate Lane / HMS Collingwood Access – 2028 Assessment

Approach		Morning Peak Period			Evening Peak Period		
		DoS (%)	MMQ (Veh.)	Delay (Sec)	DoS (%)	MMQ (Veh.)	Delay (Sec)
2028 + Committed Development							
HMS Collingwood Junction	Newgate Lane (N)	61.1%	11.7	14.2	55.7%	9.9	18.6
	HMS Collingwood	20.2%	0.9	51.1	75.9%	8.1	54.3
	Newgate Lane (S)	80.1%	18.6	22.5	77.4%	16.5	28.7
Speedfields Park Junction	Newgate Lane (N)	63.2%	0.9	3.3	44.1%	0.4	1.9
	Speedfields Park	18.8%	0.1	2.1	36.7%	0.3	2.3
	HMS Collingwood	9.7%	0.1	1.9	41.0%	0.3	5.4
	Newgate Lane (S)	71.0%	21.3	14.3	54.0%	13.0	7.9
PRC		+12.3%			+16.3%		
2028 + Committed Development + Development							
HMS Collingwood Junction	Newgate Lane (N)	62.5%	12.2	14.5	59.7%	11.0	19.4
	HMS Collingwood	20.2%	0.9	51.1	75.9%	8.1	54.3
	Newgate Lane (S)	84.5%	21.1	25.3	78.9%	17.2	29.5
Speedfields Park Junction	Newgate Lane (N)	64.8%	0.9	3.4	47.8%	0.5	2.1
	Speedfields Park	19.1%	0.1	3.7	38.1%	0.3	2.4
	HMS Collingwood	9.9%	0.1	1.9	41.2%	0.3	5.4
	Newgate Lane (S)	72.7%	21.9	15.1	55.2%	13.5	8.3
PRC		+6.5%			+14.1%		

4.8.8 The impact of traffic associated with the Appeal Site is limited being an increased average delay of some 3 seconds for northbound traffic on approach to HMS Collingwood in the Morning Peak, and delay increases of less than a second in the Evening Peak.

2037 Sensitivity Test

4.8.9 **Table 4.16** presents the modelling assessment of the Sensitivity Test Assessment Year in 2037, including unconsented development at Longfield Avenue. This is provided to demonstrate the longer term operation of the junction, taking account of continued background traffic growth and further development that does not benefit from planning consent, and to provide robustness to the assessment.

Table 4.16: Newgate Lane / HMS Collingwood Access – 2037 Sensitivity Test

Approach		Morning Peak Period			Evening Peak Period		
		DoS (%)	MMQ (Veh.)	Delay (Sec)	DoS (%)	MMQ (Veh.)	Delay (Sec)
2037 + Committed Development + ST							
HMS Collingwood Junction	Newgate Lane (N)	65.3%	13.2	15.2	59.3%	10.9	19.3
	HMS Collingwood	21.9%	1.0	51.5	80.1%	8.9	58.4
	Newgate Lane (S)	87.0%	23.1	27.5	80.8%	18.0	30.6
Speedfields Park Junction	Newgate Lane (N)	67.7%	1.0	3.8	47.3%	0.4	2.0
	Speedfields Park	20.3%	0.1	3.7	39.8%	0.3	2.5
	HMS Collingwood	10.6%	0.1	2.0	43.6%	0.4	5.7
	Newgate Lane (S)	72.0%	21.5	14.8	59.6%	14.8	9.9
PRC		+3.4%			+11.4%		
2037 + Committed Development + Development + ST							
HMS Collingwood Junction	Newgate Lane (N)	67.7%	14.0	15.6	63.2%	12.1	20.0
	HMS Collingwood	21.9%	1.0	51.5	80.1%	8.9	58.4
	Newgate Lane (S)	90.5%	26.1	31.9	82.8%	18.9	31.2
Speedfields Park Junction	Newgate Lane (N)	70.3%	1.2	4.1	51.0%	0.5	2.3
	Speedfields Park	20.6%	0.1	3.8	41.1%	0.4	2.7
	HMS Collingwood	10.8%	0.1	2.2	43.9%	0.4	5.8
	Newgate Lane (S)	74.5%	22.5	16.1	60.5%	15.1	10.2
PRC		-0.5%			+8.6%		

4.8.10 The junction is forecast to operate acceptably in 2037. Whilst design capacity is reached in the Morning Peak Period (-0.5% PRC), this relates to only the northbound approach to HMS Collingwood (where DoS is 90.5%) and does not result in any significant deterioration of performance, with forecast delays of some 32 seconds compared to 28 seconds without the Appeal development coming forward.

4.9 Longfield Avenue / Newgate Lane / Davis Way

4.9.1 HCC requested that junction geometry drawings are presented to review the model and that consideration is given to model validation. The model used was the same as that which was agreed by HCC for the West of Newgate Lane appeals.

4.9.2 Consideration was given to model validation but the queue survey data available identifies that there was upstream congestion issues for some time periods, that affected the collection of queue data. This does not provide a realistic basis to deviate from the established capacity calculations provided by the ARCADY Module of Junctions 10.

- 4.9.3 **Drawing ITB10353-GEOM-101** presents the measured geometries which have been applied to the revised modelling (**Appendix Y**). **Table 4.17** presents the summary assessments which demonstrates that the junction will operate within both design capacity (RFC <0.85) and theoretical capacity (RFC = 1.0).

Table 4.17: Newgate Lane / Longfield Avenue Roundabout – 2028 Future Year Operation

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2028 with Committed Development						
Davis Way	0.14	0.2	9.90	0.29	0.4	10.22
Newgate Lane (South)	0.76	3.1	7.10	0.81	4.1	8.86
Longfield Avenue	0.25	0.3	3.69	0.32	0.5	4.26
Newgate Lane (North)	0.74	2.7	8.35	0.64	1.8	5.86
2028 with Committed Development + Development						
Davis Way	0.14	0.2	10.20	0.31	0.4	11.27
Newgate Lane (South)	0.79	3.8	8.28	0.82	4.5	9.56
Longfield Avenue	0.28	0.4	3.86	0.35	0.5	4.48
Newgate Lane (North)	0.75	3.0	8.76	0.67	2.0	6.49

- 4.9.4 The impact of the proposed development at the junction is limited, adding some 1-2 seconds of average delay to the junction.

2037 Sensitivity Test

- 4.9.5 **Table 4.18** presents the assessment of the Sensitivity Test, considering the 2037 End of Local Plan period scenario, and including unconsented developments.
- 4.9.6 The junction is shown to operate within capacity, albeit in the Evening Peak period the Newgate Lane South approach reaches design capacity without the Appeal scheme coming forward (RFC of 0.87). Both queues and delays are relatively modest (~6 vehicles and some 13 seconds delay).

Table 4.18 - Newgate Lane / Longfield Avenue Roundabout – 2037 Sensitivity Test

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2037 with Committed Development + ST						
Davis Way	0.15	0.2	10.89	0.34	0.5	11.96
Newgate Lane (South)	0.80	3.9	8.47	0.87	6.2	12.80
Longfield Avenue	0.29	0.4	4.05	0.38	0.6	4.82
Newgate Lane (North)	0.78	3.4	9.93	0.68	2.1	6.74

Approach	Morning Peak Period			Evening Peak Period		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
2037 with Committed Development + Development + ST						
Davis Way	0.16	0.2	11.27	0.37	0.6	13.42
Newgate Lane (South)	0.83	4.9	10.22	0.88	7.0	14.33
Longfield Avenue	0.31	0.4	4.27	0.41	0.7	5.12
Newgate Lane (North)	0.79	3.6	10.52	0.72	2.5	7.58

4.9.7 The addition of the Appeal Scheme in this scenario has a minimal impact, increasing RFC by 0.01 to 0.88, and increasing delay by around one second.

4.10 Impacts at A32 Gosport Road / Palmerston Road Drive junction.

4.10.1 HCC has confirmed that, following provision of the more detailed traffic flow diagrams (**Appendix Q**), that no capacity assessment of the A32 Gosport Road / Palmerstone Drive Junction is required (**Appendix J**).

4.10.2 HCC did however require further assessment of a cluster of personal injury accidents (PIA) that is recorded at the Newgate Lane / A32 Gosport Road interchange, relative to the potential impacts of the development at the junction.

4.10.3 **Appendix Z** presents a detailed analysis of the accident records that are documented at the junction and sets this in the context of the impacts of the site.

4.10.4 In summary this concludes:

- 1 The Appeal Scheme is not forecast to add any turning movements to the priority junctions forming part of this intersection. Whilst there are various recorded accidents at these locations, these will not be materially impacted by the proposed development.
- 2 The Appeal Scheme will add traffic across the Newgate Lane flyover. There has been two recorded accidents at the merges to the flyover in the latest 5 year period, one resulting from a lane-changing accident and the other relating to a cyclist crossing the road. There is no pattern of accidents expected to be impacted by the Appeal Scheme.

SECTION 5 Proposed Mitigation Package

5.1 Considering the contents of the TA and this Addendum, the proposed package of transport mitigation comprises:

Table 5.1 – Proposed Transport Mitigation Package

Pedestrian and Cycle Enhancements	Delivery of the Access Strategy comprising: <ul style="list-style-type: none"> • Two connections to the PROW north of the site • Delivery of a new pedestrian connection to Newgate Lane East and bus stop enhancements • Provision of pedestrian and cycle routes between the site and Newgate Lane including crossing of Newgate Lane East • Connections south to the consented development for onward access to Brookers Lane / Woodcote Lane • Connection to Tukes Avenue and its upgrading to form a shared route
	Delivery of lighting improvement on Brookers Lane
	Delivery of pedestrian and cycle improvements identified in the WCHAR including improved crossing facilities and PROW
	Financial contribution to the improvement of the Brookers Lane / Newgate Lane East / Woodcote Lane crossing
	Financial contribution towards improvements for pedestrian and cyclists on: <ul style="list-style-type: none"> • Wych Lane (in line with the GBC LCWIP) • Redlands Lane (in line with the FBC LCWIP) • Longfield Avenue / Fort Fareham Rd, (FBC LCWIP) • Stubbington in the vicinity of Crofton Anne Dale Infant and Primary Schools
Financial contribution to the delivery of School Travel Plans	
Public Transport Enhancements	Improvement to the Newgate Lane East bus stops
	Financial contribution towards the delivery of Real Time Information at Tukes Avenue bus stops
	Improved cycle connectivity to BRT through improvements on Wych Lane
Cross-objective	Delivery of the Site Travel Plan, comprising measures to promote sustainable travel behaviours
	Sustainable Travel Voucher for public transport use or cycle equipment purchase
	Provision of EV Charging facilities for each dwelling
Construction Impacts	Delivery of a CTMP

SECTION 6 Summary and Conclusion

6.1.1 This Transport Assessment Addendum presents a comprehensive reply to the planning application response made by HCC, addressing HCC's comments in relation to:

- i Site Access Strategy
- ii Accessibility and Sustainable Travel Opportunities
- iii Traffic Impacts

6.2 Site Access Strategy

6.2.1 Further detail on the proposed pedestrian and cycle strategy has been presented to address HCC comments including:

- 1 Further assessment of pedestrian and cycle demands to consider a scenario where residents only access to Catchment Schools
- 2 Deliverability of the access strategy connections
- 3 Revisions to the scheme proposals to connect to Tukes Avenue
- 4 Modifications of the cycle provision to Newgate Lane providing a LTN 1/20 compliant connection to the Site

6.2.2 The access connections are shown to be deliverable, appropriate, and compliant with relevant design guidance and standards. An alternative improvement to the service road connecting the Appeal Site to Tukes Avenue is presented in response to HCC comments.

6.2.3 Minor amendments are also proposed to the Newgate Lane East vehicular access roundabout, comprising alterations to cycle provision and an extension of the flare on the northbound Newgate Lane East approach, to provide further comfort to HCC on the longer-term operation of the junction and to address its requested Sensitivity Testing. The revised scheme continues to fully comply with design standards and has been subject to Road Safety Audit.

6.2.4 The operation of the proposed access roundabout to Newgate Lane has been rigorously tested, addressing each of HCC's comments and including Sensitivity Testing of future years, uplifted traffic flows and unconsented development. The assessments demonstrate that in each and every scenario, the roundabout junction would operate within design capacity, under free flow conditions, and without creating any significant impact to users of Newgate Lane East.

6.2.5 The site access strategy, including the connection to Tukes Avenue where works are proposed, and the connection to the Newgate Lane East bus stop, have been subject to Independent Road Safety Audit, with all matters raised addressed to the satisfaction of the Auditor.

6.2.6 The NPPF requires that *'Safe and Suitable access is provided for all people'*, that *'appropriate opportunities for sustainable travel are taken up'*, and that the residual impacts of the proposals do not result in a *'severe'* operational impact or *'unacceptable'* safety impact.

6.2.7 The Access Strategy proposed satisfies each of these requirements, demonstrating a strategy which prioritises active travel and is inclusive for all users; provides for expected desire lines to ensure movement opportunities by walking, cycling and public transport are positively taken; and assessment of the operation of the proposed access junction demonstrates this will work efficiently and will not result in material, let alone Severe, impacts on road users.

6.3 **Accessibility and Sustainable Travel Opportunities**

6.3.1 The HCC response confirmed that the site is adequately located to enable sustainable travel to a range of service and facilities is realistic, and benefits from acceptable connections to public transport, for which there is good provision in the local area. The TA proposed a series of local improvements to walking and cycling infrastructure and bus provision.

6.3.2 HCC's comments in relation to the further assessment of routes to education facilities have been addressed through a WCHAR extension, which identifies further improvements that can be provided to encourage safe walking and cycling to schools. These improvements all fall in areas that already serve pupils from the existing school catchments.

6.3.3 Further enhancements to the local walking and cycling provisions have been explored, at Longfield Avenue, at Wych Lane and at Redlands Lane. Within the reasonable constraints of each location, potential improvements have been developed, towards which the Appellants are prepared to make a financial contribution to enable improvements to be delivered by HCC.

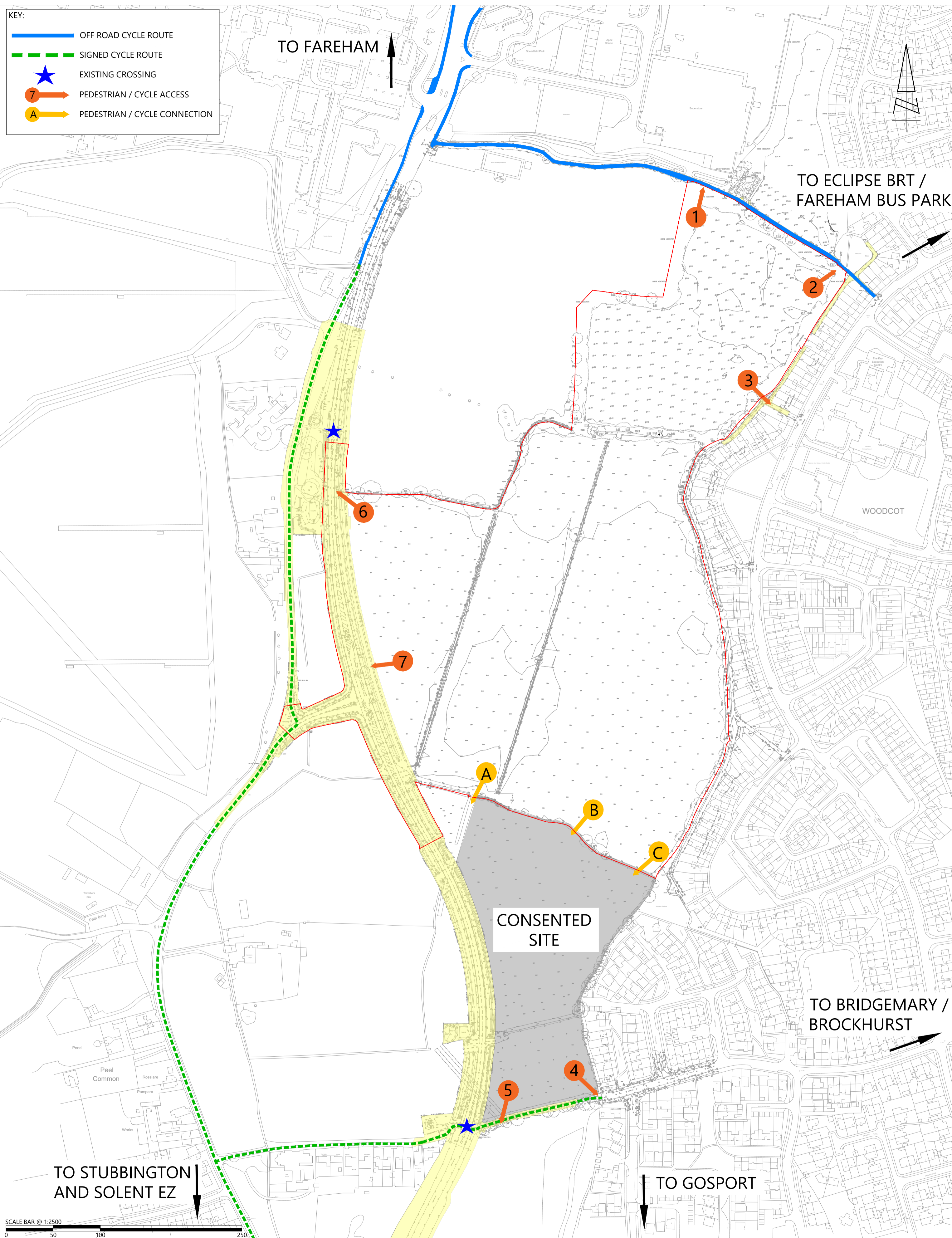
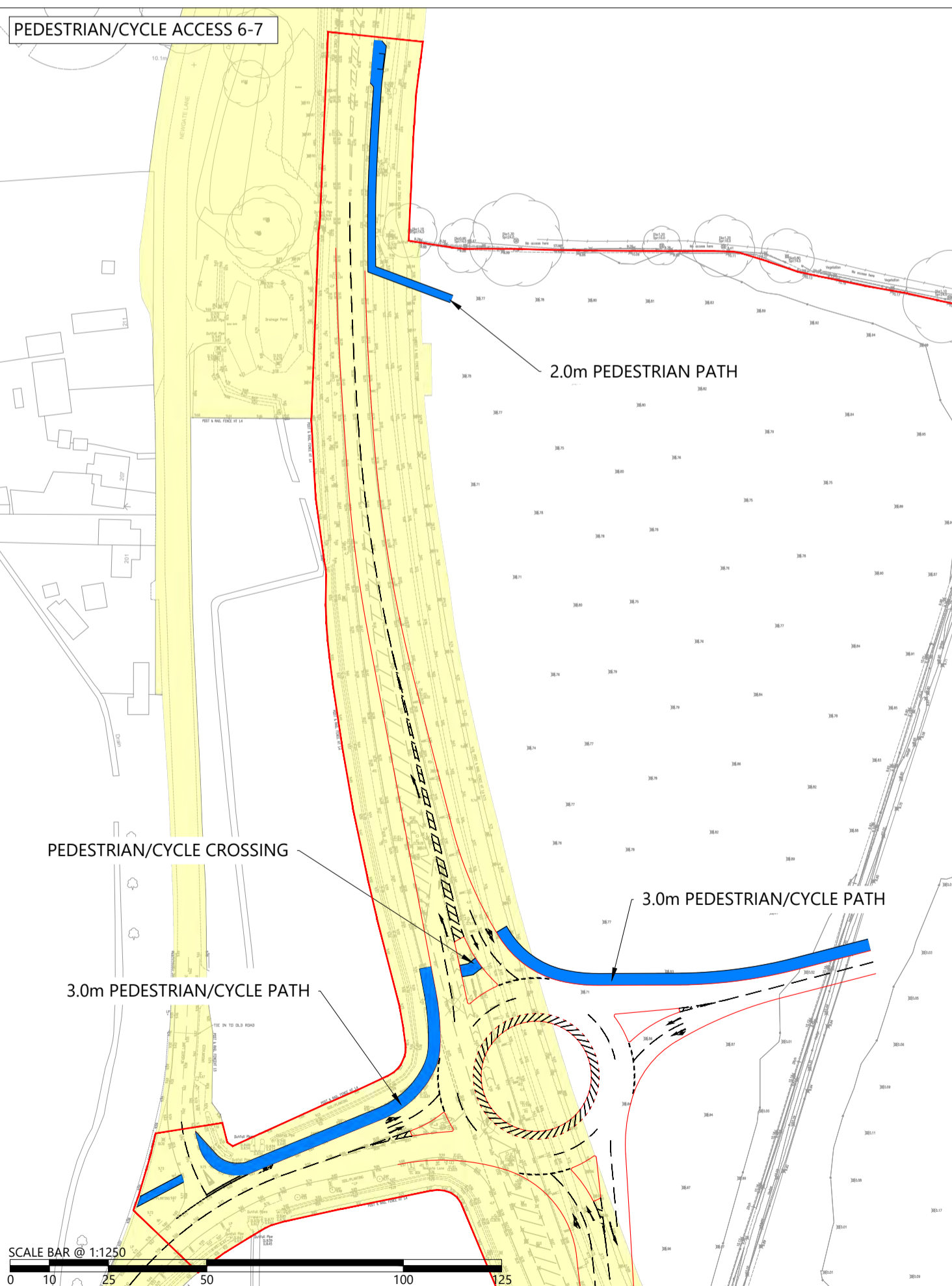
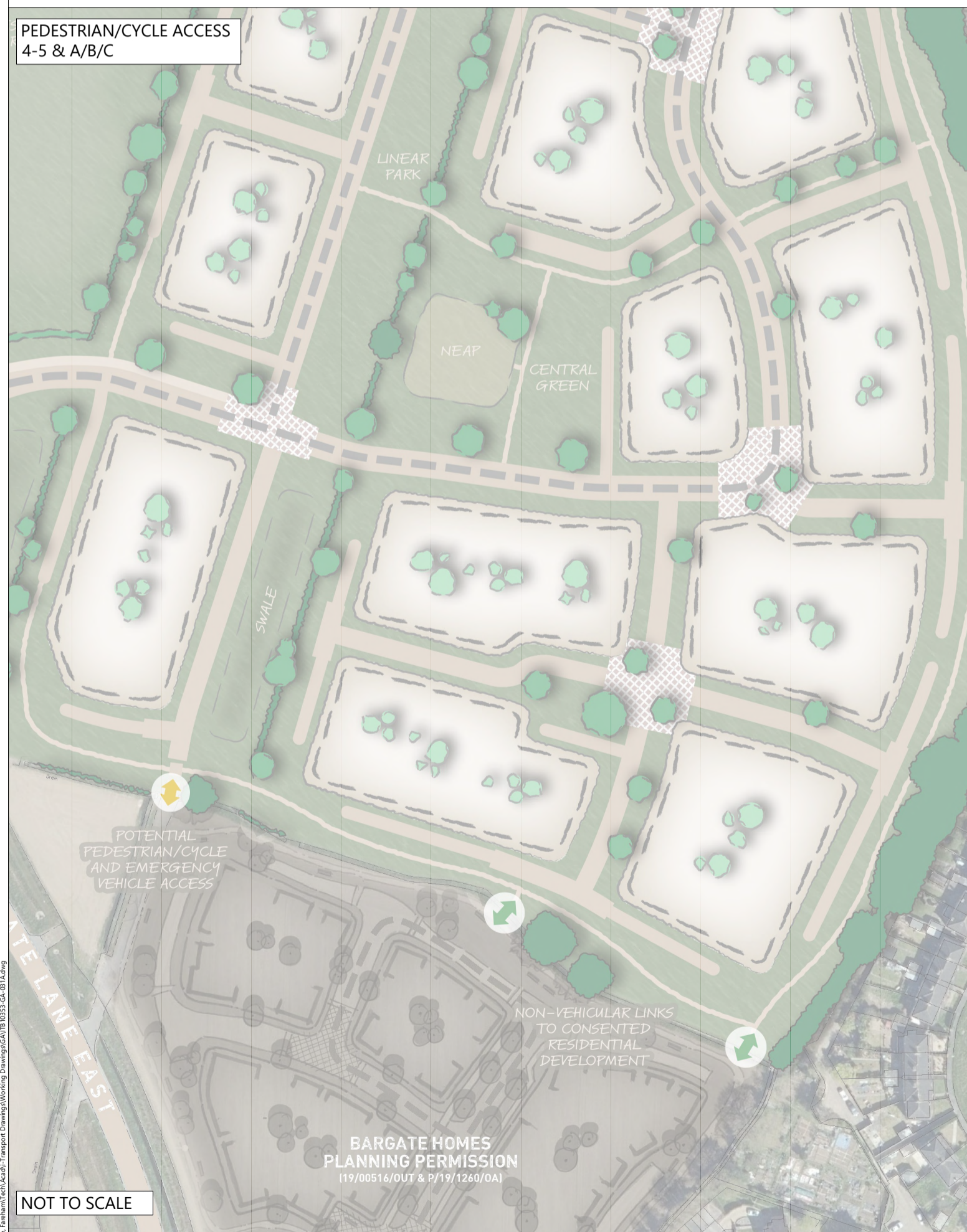
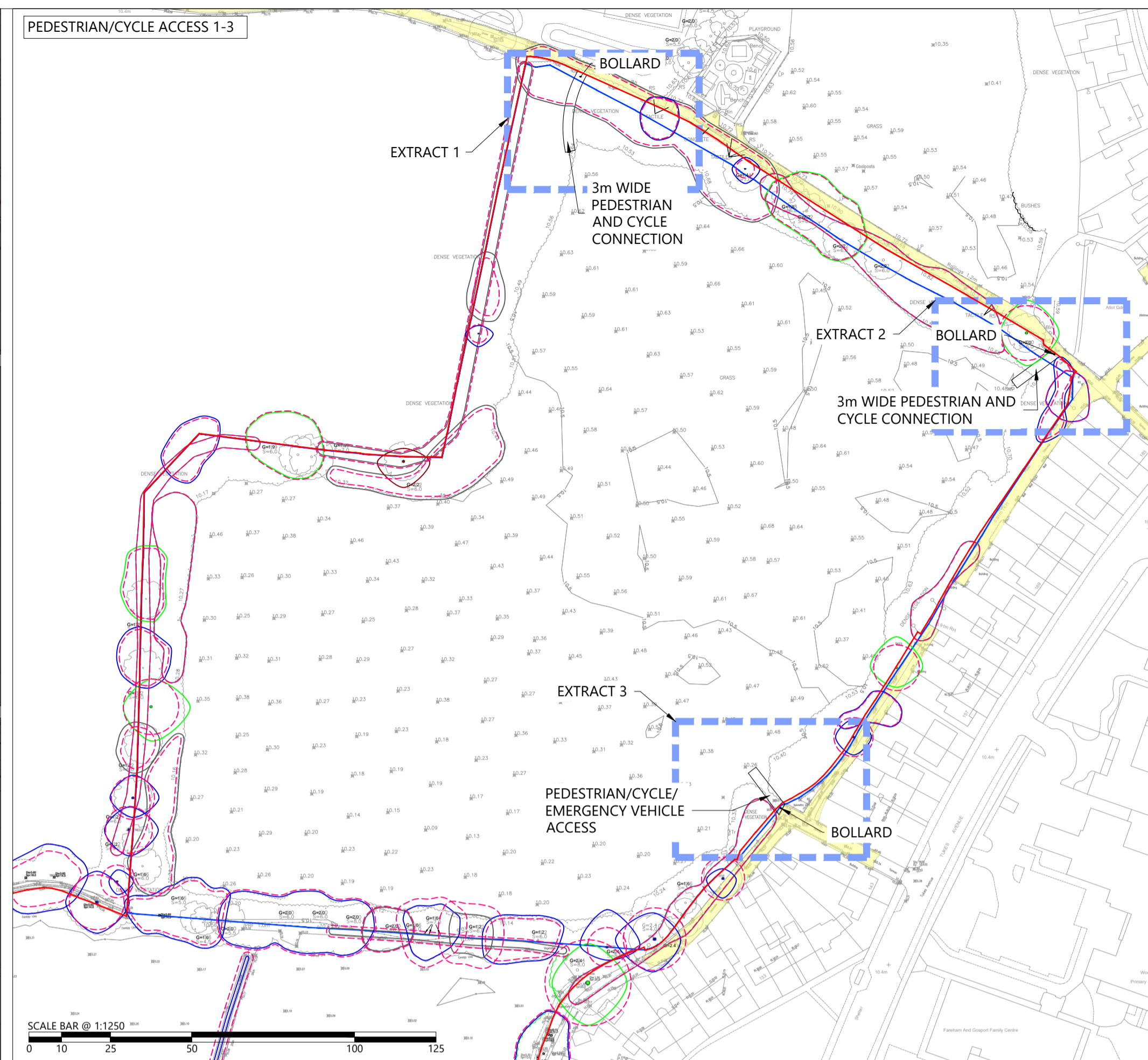
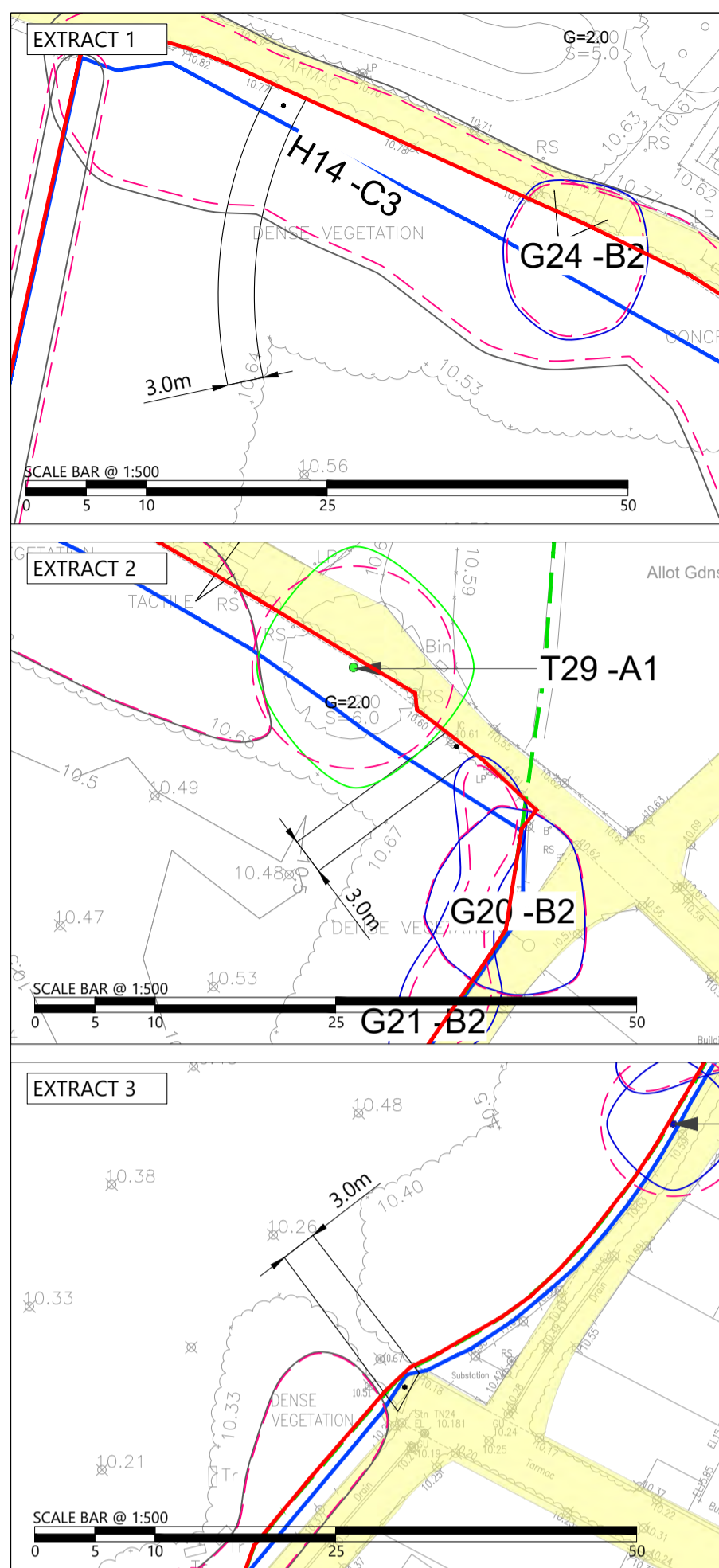
6.3.4 The TA included a Travel Plan which will promote sustainable travel to the future residents and which HCC considers to be of a good standard.

6.3.5 Collectively with the package of improvements proposed in this TA Addendum, the Appeal Scheme provides a comprehensive approach to the promotion of sustainable travel infrastructure and opportunities and satisfies the relevant parts of the NPPF (para 110) and Fareham Local Plan (CS5 / DSP40). Future residents will have the opportunity to access a range of destinations by a genuine choice of sustainable transport modes and the approaches presented ensure sustainable travel will be maximised and prioritised.

6.4 Traffic Impacts

- 6.4.1 Agreement with HCC has been reached relating to the parameters to be used in the traffic assessment including revisions to the assignment assumptions.
- 6.4.2 Based on the agreed parameters, updated traffic modelling is presented which addresses HCC's commentary and which demonstrates that the Appeal Site will not result in a severe residual cumulative impact on the local network. Key junctions are demonstrated to have sufficient capacity in the future to accommodate the traffic generated by the application site, and where there are capacity constraints, these are not a result of the Appeal Scheme.
- 6.4.3 Considered against the high-bar tests laid out in the NPPF (i.e. that the residual cumulative impacts of development must be Severe to warrant refusal on transport grounds), and against Local Plan Policies DSP40 and CS5, the scheme is shown to be compliant.

DRAWING



The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB
www.i-transport.co.uk

Tel: 01256 637940

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REV	DATE	BY	DESCRIPTION	CHK	APPD	PROJECT	TITLE	CLIENT	DRAWN	CHECKED	APPROVED
A	10/01/22	MC	FOOTPATH LINKS REVISED	MC	TW		PEDESTRIAN CONNECTIVITY		MC	MC	TW
STATUS							FOR INFORMATION	LAND EAST OF NEWGATE LANE, FAREHAM	MILLER HOMES AND BARGATE HOMES		
PROJECT									PROJECT No:	SCALE @ A1:	DATE:
DRAWING No:									ITB10353	AS SHOWN	01.12.21
									DRAWING No:	ITB10353-GA-031	REV:
											A