

TRANSPORT ASSESSMENT

Land South of Mortimers Lane, Eastleigh, SO50 7EA



Prepared for: Bloor Homes Limited

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Contents

1.0	Introduction.....	1
2.0	Existing Situation	2
3.0	Recent Planning History and Pre-application Discussions	10
4.0	Accessibility.....	17
5.0	Personal Injury Collision Analysis	25
6.0	Proposed Development	27
7.0	Forecast Traffic Generation	31
8.0	Forecast Trip Distribution	35
9.0	Modelling Inputs	39
10.0	Modelling Outputs.....	42
11.0	Policy Context	53
12.0	Summary and Conclusions.....	54

Figures

- Figure 1: Walking Catchments
- Figure 2: Cycling Catchments
- Figure 3: Public Transport Routing

Appendices

- Appendix A: Pre-Application Correspondence, Technical Notes and Departure from Standards Application
- Appendix B: Site Location Plan
- Appendix C: Public Rights of Way
- Appendix D: Personal Injury Collision Data
- Appendix E: Adopted Highway Records
- Appendix F: Indicative Masterplan
- Appendix G: Site Access General Arrangement and Swept Paths
- Appendix H: Traffic Survey Results (ATC and MCC)
- Appendix i: Hampshire County Council Improvement Works – Mortimers Lane / Winchester Road
- Appendix J: Proposed Off-Site Highway Works – Mortimers Lane / Winchester Road / Knowle Lane
- Appendix K: Traffic Generation Calculations
- Appendix L: Traffic Flow Diagrams
- Appendix M: Junction Geometry Drawings
- Appendix N: Junctions 10 Outputs
- Appendix O: Linsig Outputs

1.0 Introduction

- 1.1 This Transport Assessment (TA) has been prepared by Glanville Consultants on behalf of Bloor Homes Limited to accompany an outline planning application for residential development with multi-functional hub on Land South of Mortimers Lane, Fair Oak, Eastleigh, herein 'the site'. The description of development is as follows:
- 'Outline application for up to 245 dwellings (Use Class C3), up to 350m² multi-functional space, mobility infrastructure (Use Class Sui Generis), with associated open space, landscaping, infrastructure, and vehicular access off Mortimers Lane, Fair Oak; All matters reserved except for vehicular access off Mortimers Lane and pedestrian / cycle connections to the site boundary.'*
- 1.2 This TA has been prepared to assess the impacts of up to 245 residential dwellings and up to 350m² multi-functional space to be sited on land to the south of Mortimers Lane in Fair Oak, Eastleigh. This TA, therefore, assesses the impact of the potential development on the surrounding highway network and identifies, where necessary, mitigation measures required to address the identified impacts.
- 1.3 Extensive pre-application engagement has been held with the Local Highway Authority (LHA) at Hampshire County Council (HCC) to inform the scope of this TA. A copy of the pre-application responses and submitted documentation is available at Appendix A.
- 1.4 This TA has been prepared in accordance with central government policies set out in the National Planning Policy Framework (NPPF) (December 2023) and in line with planning practice guidance Travel Plans, Transport Assessment and Statements (March 2014).
- 1.5 A Framework Residential Travel Plan (FRTTP), a Walking, Cycling and Horse-Riding Assessment and Review (WCHAR) and Stage 1 Road Safety Assessment (RSA) have also been prepared and submitted as separate documents. At this stage, it is not proposed to prepare a Travel Plan for the proposed up to 350m² hub given that associated vehicular traffic will be very low. If considered necessary, the use will be subject to a reserved matters application and a detailed Travel Plan specific to the end operator will be provided at that stage, based on a scope agreed with the LHA.

2.0 Existing Situation

Site Description

- 2.1 The site is located on eastern edge of Fair Oak to the south of Mortimers Lane, approximately 1.4km to the east of Fair Oak Village Centre and 5.5km to the east of Eastleigh town centre. The site is bounded by:
- Mortimers Lane to the north;
 - The rear of Pembers Hill Drive and Kingsmill Drive residential areas to the west;
 - Woodland, Horton Heath Business Park, an under-construction employment development at Land East of Knowle Lane (ref. F/23/94668) and the East Horton Golf Club car park and clubhouse to the south; and
 - Open/agricultural land (including an access track to the adjacent field leading south from Mortimers Lane) and the East Horton Golf Club course to the east.
- 2.2 A gated field access is located on the southern side of Mortimers Lane at the northeastern corner of the development site providing access to the site and the adjacent agricultural land to the east.
- 2.3 The Eastleigh Borough Council Local Plan identifies Fair Oak is a level 3 settlement, but it is also located within 8.0km cycling / driving distance of three level 1 & 2 settlements of Eastleigh, Chandler's Ford and Hedge End and considered to be accessible to these settlements by bike and public transport.
- 2.4 The majority of facilities and amenities are located in Fair Oak to the west of the site, or near the B3354/Botley Road/Winchester Road, although there are also a number of facilities and amenities located in reasonably close proximity to the site, including the Deer Park Farm Industrial Estate, East Horton Business Park, and Knowle Park, accessed off Knowle Lane, as well as a pharmacy, a Library, Fair Oak Village hall, number of restaurants / takeaways / cafes / pubs, three convenience stores, hairdressers, retail units, a Post Office, educational facilities (Wyvern College, Wyvern Day nursery, Fair Oak Junior and Infant schools) and leisure facilities (i.e. gym, Squash and Racquetball club) in Fair Oak. East Horton Golf Club is also located to the east of the site with access provided at Mortimers Lane. It should be noted that Wyvern College also has a gym on site, which is open to the public.
- 2.5 A site location plan is provided in Appendix B.

Local Highway Network

- 2.6 Table 1 below provides a summary of the local highway network in the vicinity of the site. A copy of the adopted highway extents maintainable at the public's expense are included at Appendix R.

Table 1: Local Highway Network Summary

B3037 – Mortimer's Lane	
Description	This is a single carriageway, local, semi-urban distributor road. This road provides access to Fair Oak village centre to the west and Lower Upham to the east. This road also provides access to other residential roads along the route including Knowle Lane, Bradshaw Close, Scotland Close, Michaels Way, Rustan Close, Willow Grove and Mortimers Drive on the southern side, and Pembers Farm Avenue, Mimosa Drive, Camelia Grove, Goater Way and Glebe Court. Within the vicinity of the site's northern site frontage with Mortimers Lane, there is a private access located on the northern side of the carriageway to Little Dower House as well as two gated field accesses to agricultural land. As advised in paragraph 2.2 above, a gated field access is also located on the southern side of Mortimers Lane at the northeastern corner of the development site providing access to the site and the adjacent agricultural land to the east.
Speed limit	30mph / Derestricted National Speed Limit. A speed limit gateway is located on Mortimers Lane circa 100 metres to the east of junction between Mortimers Lane and Pembers Farm Avenue located on the northern side of the carriageway. To the east of the speed limit gateway, Mortimers Lane is derestricted / subject to the national speed limit for a single carriageway road. To the east leading towards the main settlement areas of Fair Oak, Mortimers Lane is subject to a 30mph speed limit.
Carriageway width	Near the site, Mortimers Lane/B3037 is a single carriageway, that is approximately 6.5m wide.
Pedestrian Infrastructure	There is a continuous footway that commences to the immediate west of Pembers Farm Avenue on the southern side of Mortimer Lane leading west to the centre of Fair Oak. This footway is generally between 1.2-2m wide and is occasionally separated from the carriageway by a grassed verge. A 1.8 metre footway is also proposed to be delivered on the southern side of the Mortimers Lane carriageway as part of the consented Mortimers Farm development (planning reference: F/22/04435) that is located circa 130 metres to the east of the eastern site boundary. The proposed footway is proposed to extend for an approximate length of 400m from the access to Mortimers Farm to the junction between Mortimers Lane and Knowle Lane. A more detailed review of the local footway / footpath and Public Right of Way (PRoW) based on an agreed study area with the LHA at HCC is set out in the Walking, Cycling and Horse-Riding Assessment (WCHAR).
Cycle Infrastructure	There is currently no dedicated cycle facilities provided on Mortimers Lane. However, HCC are proposing to implement active travel improvements in the village of Fair Oak generally comprising the provision of 3m wide shared footway / cycleways in

	accordance with the aspirations of the Local Cycling, Walking and Infrastructure Plan (LCWIP). The HCC cycle improvements are included at Appendix i. The proposals on Mortimers Lane are to provide a 3m shared footway / cycleway from the junction between Winchester Road / Mortimers Lane to the junction between Mortimers Lane and Knowle Lane. It is understood that HCC are seeking to implement these works in mid to late 2025.
Lighting	There is lighting provided along the length of the route on both sides of the carriageway.
Crossing facilities	There are informal crossings (with dropped kerbs and tactile paving) provided along the length of the carriageway in the vicinity of the site, to the west of Pembers Farm Avenue, Camelia Grove and Willow Grove junctions. In addition, pedestrian crossing facilities are provided across Knowle Lane, Bradshaw Close, Scotland Close, Michaels Way, Rustan Close, Willow Grove and Mortimers Drive on the southern side, and Pembers Farm Avenue, Mimosa Drive, Camelia Grove, Goater Way and Glebe Court to the north. A formal signalised crossing is provided across B3354/Winchester Road 1.3km further to the west of the site access.
Parking	There are no parking restrictions in the form of Traffic Regulation Orders (TROs) in place on Mortimers Lane and on-street parking was not observed to occur.
Knowle Lane	
Description	Knowle lane is a single carriageway road providing access to Ascott Road and residential properties via private driveways at the southern section near its junction with the B3354 / Botley Road and Burnetts Lane; Home Park Nursing Home, Knowle Park car park, private residential properties and local business in the middle section; and Deer Park Farm Industrial Estate, East Horton Business Park; the entrance to a second car park to Knowle's Park and the residential properties served by its junctions with Kingsmill Drive and Pembers Hill Drive at the northern section within Fair Oaks and approaching its junction with Mortimers Lane. It is understood that Kingsmill Drive and Pembers Hill are residential streets that are currently privately maintained. Knowle Lane connects with Mortimers Lane via a priority right turn lane ghost island junction with Mortimers Lane. Knowle Lane connects with B3354/Botley Road and Burnetts Lane via a signalised crossroads junction that is located circa 1.5km to the south of the development site.
Speed limit	Knowle Lane is subject to a 30mph for a section 50 of metres south of its junction with Mortimers Lane. A speed limit of 40mph is in place on Knowle Lane for an approximate length of 900 metres from the point located circa 50 metres to the south of its junction with Mortimers Lane to the Home Park Nursing Home. A 30mph speed limit is place on Knowle Lane for an approximate length of 500 metres between Home Park Nursing Home and the signalised crossroads junction with the B3354 / Botley Road and Burnetts Lane.
Carriageway width	Approximately 5-5.5m wide.

Pedestrian Infrastructure	A circa two metre footway is provided on the western side of Knowle Lane for an approximate distance of 370 metres from its junction with Mortimers Lane to the entrance to the Deer Park Farm Industrial Estate on the western side of Knowle Lane. A circa two-metre-wide footway is provided on the southern side of the carriageway for an approximate length of circa 130 metres from the crossroads junction with Botley Road and Burnetts Lane up to the junction with Goodwood Court). The footway provision is limited along the rest of Knowle Lane.
Cycle Infrastructure	There is currently no dedicated cycle infrastructure in place on Knowle Lane.
Lighting	There is some lighting provided outside the residential properties at the southern and the northern end of the carriageway. There is no lighting along the rest of the lane as there are limited facilities and residential properties provided along there.
Crossing facilities	There is an uncontrolled pedestrian crossing with dropped kerbs and tactile paving located circa 10 metres south of Knowle Lane's junction with Mortimers Lane. Uncontrolled pedestrian crossings with dropped kerbs and tactile paving are located circa 10-15 metres north of Knowle Lane's junction with Pembers Hill and circa 5-10 metres north of its junctions with Kings Mill Drive and the East Horton Business Park access. Dropped kerbs and tactile paving are also in place at the access point to CWM aggregates. A signalised pedestrian crossing is located at the southern end on approach to the B3354 junction.
Parking	No parking restrictions, although some private drives at the southern end are accessed from this road.
B3354 - Winchester Road / Botley Road	
Description	The B3354 – Winchester Road / Botley Road is a local distributor road that connects with the A334 to the south of Fair Oak and Colden Common and the B3335 to the north. Within the village of Fair Oak, the B3354 – Winchester Road / Botley Road forms two key junction nodes with the B3037 – Eastleigh Road and the B3037 – Mortimers Lane. The junction with the B3037 – Eastleigh Road is a signalised crossroads junction with the fourth arm being the residential street of Stubbington Way. As part of the aspirations of the LCWIP, the proposed amendments to the signalised junction will comprise: • Widening of existing western footway into the carriageway to accommodate a shared use facility approx. 3m wide; • Decluttering of street furniture; • Carriageway realignment due to widening of the cycleway resulting in narrower traffic lanes; • Installation of shared use cycle infrastructure; • Tightening of radiuses of the Stubbington Way junction; • Side road junctions upgraded to LTN 1/20 compliance for pedestrian / cycling priority;

	- Fair Oak Court junction formalisation for vehicles and cyclists; and - Pelican crossings upgraded to Toucan. It is understood that it is the intention to implement the physical works mid to late 2025. Numerous residential streets are accessed via the B3354 – Winchester Road / Botley Road throughout its length within Fair Oak on both sides of the carriageway in the form of simple priority junctions or right turn lane ghost island junctions, as well as private driveway access to local business and residential properties. Wyvern College and Fair Oaks Junior School and Fair Oaks Infant School are accessed via simple priority junction arrangements with the B3354 – Winchester Road / Botley Road located circa 350 -400 metres to the south of the signalised crossroads junction with the B3037 – Eastleigh Road and Stubbington Way.
Speed limit	The B3354 – Winchester Road / Botley Road is subject to a 30mph speed limit within the village of Fair Road.
Carriageway Width	Within the village of Fair Oak, the B3354 – Winchester Road / Botley Road is between 6.1 and 7.3 metres in width.
Pedestrian Infrastructure	A detailed description of the local pedestrian network is set out in detail in the accompanying WCHAR, but generally there are footways provided on both sides of the carriageway to the south of its junction with the B3037. Leading north from its junction with the B3037 – Mortimers Lane there is only one footway provided on the western side of the carriageway.
Cycle Infrastructure	There is currently no dedicated cycle infrastructure in place on the B3354 – Winchester Road / Botley Road within the village of Fair Oak. However, HCC are proposing to implement cycle improvements generally comprising the provision of 3m wide shared footway / cycleways in Fair Oaks in accordance with the aspirations of the Local Cycling, Walking and Infrastructure Plan (LWCIP). The HCC cycle improvements are included at Appendix i. The proposals on Mortimers Lane are to provide a 3m shared footway / cycleway from the junction between Winchester Road / Mortimers Lane to the junction between Mortimers Lane and Knowle Lane. It is understood that HCC are seeking to implement these works in mid to late 2025.
Lighting	There is lighting provided along the length of the route on both sides of the carriageway.
Crossing Facilities	The pedestrian infrastructure and crossing facilities are considered in detail in the accompanying WCHAR, but there are generally uncontrolled or signalised crossing facilities located along the length of the B3354 within the village of Fair Oaks.
Parking	School Keep Clear clearway and double yellow lines TROs are in place on the B3354 - Winchester Road / Botley Road within the vicinity of Wyvern College and Fair Oaks Infant and Junior Schools to the south of its signalised junction with the B3037 – Eastleigh Road and Stubbington Way.

	Double Yellow Line TROs are also in place on the western side of the carriageway at the B3354 – Winchester Road / Botley Road junction with Fair Oak Road. There are no parking restrictions in place on other sections of the B3354 – Winchester Road / Stubbington Way and on-street parking was not observed to occur.
B3037 – Eastleigh Road	
Description	The B3037 – Eastleigh Road is a local distributor road that connects with the B3037 – Winchester Road / Botley Road in Fair Oak via a four-arm signalised crossroads junction. It provides a connection to Eastleigh that is located circa four kilometres to the west of the village of Fair Oaks. Numerous residential streets are accessed via the B3037 – Eastleigh Road throughout its length within Fair Oak on both sides of the carriageway in the form of simple priority junctions or priority right turn lane ghost island junctions, as well as private driveway accesses to local business and residential properties. Wyvern College and Fair Oaks Junior School and Fair Oaks Infant School are accessed via simple priority junction arrangements with the B3354 – Winchester Road / Botley Road located circa 350 -400 metres to the south of the signalised crossroads junction with the B3037 – Eastleigh Road and Stubbington Way.
Speed Limit	The B3037 – Eastleigh Road within the village of Fair Oak is subject to a 30mph speed.
Carriageway Width	The B3037 – Eastleigh Road is circa six to seven metres wide
Pedestrian Infrastructure	A detailed description of the local pedestrian network is set out in detail in the accompanying WCHAR, but generally there are footways provided on both sides of the B3037 – Eastleigh Road carriageway within the village of Fair Oak.
Cycle Infrastructure	A shared three-metre-wide shared footway / cycleway continues to the immediate east of the B3037 – Eastleigh Road junction with Fratton Way that continues westward to Eastleigh. HCC are proposing to implement cycle improvements on the B3037 – Eastleigh Road generally comprising the provision of 3m wide shared footway / cycleways in Fair Oaks and to Eastleigh in accordance with the aspirations of the Local Cycling, Walking and Infrastructure Plan (LWCIP). The HCC cycle improvements in Fair Oaks are included at Appendix i. The proposals on the B3037 – Eastleigh Road include for: • Widening of existing western footway into the carriageway to accommodate a shared use facility approx. 3m wide; • Decluttering of street furniture; • Carriageway realignment due to widening of the cycleway resulting in narrower traffic lanes; • Formalisation of existing parking; and • Advanced stop lines for cyclists.
Lighting	There is lighting provided along the length of the B3037 – Eastleigh Road within the village of Fair Oak on both sides of the carriageway.

Crossing Facilities	The pedestrian infrastructure and crossing facilities are considered in detail in the accompanying WCHAR, but signalised crossing facilities are located along the length of the B3037 – Eastleigh Road within Fair Oaks.
Parking	In general, there is limited parking restrictions and on-street parking was not observed to occur. Within the centre of the village of Fair Oaks, there are several lay-bys that are observed to be used for parking by adjacent residential properties and potentially for visitors to the village local centre. There are no TROs in place in the laybys.
Stubbington Way	
Description	Stubbington Way is a primary residential street providing access to the main distributor roads, namely the B3037 – Eastleigh Road and the B3354 – Winchester Road / Botley Road via a four arm signalised crossroads junction. Stubbington Way also provides access to the adjacent secondary and tertiary residential streets located to the north and east via priority junctions with Noyce Drive and Longfield Road. Private driveway access to the dwellings that front onto Stubbington Way are provided on both sides of Stubbington Way along its length.
Speed Limit	Stubbington Way is subject to a 30mph speed limit.
Carriageway Width	Stubbington Way is 8.5 metres in width leading east from its signalised junction with the B3354 and B3037 for an approximate distance of 60 metres to its priority junction with St. Thomas Court. Stubbington Way then narrows to 5.5 metres.
Pedestrian Infrastructure	A detailed description of the local pedestrian network is set out in detail in the accompanying WCHAR, but generally there are footways provided on both sides of Stubbington Way and the surrounding residential streets. The footways provide access to a footpath that connects to the B3354 – Winchester Road / Botley Road located circa 250 metres to the south of the signalised crossroads junction between Stubbington Way and the B3354 and B3037. This allows existing and future residents residing in the eastern residential areas of Fair Oak. Including the site, the opportunity to use quiet residential streets to travel to / from Wyvern College and the Fair Oaks Junior and Infants school and avoid having to travel on the busier B3354-Winchester Road / Botley Road via the signalised crossroads junction.
Cycle Infrastructure	There is no dedicated cycle infrastructure provided on Stubbington Way or the surrounding residential streets, but it is considered that traffic flows and speeds are sufficiently low to allow on-carriageway cycling by all users.
Lighting	There is lighting in place on Stubbington Way.

Crossing Facilities	The pedestrian infrastructure and crossing facilities are considered in detail in the accompanying WCHAR. Controlled pedestrian crossing facilities are provided on all arms of the signalised crossroads junction with the B3354 and B3037. There is no dedicated crossing facilities provided on Stubbington Way and the surrounding residential streets.
Parking	Double yellow line TROs are located on Stubbington Way leading from the signalised crossroads junction with the B3354 and B3037 until Stubbington Ways priority junctions with Reynolds Road and Noyce Drive for an approximate distance of 180 metres.



3.0 Recent Planning History and Pre-application Discussions

Strategic Growth Option

- 3.1 The proposed site and the nearby land historically formed part of a Strategic Growth Option (SGO), which Eastleigh Borough Council sought to allocate through the submission version of the Eastleigh Borough Local Plan 2016-2036. This site, together with other surrounding land formed a key part of the proposed housing strategy set out by the emerging Local Plan at the time.
- 3.2 The allocation of the area included at least 5,200 new homes, employment space, retail, community and green space facilities as well as a new link road. In addition, the expansion of Fair Oak to the east and north, was considered in the '*Eastleigh Borough Local Plan 2011-2036 Sustainability Appraisal Report to accompany the Eastleigh Issues and Options Document at Regulation 18 consultation stage*', under Option C which appraised a total delivery of 2,500 dwellings, of which 750 dwellings would be to the south of Mortimers Lane.
- 3.3 However, the Planning Inspector examining the Local Plan deemed that Eastleigh Borough Council did not provide sufficient evidence, through the Sustainability Appraisal process, to justify the proposed allocation and proposed to remove these SGO sites (draft Policies S5 and S6) from the Local Plan.

Pre-Application Scoping Exercise

- 3.4 A Transport Scoping Note dated June 2023 accompanied a pre-application submission to the Local Highway Authority (LHA) at Hampshire County Council (HCC) for the site (pre-app ref.6/3.9/320). The LHA provided a pre-app response letter dated 14th September 2023. The Pre-app response raised concerns with respect to:
- Walking and Cycling. The LHA at HCC considered that the site is located some distance from local shops and services, as well as the local schools, with Figure 3.2 of the SN showing that most destinations are over 20 minutes' walk from the site and the distance to local facilities is likely to encourage short trips by private car rather than active travel. The letter advised that the quality of active travel provision connecting the site to the village centre and local schools will be important in determining the sustainability of the site and noted that there is a scheme planned by the LHA at HCC which will widen the southern footway on Mortimers Lane to at least 3m in width to provide a Shared Use Path. It also advised that the footway on the northern side of Mortimers Lane is intermittent and will not likely be used for walking into the village centre although it does provide access to leisure routes and Public Rights of Way;
 - Buses. The LHA considered that the level of bus provision from the site is limited and that the closest bus stops for these routes are over a kilometre from the site served by the hourly no.69 service. The LHA at HCC therefore advised that it considered that the accessibility of the site by bus is limited, and any future application will need to consider how this can be improved to reduce the reliance on the private car from any future development; and
 - Overall, the LHA at HCC considered at that time, that the location of the site would be likely to result in an overreliance on the private car, particularly given the distance to key local services such as schools, which are likely to preclude walking as a preferred option. Also, a lack of existing cycle routes in the area would encourage non-regular cyclists to use the private car to access shops and services; and limited options for public transport use for journeys further afield may also result in overreliance on the private car. Given the scale of the proposed development, the LHA would likely require significant active travel mitigation to consider the site acceptable.

- 3.5 A subsequent Scoping Note was prepared by Glanville dated 22 November 2023 and submitted to the LHA at HCC. The purpose of the Glanville SN was to obtain certainty on the proposed scope and methodology of TA and seek clarity on the responses provided by the LHA at HCC in its pre-app response dated 14 September with respect to the scope of study areas and methodology as follows:
- a. Walking, Cycling and Public Transport Networks in Fair Oak;
 - b. Personal Injury Collisions;
 - c. Trip Rates; d. Trip Assignment and Distribution;
 - d. Committed Developments / Growth Rates; and
 - e. Junction capacity assessments.
- 3.6 The SN prepared by Glanville also sought further clarification on Bloor Homes's behalf with respects to the LHA at HCC views in its pre-app response dated 14th September 2023 to further explain:
- i. why it currently considers the location of the site is likely to result in an overreliance on the private car, particularly when compared to the consented and now constructed Pembers Farm development located opposite the site that is located similar walking and cycling distances to the amenities and facilities located within Fair Oak and access to the same level of bus services and frequency;
 - ii. Confirmation of the proposed mitigation measures, infrastructure improvements and S106 contributions the LHA could seek as part of the development proposals to improve the accessibility of the development proposals in this respect; and
 - iii. Advised that the proposed access arrangement with Mortimers Lane has been amended to seek to incorporate the comments provided by HCC Highways Engineers but considered that the amended junction design fully incorporating the Highways Engineers comments will lead to detrimental impact on other planning issues such as landscape, ecology, and arboriculture. The LHA's view was sought on a third access option to minimise the impact on landscape, ecology, and arboriculture.
- 3.7 The relevant correspondence and documentation are included at Appendix A.
- 3.8 Further to issuing the Glanville SN dated 22 November 2023, a meeting was held with the LHA at HCC on 12 January 2024. A copy of the meeting notes is attached included at Appendix A. A second pre-app response letter was provided by the LHA dated 29 January 2024 via email dated 09 February 2024. This correspondence provided clarification on the meetings notes and confirmed the LHA at HCC views that:
- i. Accessibility - The LHA at HCC first formal pre-application comments raised concerns regarding the sustainability of the site, in particular access to local facilities and employment and education opportunities by non-car modes. The LHA's response noted that whilst the sites nearby have been granted permission, including the Pembers Farm site, it should be noted that these were granted ahead of changes to policy. This includes HCC declaring a climate emergency in 2019 and the emerging Local Transport Plan 4 (LTP4) which has an emphasis on reducing car dependency in the County including through land use planning. As such, under this revised policy position, the LHA considered that the location of the site is likely to result in an overdependence on the private car without mitigation.

The response noted that the Glanville SN included some options for mitigation including the provision of an on-site hub that may be able provide some facilities, a shared use path connection to the proposed HCC scheme along Mortimers Lane, potential new bus stops on Mortimers Lane, provision of a car club space and travel plan measures. However, it advised that the LHA considers that additional measures should also be considered as part of any future application such as improvements to routes to the local schools to encourage the use of active travel modes given the distance between the site and nearby primary and secondary schools. Therefore, the proposals may be considered acceptable with regards to sustainability, although this is dependent on the extent of the proposed mitigation to promote and encourage sustainable transport use to and from the site;

- ii. Site Access – The LHA agreed that the corner taper is not necessary for the design to be acceptable to HCC and that taking the visibility splay to the west to the centreline is agreed on the basis that the traffic islands are provided as proposed. The LHA at HCC also considered that the provision of a 2.4 metre 'X' distance visibility splay would be considered a Departure from Standard supported by a Stage 1 Road Safety Audit;
- iii. Personal Injury Accident Data – The proposed study area was agreed;
- iv. Local Highway Impact - The LHA agreed that impact of the proposals on the local highway network should be assessed independently of the use of any strategic growth micro-sim models. The years of assessment (2024 and 2029) have been agreed on the basis that an application is submitted in 2024 and that the trip rates and proposed distribution methodology is considered acceptable. The scope of junction assessment will be dependent on the results of the trip generation and distribution work, although as set out in the previous pre-app comments considered that the following junctions need to be considered as a minimum:
 - Mortimers Lane/Knowle Lane priority junction;
 - Mortimers Lane/Winchester Road priority junction; and
 - Botley Road/Eastleigh Road/Stubbington Way signal junction.

In addition, any junctions which are subject to a 5% increase in traffic because of the proposals will also need to be assessed, along with any relevant junctions with known safety or capacity concerns.

- 3.9 It was noted by Glanville that the pre-app response dated 29 January 2024 whether the TA needs to consider specific committed / allocated developments or whether these can be accounted for using Temprow Growth rates when assessing a design year of 2029. Glanville sought to confirm this via an email dated 06 February 2024 that included a list of committed / allocated developments. The LHA at HCC responded via email on the 14 February 2024 advising the committed development to assesses including for six additional committed development schemes.
- 3.10 The relevant correspondence and documentation are included at Appendix A.

Pre-App Technical Work

Departure from Standard Application

- 3.11 To support the proposed Departure from Standard (DfS) application for the proposed site access and providing the emerging visibility splays at an 'X' distance set back of 2.4 metres, a Stage One Road Safety Audit (RSA) was carried out on the 23 January 2024 informed by a Briefing Note agreed with the LHA at HCC. A draft DfS application and proposed site access proposals was submitted to the LHA at HCC on 13 February 2024, and formally submitted on 22 February and was agreed in principle on 28 March 2024. The relevant correspondence is attached at Appendix A.

Technical Note

- 3.12 A Technical Note (TN) was also prepared and issued to the LHA at HCC on the 22 March 2023 to seek the agree the following:
- i. details of the proposed trip rates, trip purposes and trip distribution;
 - ii. percentage impact assessment and a review of Personal Injury Collision (PICs) at 15 local junctions. Based on the outcome of this detailed analysis, the TN concludes that the supporting Transport Assessment only needs to consider junction capacity assessments at the following junctions:
 - a. Junction 1 – Mortimers Lane/B3354 Winchester Road priority junction;
 - b. Junction 6 – B3354/ Winchester Road/B3037 Eastleigh Road/Botley Road/Stubbington Way traffic signal-controlled junction;
 - c. Junction 14 – Mortimers Lane/Knowle Lane priority junction; and
 - d. Junction 15 – Mortimers Lane/Pembers Farm Avenue priority junction.
 - iii. Response to the list of committed developments provided via email on the 14 February 2024 and whether these are appropriate to be included, partially included, or not included at all within the junction capacity assessments in addition to base traffic.
- 3.13 A third pre-app response was received dated 20 April 2024 from the LHA at HCC with respect to the TN that advised:
- i. The trip rates and trip distribution methodology are agreed although the trip rates to be used within the submitted TA should be those submitted in the SN issued on the 12 January 2024;
 - ii. The scope of junction capacity assessments is agreed to be:
 - a. Mortimers Lane/ B3354 Winchester Road priority junction;
 - b. B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way traffic signal-controlled junction;
 - c. Mortimers Lane/ Knowle Lane priority junction; and
 - d. Mortimers Lane/ Pembers Farm Avenue priority junction.

- iii. Regarding committed mitigation proposals at the junctions confirmed for further capacity assessment, the LHA confirmed that there are no physical proposals at any of the junctions, except for the proposals to improve pedestrian and cycle facilities on Mortimers Lane and Eastleigh Road. It also advised that S106 contributions are agreed in the One Horton Heath planning applications towards mitigation at Mortimers Lane/ B3354 Winchester Road priority junction and B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way traffic signal-controlled junction. However, given these contributions are only partly secured currently (the larger outline application does not currently have a signed S106/ planning permission at the time of writing), and the impacts of the One Horton Heath development (if approved) will not be felt for some time. As such, no improvement designs have been progressed to date and therefore there are no specific schemes for the applicant to consider at this time; and
- iv. Inclusion of the committed developments as listed in Table 20 of the Technical Note 01 (March 2024) is agreed, but application O/20/89498 should be included in the committed development flows as it is anticipated this permission will be granted late spring/ early summer 2024. Application F/23/94668 (2,817sqm B2 extension to the East Horton Business Park off Knowle Lane) should also be included as advised previously.

3.14 The relevant correspondence is included at Appendix A.

Walking, Cycling, Horse Riding Assessment and Review

- 3.15 A Walking, Cycling, Horse-Riding Assessment and Review (WCHAR) document was prepared based on an agreed scope with the LHA at HCC and issued on the 21 May 2024. The WCHAR identified and number of issues with the local walking and cycling networks.
- 3.16 A response from the LHA at HCC was received on 11 June 2024 that advised that that WCHAR was of a good standard but needed to be updated to consider update policy such as the adopted of the LTP4 further details on some of routes was required such as widths and where there is deficiency in crossing facilities. I did not include any comments on the suitability of the proposed improvements identified above and any other measures the LHA may seek in addition, and this was requested via email on the 03 July 2024. A virtual meeting was subsequently arranged with the LHA at HCC to discuss the WCHAR on the 09 July 2024. Email correspondence received from the LHA at HCC to confirm the notes of the meeting advised that it agreed with Glanville response for recommendations ref 1 – 6, 8 & 9, 12 & 13 and 15 in the WCHAR. It also confirmed that it was agreeable to ref 7 and 14 from a Highways Development Planning point of view but would note that HCC's Countryside Services may have comments.
- 3.17 The email also confirmed that the LHA is Agreeable to ref 10 and 11 but that it will need to see a design as part of any future application to ensure that an in-principal scheme is deliverable. The LHA is also agreeable to ref 16, but again requires a design to be provided as part of the TA that include Botley Road between Stubbington Way/ B3037/ B3354 crossroads and Fair Oak Infant School.
- 3.18 The Highway Authority has subsequently provided plans for the proposed active travel improvements proposed to Botley Road, Winchester Road and Mortimers Lane and these are included at Appendix i and comprise of the following works as indicated in Chapter 2:

Winchester Road / Botley Road junction

- Widening of existing western footway into the carriageway to accommodate a shared use facility approx. 3m wide;
- Decluttering of street furniture;
- Carriageway realignment due to widening of the cycleway resulting in narrower traffic lanes;
- Installation of shared use cycle infrastructure;
- Tightening of radiuses of the Stubbington Way junction;
- Side road junctions upgraded to LTN 1/20 compliance for pedestrian / cycling priority;
- Fair Oak Court junction formalisation for vehicles and cyclists; and
- Pelican crossings upgraded to Toucan.

Winchester Road

- Widening of existing western footway into the carriageway to accommodate a shared use facility approx. 3m wide;
- Decluttering of street furniture;
- Carriageway realignment due to widening of the cycleway resulting in narrower traffic lanes;
- Installation of shared use cycle infrastructure;
- Side road junctions upgraded to LTN 1/20 compliance for pedestrian / cycling priority;
- Fair Oak Court junction formalisation for vehicles and cyclists; and
- Pelican crossing upgraded to Toucan outside Esso garage.

Eastleigh Road

- Widening of existing western footway into the carriageway to accommodate a shared use facility approx. 3m wide;
- Decluttering of street furniture;
- Carriageway realignment due to widening of the cycleway resulting in narrower traffic lanes;
- Formalisation of existing parking; and
- Advanced stop lines for cyclists.

Fair Oaks Road

- Widening of existing western footway into the carriageway to accommodate a shared use facility approx. 3m wide;
- Decluttering of street furniture;
- Carriageway realignment due to widening of the cycleway resulting in narrower traffic lanes;
- Installation of shared use cycle infrastructure;
- Side road junctions upgraded to LTN 1/20 compliance for pedestrian / cycling priority; and
- Installation of refuge islands appropriate for cyclist widths.

3.19 Chapter 6 describes in detail the proposed off-site pedestrian / cycle / public transport improvements that are considered necessary to provide continuous / suitable cycle connections between the site and the schools on Botley Road. These are attached including for an overarching plan that shows the existing cycle routes, residential streets considered suitable for cycling, the HCC active travel improvement scheme and the cycle and public transport improvements proposed by the site. The design of the off-site pedestrian / cycle / public transport improvements proposed by the site have been subject to a preliminary review by the LHA at HCC and amended as appropriate.

- 3.20 With these holistic active travel and public transport improvement in place, it is considered that there will be continuous pedestrian and cycle connections from the site to the Fair Oaks village centre and local schools via Mortimers Lane and Winchester Road / Botley Road. Alternatively, residents could choose to use the quieter residential streets located between Mortimers Lane and Stubbington Way to access the village centre and local schools. Whilst these residential roads do not have any specific cycle facilities, they are considered suitable of on-carriageway use as vehicles speeds are likely to be around 20mph and that the volume of daily traffic using the roads will be less than 2,000 per day. These are the thresholds that LTN 1/20 advises that roads are acceptable for on-carriageway use as per Figure 4.1 of the document.



4.0 Accessibility

- 4.1 As set out in Chapter 2, the Eastleigh Borough Council Local Plan identifies Fair Oak as a level 3 settlement, but it is also located within 8.0km cycling / driving distance of the three level 1 & 2 settlements of Eastleigh, Chandler's Ford and Hedge End and considered to be accessible to these settlements by bike and public transport.
- 4.2 There is a relatively large local centre in Fair Oak and there are good local sport and recreation facilities including some associated with local schools such as Wyvern School, which are available to the public. There are three Sheffield style cycle stands provided at the southern end and two on the northern end of the section of Summerland's Road between Fair Oak Road and Brook Road where several local facilities, including a Post Office and One Stop convenience store, a pharmacy and other retail units are located.
- 4.3 Fair Oak has a range of community facilities including community halls. Infant, junior and secondary schools are located at the Wyvern College site. A youth facility is provided at Blackberry Drive and the Sherwood Surgery provided at Fair Oak Road.
- 4.4 It is understood that the Eastleigh Borough Council Local Plan considers that there is very little industry opportunities provided in Fair Oak and Horton Heath Parish Council area. However, of the industry provision that is provided within the Fair Oak and Horton Heath Parish Council area, two employment facilities are provided near the site on Knowle Lane, comprising of the Deer Park Farm Industrial Estate and the East Horton Business Park. The development site therefore provides the opportunity for existing and future employees at Deer Park Farm Industrial Estate and the Horton Heath Business Park to purchase a dwelling near to these facilities and travel shorter distances by car and / or walk or cycle.
- 4.5 Most facilities and amenities in Fair Oak are located within two kilometres (a 25-minute walking distance of the site, or a seven-minute cycle ride based upon an average walking speed of 80 metres per minute and an average cycling speed of 270 metres a minute).
- 4.6 The DfT document Manual for Street (MfS) published in 2007 states that walking offers the greatest potential to replace short car trips, particularly those under two kilometres are within the normal range.
- 4.7 CIHT's 'Planning for Cycling' (2015) document and 'Local Transport Note – Cycle Infrastructure Design' (LTN 1/20) states that 5 miles (approximately 8km) is an achievable distance to cycle for most people. LTN 1/20 also states that the typical cycle speed is 10mph, equivalent to 270m per minute.
- 4.8 The local amenities and facilities, which are considered local to the site such as schools, shops, chemists, banks and food outlets are summarised in Table 2 below and shown Figure 1. Note: All distances are approximate and assume use of existing footways / proposed cycle improvements between the site and the facility or amenity.

Table 2: Local Facilities (30-minute walking distance)

Facility	Distance (m) From the Centre of the Site	Approximate Walking Time (minutes)	Approximate Cycle Time (minutes)
Bus stop	730	9	3
Stokewood Surgery	2400	30	9
Deer Park Farm Industrial Estate	850	11	3
East Horton Business Park	850	11	3
Fair Oak Infant and Junior School	1900	24	7
Tesco Express and Esso Petrol Station	1300	16	6
Wyvern Day nursery	1900	24	7
Fair Oak Village Centre on Fair Oak Road (includes bus stops, takeaways, a pub, restaurant, butchers, hairdressers, pharmacy, Post Office and retail units)	1600	20	6
Library	1800	23	6
Village Hall	1900	24	6
Knowle Hill Park open area and skate park	1500	19	6
Fair Oak Squash club	1900	24	6
Wyvern College Gym (open to public)	1900	24	7

- 4.9 Further facilities, within a 30-minute cycle distance of the site (equivalent to 8.0km distance) are shown in Figure 2. These include Lapstone Playing Fields and Tennis Courts, Chalcroft Business Park; Hedge End Railway Station; Lower Upham; Bishop's Waltham, Eastleigh Town Centre, Woodside Road Industrial Estate; Barton Park Industrial Estate; several education facilities and Southampton Airport. The cycling catchment area is shown in Figure 2.

Walking, Cycling and Horse-Riding Assessment (WCHAR)

- 4.10 As detailed in Chapter 3, a WCHAR has been prepared based on an agreed scope with LHA and carried out in accordance with the HCC Technical Guidance Note TG19 – Walking, Cycling and Horse-Riding Assessment and Review (WCHAR).
- 4.11 The scope of the study area has been considered in detail and consideration of the scale of development, as well as the number, type and location of amenities and facilities available within Fair Oak and further afield has been taken into consideration.
- 4.12 The study is shown in Appendix E of the WCHAR report, together with the likely key walking routes are summarised below (and are shown in Figure 8 of the WCHAR):
- Route 1 – west to the bus stops on Mortimers Lane;
 - Route 2 – west to Fair Oak village centre;
 - Route 3 – to Fair Oak Infant and Junior School, Wyvern College, Wyvern Day Nursery and Gym (via Mortiers Lane, residential streets or Knowle Park);
 - Route 4 – south to Knowle Park;
 - Route 5 – south to Knowle Lane employment area;
 - Route 6 – west to Stokewood Surgery and Kings School; and
 - Route 7 - north towards Crowdhill and Colden Common.

- 4.13 The study is shown in Appendix E of the WCHAR, together with the likely key cycling routes are summarised below (and are shown in Figure 9):
- Route 7 – north to Crowdhill and Colden Common;
 - Route 8 - south to Hedge End railway station, Chalcroft Business Park; and
 - Route 9 – west to Eastleigh Town centre.
- 4.14 The study is shown in Appendix E of the WCHAR.
- 4.15 As advised in Chapter 2, the WCHAR was issued to the LHA on the 21 May 2024. In general, it is concluded that the available pedestrians' routes were overall 'Moderate to Good' and except for any recommended actions indicated in the 'User Opportunities', there were no obvious, significant barriers that might otherwise discourage pedestrians from using them.
- 4.16 The WCHAR also considered that the cycling routes assessed was determined where the whole 'Moderate' although some sections, such as the advisory on-carriageway cycle lanes were determined to be 'Poor' on Eastleigh Road were determined to be poor. Notwithstanding, the WCHAR considered, except for any recommended actions indicated in the 'User Opportunities', there were no obvious, significant barriers that might otherwise discourage cyclists from using the assessed routes
- 4.17 The WCHAR has been updated to consider the HCC Active Travel Improvements proposed in Fair Oaks as identified in Chapter 2 and shown at Appendix i and the off-site mitigation proposed by the site as described in Chapter 6.
- 4.18 It is considered that the existing and proposed pedestrian and cycle infrastructure proposed to be provided by the LHA at HCC and the site will provide safe and suitable routes from the site to the local services, facilities and amenities detailed in Table 2 above.

Bus Services

- 4.19 A Public Transport figure, showing the bus routes and the closest bus stops in the vicinity of the site are included in Figure 3.
- 4.20 The closest existing bus stop is located on Mortimers Lane, named 'Bradshaw Close', approximately 730m to the west from the centre of the site, which is equivalent to a 9-minute walk. This bus stop is served by bus route 69 and route 649. Bus route 69 runs between Winchester to the north and Fareham to the south. The westbound bus stop is provided with shelter, seating, bus timetable information, a flag and a pole. The eastbound bus stop is provided with a flag, pole and bus timetable information.
- 4.21 As set out in detailed in Chapter 6, the development proposals include for the provision of new westbound and eastbound bus stops located between Mortimers Lane's junctions with Knowle Lane the Pembers Hill Farm residential scheme within the vicinity of the existing uncontrolled pedestrian refuge island crossing facility in place at this location. This includes for the provision of four Sheffield stand cycle parking spaces near the bus stop on the southern side of the Mortimers Lane carriageway. The proposed new bus stops are located circa 400 metres walking distance metres of the centre of the development site and within 400 metres walking distance of the existing dwellings within the Pembers Hill Farm development and those to the south accessed at Knowle Lane. The new bus stops are also materially closer to the existing employment opportunities that available on Knowle Lane to the south (circa 550 – 600 metres compared to circa 750-800 metres), in comparison to the existing bus stop provision in place on Mortimers Lane.

- 4.22 Further services are available from 'The Square' bus stops in the centre of Fair Oak on Fair Oak Road, 1.4km west of the site access. Both stops are provided with flags with timetabling information and real-time public transport information. The westbound stop additionally provides sheltered seating, whilst the eastbound stop provides four cycle parking spaces.
- 4.23 These stops are served by the 2, 3 and 69 bus services, as well as the bus stops located on the B3354 – Botley Road to the south of the entrance to Wyvern College and Fair Oaks Junior. The off-site mitigation proposals include for the provision of two Sheffield Stands at the back of the proposed shared footway / cycleway at the bus stop located on the western side of the carriageway near the accesses to Wyvern College and the Fair Oaks Junior and Infants School.
- 4.24 The services at each bus stop are tabulated below, along with the first and last buses from the stops.

Table 3: Bus Services from Bradshaw Close and The Square

Bus Service	Route	Frequency (peak)			Operator
		Weekdays	Saturday	Sunday	
Bradshaw Close					
69	Winchester – Fair Oak – Bishops Waltham – Fareham	1 per hour (07:23-19:11) [3 additional services on Friday evenings]	1 per hour (08:02-23:38)	3 per day in each direction (08:53, 10:21, 11:51 westbound and 15:43, 17:13, 18:42 eastbound)	Stagecoach
649 (school service)	Swanmore Technology College – Bishops Waltham – Botley	1 per day in each direction (07:41 & 15:33)	-	-	Stagecoach
The Square					
2	Southampton – Portswood – Swaythling – Eastleigh – Fair Oak	4 per hour (05:46-23:18)	3-4 per hour (06:50-23:18)	2 per hour (07:25-22:31)	Blue Star Bus
3	Southampton – Hedge End – Botley – Boorley Park – Eastleigh	1 per hour (06:24-19:24)	1 per hour (07:13-17:35)	Every 80 minutes (08:28-16:08)	Blue Star Bus
69	Winchester – Fair Oak – Bishops Waltham – Fareham	1 per hour (07:22-19:10) [3 additional services on Friday evenings]	1 per hour (08:01-23:37)	3 per day in each direction (08:52, 10:20, 11:50 westbound and 15:44, 17:14, 18:43 eastbound)	Stagecoach

- 4.25 It is considered that the provision of both existing and proposed Sheffield stands at the existing and proposed bus stops on Mortimers Lane, Fair Oak Road and Botley Road complies with LTN 1/20 'Cycle Infrastructure Design' and paragraph 11.6.5 which advises: -
Bus stops should also be considered as locations where cycle parking has potential to fulfil a role as an intermodal option (Fig 11.11), particularly in less dense suburban and rural locations where bus routes may be further from people's homes or places of work. High-quality interurban bus routes or limited stop express routes may draw users from a further catchment than the traditional 5 or 10-minute walking distance hinterland normally assumed for bus services. Central bus hubs will also have a large catchment area where the choice of routes may be significantly better than what is available within walking distance from a residential area.
- 4.26 It is therefore considered that future and existing residents and employees who travel to the Deer Park Farm Industrial Estate and the Horton Heath Business park will be provided with opportunities to walk or cycle a shorter distance to the proposed new bus stops on Mortimers Lane; or to walk or cycle via the proposed active travel improvements proposed by both the development proposal and the LHA to the bus stops located on Fair Oak Roads and Botley Road to travel by bus to the wider health, employment, leisure, education, leisure and transport facilities located in Eastleigh town centre, Southampton city centre, Winchester city centre and Fareham town centre.

Rail Services

- 4.27 A Public Transport figure, showing the closest railway stations to the site is included in Figure 3.

Hedge End Railway Station

- 4.28 Hedge End Railway Station is located approximately 5.0km to the south of the site equivalent to a 16-minute cycle journey.
- 4.29 This station is located on the Eastleigh-Fareham line and is managed by South Western Railway. The station is category B in terms of accessibility and there is a level access to Platform 1 but access to Platform 2 is via a stepped footbridge. There is a 96-space station car park (including four accessible spaces) located at this station and there are 54 cycle parking spaces provided in racks. These cycle spaces are sheltered and provided with CCTV.

Eastleigh Railway Station

- 4.30 Eastleigh Railway Station is located approximately 5.7km to the west of the site equivalent to a 21-minute cycle journey.
- 4.31 Eastleigh Railway Station is category A in terms of accessibility, and the station has step-free access to all platforms. There is a 133-space station car park (including four accessible spaces) located at this station and parking charges apply. In addition, there are 130 cycle parking spaces provided in racks and stands. These cycle spaces are sheltered and provided with CCTV.

Services

- 4.32 The services available from Hedge End and Eastleigh are summarised in Tables 4 and 5.

Table 4: Hedge End – Rail Service Summary

Route	Frequency (peak)	Destination	Typical Journey Time
Northbound	1 per hour	Eastleigh	7 minutes
		Winchester	16 minutes
		Basingstoke	36 minutes
		London Waterloo	88 minutes
Southbound	2 per hour	Botley	4 minutes
		Fareham	12 minutes
		Fratton	32 minutes
		Portsmouth Harbour	40 minutes

Table 5: Eastleigh – Rail Service Summary

Route	Frequency (peak)	Destination	Typical Journey Time
Northbound (to London)	2 per hour	Winchester	9 minutes
		Basingstoke	27 minutes
		London Waterloo	78 minutes
Southbound (to Portsmouth)	2 per hour	Botley	11 minutes
		Fareham	19 minutes
		Fratton	39 minutes
		Portsmouth Harbour	47 minutes
Southbound (to Southampton)	2 per hour	Southampton Airport Parkway	4 minutes
		Southampton Central	12 minutes

- 4.33 It is considered that the initial or later stages of a journey by car but the main journey by train is a sustainable mode of travel as it will result in less distances travelled by car. It is therefore considered that the railway stations at Hedge End and Eastleigh provide the opportunity for future residents to travel to these stations by car and or bike with onward connections to wider employment, health, leisure, education and retail opportunities located in London, Southampton city centre, Southampton Airport, Portsmouth, Winchester and Basingstoke.

Multi-Use Mobility Hub

- 4.34 The proposed multi-functional hub will comprise up to 350m² and is proposed to be an ancillary use to the main residential development. The exact use is still under consideration and will be informed by engagement with the local community. This hub could include vehicle charging points, an Automated Teller Machine (ATM) or other facilities subject to local views / commercial interest. However, the purpose of this use is to primarily serve the residents of the development and to reduce the reliance on a private car. Therefore, it is considered that majority of trips generated by this use will be by walking and cycling by the residents of the development reducing the propensity for off-site travel and residents from nearby streets.

Community Transport

- 4.35 The Bishopstoke and Fair Oaks Good Neighbours scheme provides access to hospital, GP, dental and optician medical facilities and appointments are made by phone or email. It operates Monday to Friday (but generally not evenings) and bookings hours are 0900 to 1700 hours, Monday to Friday.
- 4.36 Connect Transport, formally known as Dial-a-Ride, is a bookable door-to-door accessible transport service which operates across Borough of Eastleigh, for people who find it difficult or impossible to use ordinary bus services. This service is jointly funded Eastleigh Borough Council in partnership with HCC.
- 4.37 Eastleigh Borough Council also offer a local Medical Transport Taxi if residents have difficulty using public transport to get to a hospital, medical centre or GP surgery, The Medical Transport Taxi operates seven days a week and is available if residents are either attending a medical appointment or visiting friends or relatives in hospital. Appointments can be made by phone or emails and the fare from Fair Oaks is advised to be between £6 and £22.40 depending on the hospital, medical centre or GP that is being visited.

Summary

- 4.38 Two employment facilities are provided near the site on Knowle Lane, comprising of the Deer Park Farm Industrial Estate, the East Horton Business Park and the under-construction employment development at Land East of Knowle Lane (ref. F/23/94668). The development site therefore provides the opportunity for existing and future employees at Deer Park Farm Industrial Estate and / or the Horton Heath Business Park to purchase a dwelling at the site near to these facilities and travel shorter distances by car and / or walk or cycle.
- 4.39 With the holistic active travel and public transport improvement in place proposed by the LHA at HCC and the site, it is considered that there will be continuous pedestrian and cycle connections from the site to the Fair Oaks village centre and local schools via Mortimers Lane and Winchester Road / Botley Road. Alternatively, residents could choose to use the quieter residential streets located between Mortimers Lane and Stubbington Way to access the village centre and local schools. Whilst these residential streets do not have any specific cycle facilities, they are considered suitable for all users to cycle on-carriageway as vehicle speeds are likely to be around 20mph and that the volume of daily traffic using the roads will be less than 2,000 per day. These are the thresholds that LTN 1/20 advises that roads are acceptable for on-carriageway use as per Figure 4.1 of the document.
- 4.40 The site and the village of Fair Oaks are located within 8.0km cycling / driving distance of three level 1 & 2 settlements of Eastleigh, Chandler's Ford and Hedge End and considered to be accessible to these settlements by bike and public transport.
- 4.41 The 69-bus service will be able to be accessed from new bus stops on Mortimers Lane located within 400 metres walking distance of the approximate site centre. A further three bus services are available within a reasonable walking and cycling distance of the site and the existing and proposed cycle stands at the bus stops on Fair Oaks Road and Botley Road will provide the opportunity for both existing and future residents to carry out the initial or later part of their journeys by bike with onwards and return journeys by bus to Eastleigh, Southampton, Winchester and Fareham.

- 4.42 The railway stations at Hedge End and Eastleigh provide the opportunity for future residents to travel to these stations by car and or bike with onward connections to wider employment, health, leisure, education and retail opportunities located in London, Southampton city centre, Southampton Airport, Portsmouth, Winchester and Basingstoke.
- 4.43 There are several community transport opportunities provided within Fair Oak, provided via the Connect Transport funded by both EBC and HCC, which provide door-to-door accessible transport. One Community also offer residents of Hedge End, Eastleigh and the surrounding villages the opportunity to hire mobility equipment for short and long term, with training provided.
- 4.44 It is understood that there are currently no Electric Vehicle Charging points exist within Fair Oak. The site will include the provision of electric charging points at the mobility hub and the dwellings available for the use of future users to encourage the use of low and ultra-low emission vehicles when travelling to and from the site.
- 4.45 It is acknowledged that future users of the site will use private vehicles to travel to and from the site for some journeys. However, it is likely that future users of the site will not just comprise of trips by single individuals, but partners, couples and families. It is understood that HCC also runs its own liftshare scheme, Hants Carshare that is free to join with registration via email or Facebook account.
- 4.46 The proposed multi-functional hub will reduce the propensity for off-site travel and for residents from nearby streets to travel less distance to this facility when compared to the distances to the amenities and facilities in the centre of Fair Oak.
- 4.47 A Framework Residential Travel Plan will be submitted alongside this Transport Assessment which sets out the measures and initiatives, monitoring and implementation strategy to be included in the Full Residential Travel Plan which will come forward for the proposed development. This will promote sustainable travel and reduce the number of vehicle trips associated with the development.
- 4.48 It is concluded that the application site is accessibly located as the existing and proposed walking, cycling and public transport opportunities provide realistic active travel and sustainable transport choices to local and wider destinations and reduce the dependence on travel by car, also supported by the measures, initiatives, targets and monitoring proposals which will be agreed with the LHA through the determination process, as part of the Framework Residential Travel Plan.

5.0 Personal Injury Collision Analysis

5.1 A Technical Note dated 22 March was submitted to the LHA at HCC including for percentage impact assessments and a detailed review of personal injury collision (PIC) data at 15 junctions to confirm the junctions be considered further in the TA. The LHA confirmed in its response dated 30 April 2024 that the TA should consider PIC patterns at the following junctions for a three-year study period. However, the pre-application response continued to advise that based on an initial review and current information available, there do not appear to be any areas where development traffic would unacceptably exacerbate existing / known accidents. A copy of the TN dated 22 March 2024, and the LHA response dated 30 April 2024 is included at Appendix A.

5.2 Noting the LHA comments that it did not appear to be any adverse PIC patterns, the TA has continued to assess the PIC for the latest available three-year study period for the following agreed junctions.

- 1) Mortimers Lane / B3354 Winchester Road priority junction;
- 2) B3354 Winchester Road / B3037 Eastleigh Road / Botley Road / Stubbington Way traffic signal-controlled junction;
- 3) Mortimers Lane / Knowle Lane priority junction; and
- 4) Mortimers Lane / Pembers Farm junction.

5.3 The data available provided by Hampshire Constabulary is for a period between 30th September 2020 to 30th September 2023. The full collision data is included in Appendix D.

5.4 A comprehensive analysis of PIC data for the pedestrian and cycling routes agreed to be assessed is included in the accompanying WCHAR.

Mortimers Lane / B3354 Winchester Road

5.5 This section describes PICs recorded to have occurred at the Mortimers Lane / B3354 Winchester Road priority junction.

5.6 One collision occurred at this junction on 01/07/2019 at 10:14 and involved a cyclist sustaining a slight injury. The cyclist turned left from Mortimers Lane onto Winchester Road and slipped on a slippery surface.

5.7 As only one PIC occurred in the study period, it is considered there is no adverse highway safety issue associated with the junction. As the development proposes the introduction of off-carriageway cycle facilities along Mortimers Lane and Winchester Road, this will further reduce the likelihood of PICs arising from cyclists.

B3354 Winchester Road / B3037 Eastleigh Road / Botley Road / Stubbington Way

5.8 This section describes PICs recorded to have occurred at the B3354 Winchester Road / B3037 Eastleigh Road / Botley Road / Stubbington Way traffic signal-controlled junction;

5.9 One collision occurred at this junction on 31/01/2019 at 15:28 and involved a car driver sustaining a slight injury. A car turning right from the B3037 Eastleigh Road failed to judge the other cars speed or failed to look properly and collided with a car travelling northwest along Botley Road.

- 5.10 A second collision occurred at this junction on 27/05/2019 at 15:52 and resulted in a car driver sustaining a slight injury. The PIC occurred because of a car travelling east along Botley Road prematurely moving off from the junction and colliding with the rear of a car travelling in the same direction. The PIC occurred because of failure to look, distractions or being careless / reckless.
- 5.11 The third PIC occurred on 01/04/2022 at 16:04 and resulted in a pedestrian sustaining a slight injury. The pedestrian failed to look properly when crossing the road and was struck by a car travelling westbound.
- 5.12 A further collision occurred at this junction on 28/10/2022 at 16:12 and involved a motorcyclist sustaining a serious injury. The car driver carelessly turned right into Stubbington Way without giving way to the motorcyclist, resulting in a collision.
- 5.13 It is considered that there is no adverse highway safety issue associated with the current operation of the junction, given many of the PICs arose from error / poor judgement on behalf of one or more of the persons involved. However, improvements are proposed at the junction in the form of improved crossings and wider footways / cycleways, which will help to address any perceived issues at the junction.

Knowle Lane/Mortimers Lane

- 5.14 This section describes PICs recorded to have occurred at the Knowle Lane/Mortimer's Lane junction.
- 5.15 One collision occurred at this junction on 14/05/2023 at 4.15pm and involved a cyclist sustaining slight injury. The road surface was dry. The collision report states that a car was travelling west along B3037 Mortimers Lane and overtook a cyclist. The car then turned left into Knowle Lane, causing a cyclist to collide with the nearside of a car.
- 5.16 It is considered that there is no adverse highway safety issue associated with the current operation of the junction. It should also be noted that comprehensive cycle improvements schemes are proposed by both the LHA and the development proposals on Mortimers Lane by way of a continuous three-metre-wide shared footway between the development site and Winchester Road that will help address any perceived issues with PICs involving cyclists.

Mortimers Lane / Pembers Farm

- 5.17 No recorded PICs have occurred at the Mortimers Lane / Pembers Farm junction in the study period.

Conclusions

- 5.18 It is concluded that the collisions recorded within the study area and study time period mainly occurred due to driver error, poor turning manoeuvre, alcohol impairment and speeding and most collisions were slight.
- 5.19 It is considered that the proposed development will add a very low number of vehicle trips to these junctions when compared to extant volumes of traffic, and it is considered that this will not lead to a material impact on the extant operation and safety of these junctions.

6.0 Proposed Development

6.1 The proposals seek Outline planning permission for:

"Outline application for up to 245 dwellings (Use Class C3), up to 350sqm multi-functional space, mobility infrastructure (Use Class Sui Generis), with associated open space, landscaping, infrastructure, and vehicular access off Mortimers Lane, Fair Oak; All matters reserved except for vehicular access off Mortimers Lane and pedestrian / cycle connections to the site boundary"

6.2 As an Outline planning application, matters pertaining to on-site layout, including car parking, cycle parking, refuse collection, access for emergency vehicles and servicing, are not matters for determination at this stage. Therefore, these matters are not referenced in this Transport Assessment. However, the Applicant acknowledges that the site will need to be designed in accordance with the relevant standards and design guidance at the time of a Reserved Matters application.

6.3 An indicative masterplan is provided at Appendix F.

Vehicular Access

6.4 Access to the site is proposed at Mortimers Lane via a proposed new ghost-island right turn lane priority junction with 3.5m wide running lanes and a 3.0m wide right turn lane, as shown at Appendix G.

6.5 ATC surveys undertaken either side of the site access recorded 85thile vehicle approach speeds of 46.0mph eastbound towards the access and 42.1mph westbound towards the access. The traffic survey results are provided at Appendix H.

6.6 The HCC's Technical Guidance Note 'TG3 - Stopping Sight Distances and Visibility Splays' advised that based on the recorded 85thile vehicle approach speeds, visibility splays of 133m should be provided looking to the left and 106m looking to the right upon egress from the access.

6.7 The access design proposals have evolved further to extensive pre-application discussions with the LHA at HCC and a Departure from Standard application is agreed in principle to provide the emerging visibility splays at a an 'x' distance of 2.4m. The relevant correspondence is included at Appendix A.

6.8 The right-hand emerging visibility splay at a 'X' distance set back of 2.4 metres is achievable to the nearside kerbline, whilst the left-hand splay is achievable to the approximate centreline of the road, this being an acceptable offset in this instance owing to the proposed splitter islands to the west of the access which would prevent any overtaking manoeuvres along this stretch of road.

6.9 Subject to a Traffic Regulation Order, it is proposed to relocate the existing gateway feature and 30mph speed limit signage along the site frontage to the east of the new junction, thereby helping to reduce vehicle speeds in the vicinity of the site access.

6.10 All highway works and visibility splays specified above are deliverable within land under the control of the Applicant or the extents of the adopted highway.

Swept Path Analysis

- 6.11 As shown on the swept path analysis drawing 8230679/6201_B at Appendix G, sufficient space is afforded for 11.2m refuse vehicles to enter and exit the site via the new junction with Mortimers Lane whilst passing a car, these being the largest vehicles which would access the site on a regular basis. Drawing 8230679/6202_B shows that the new 3.5m running lanes provide sufficient space to allow a 16.5m articulated vehicle to travel eastbound and westbound along Mortimers Lane.

Pedestrian and Cycle Access

- 6.12 As shown at Appendix G, pedestrian access to the site will be delivered through the provision of 2.0m wide footways either side of the site access, with a tactile crossing to connect the eastern and western sides of the footway. To the east, the footways will tie-in to the 1.8m footways delivered along the southern side of Mortimers Lane as part of the works consented by way of Application No. F/22/94435 at Mortimers Farm.
- 6.13 To the west, the 2.0m footway will tie-in to a new 3.0m wide shared footway / cycleway heading westbound for an approximate distance of 160 metres to connect to the cycle improvements proposed on Mortimers Lane by the LHA at HCC, as set out in Chapter 2 providing a continuous connection to Winchester Road, Fair Oak village centre, Wyvern College and Fair Oaks Junior and Infant Schools. To the east, the proposed access will connect with the 1.8m wide footway proposed to be delivered by the Mortimers Farm planning application.

Multi-Use Mobility Hub

- 6.14 The proposed multi-functional hub will comprise up to 350m² and is proposed to be an ancillary use to the main residential development. The exact use is still under consideration and will be informed by engagement with the local community. This hub could include vehicle charging points, an Automated Teller Machine (ATM) or other facilities subject to local views / commercial interest. However, the purpose of this use is to primarily serve the residents of the development and to reduce the reliance on a private car.

Off-Site Highway Works

- 6.15 As shown on the drawings at Appendix J, several off-site highway works are proposed to be delivered as part of the proposed development, primarily to improve pedestrian, cycle and public transport connectivity between the site, Winchester Road, Fair Oak village centre and Wyvern College and Fair Oak Junior and Infants School on Botley Road. These have been reviewed with consideration to the observations and recommendations of the WCHAR and pre-application advice from the LHA at HCC including its proposed active travel improvements proposed to be implemented in the village of Fair Oaks.
- 6.16 The preliminary design of the proposed off-site cycle and public transport works have been subject to pre-application feedback from the LHA at HCC and updated as appropriate. It is considered that these off-site works will both complement and enhance HCC's proposed cycle improvement scheme in Fair Oaks.

- 6.17 Drawings 8230678/6017_A and 8230679/6105_C show the extent of HCC's cycle improvement scheme in Fair Oaks; the proposed development's off-site mitigation and the footway works proposed to be provided by Mortimers Farm to the east of the development site.
- 6.18 Drawing 8230679/6106_D shows the proposed three metre shared footway / cycleway extending for a distance of circa 160 metres to the west of the site and how it ties-in to the HCC cycle improvement scheme near its junction with Pembers Hill Farm, as well as the delivery of on-carriageway cycle markings along Knowle Lane.
- 6.19 Drawing 8230679/6106_D also shows the provision of new westbound and eastbound bus stops located between Mortimers Lane's junctions with Knowle Lane to the west and the Pembers Hill Farm residential scheme to the east within the vicinity of the existing uncontrolled pedestrian refuge island crossing facility in place at this location.
- 6.20 The scheme proposal includes the provision of a new footway that is proposed to be circa 1.8 metres in width to the eastbound bus stop on the northern side of the Mortimers Lane carriageway to the west of the existing footway that is in place provided by the Pembers Farm scheme. Due to the drainage ditch that is in place at this location, it is considered that the provision of the footway extension to the bus stop will need to provide pedestrian guardrails (or similar) for pedestrian safety. It considered that the proposed footway and bus stops are deliverable within the adopted highway extents. The bus stop arrangements are shown as per HCC 11/C/195 STD.
- 6.21 Two Sheffield stand cycle parking spaces are shown near the bus stop on the southern side of the Mortimers Lane carriageway. It is not considered that the verge / proposed footway on the northern side of the carriageway is sufficiently wide to accommodate Sheffield cycle stands. This proposed arrangement therefore requires cyclists to park their bikes / cycles at the facilities proposed to be provided at the bus stop on the southern side of the carriageway and then cross Mortimers Lane to use the eastbound northern bus stop. However, this is similar to the existing arrangements already in place at the bus stops in Fair Oak village centre located on Fair Oaks Road near the Cricketers Arm PH.
- 6.22 It is considered that the location of the bus stops on Mortimers Lane, as shown on Drawing 6106 Rev D is appropriate because bus / public transport users will only need to cross the Mortimers Lane carriageway once to catch / depart a bus depending on where they reside. The proposed new bus stops are located circa 400 metres walking distance metres of the centre of the development site and within 400 metres walking distance of the existing dwellings within the Pembers Hill Farm development and those to the south accessed at Knowle Lane. The new bus stops are also materially closer to the existing employment opportunities that available on Knowle Lane to the south (circa 550 – 600 metres compared to circa 750-800 metres), in comparison to the existing bus stop provision in place on Mortimers Lane.

- 6.23 Drawing 8230679/6107_C shows a proposed Toucan crossing at the southern arm of the B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way Signalised crossroads junction. It also shows the proposed removal of a refuge island on Stubbington Way arm to deliver a 3.0m wide footway / cycleway and widening of the western side of Botley Road to deliver a 3.0m wide footway / cycleway extending circa 450 metres to the south of the signalised crossroads junction to connect to Wyvern College and Fair Oak Infants School to the south. Drawing 8230679/6107_C also shows the proposal to convert the existing footway located on the southern side of the Stubbington Way carriageway to a shared use footway / cycleway leading back from the signalised crossroads junction for an approximate distance of 100 metres. It is not proposed to amend the existing footway width, and this is considered appropriate and consistent with the HCC Active Travel improvement schemes when constraints dictate the provision of a shared footway / cycleway that is narrower than three metres.
- 6.24 Drawing 8230679/6108 is a Continuation of 6106_D, including on-carriageway cycle markings and delivery of an ASL at the Botley Road / Knowle Lane / Burnetts Lane junction.
- 6.25 As shown at Appendix J, given the tightening of the radii and widening of the footway on the Stubbington Way and Botley Road arms to provide a footway / cycleway at the junction, swept path analysis has been undertaken of an 11.2m refuse vehicle entering and exiting the respective arms as shown on Drawing 8230679/6203.
- 6.26 To ensure that refuse vehicles have sufficient space to manoeuvre into the Stubbington Way arm past any queuing vehicles, the existing double yellow lines on Stubbington Way will be extended to prevent parking in the vicinity of the junction.
- 6.27 It is considered that proposed off-site mitigation will offer future and existing residents' alternative routes from the site to facilities located to the south and west, via the continuous footway / cycleway along Mortimers Lane or along the quiet residential streets between Stubbington Way and Mortimers Lane. The proposals will therefore improve connectivity from the site to the destinations which will be most used by residents, namely schools, shops and workplaces.

Framework Travel Plan

- 6.28 A Framework Residential Travel Plan will be submitted alongside this Transport Assessment which sets out the measures and initiatives, monitoring and implementation strategy to be included in the Full Residential Travel Plan which will come forward for the proposed development.

7.0 Forecast Traffic Generation

- 7.1 This Chapter describes the methodology used to forecast the trip generation for 245 residential dwellings and a 350m² multi-use multi-functional space, mobility infrastructure hub for all modes of travel.

Residential Dwellings

- 7.2 It was agreed with the LHA as part of the second pre-application, dated 29th January 2024 that development traffic distribution will be based on work, education, leisure and retail-based trip purposes, which are based on a 'decide and provide' approach.
- 7.3 The details are included in the pre-application document submitted to the LHA (see Appendix A). The principles and steps for establishing development generated development trips by purpose are listed below as follows:
- Predict residential trips using the TRICS database or local traffic survey data;
 - Separate trip by purpose using National Travel Survey – work, primary education, secondary education, leisure, and shopping;
 - Identify key destinations for trips for each trip purpose using Census travel to work data, locations of employer linked sites, and locations and proximity to existing facilities; and
 - Assign trips to these areas by walking, cycling, public transport, car/driving and all other modes.

Trip Rates and Trip Generation

- 7.4 In their April 2024 pre-application response, the LHA confirmed that either the site could use the TRICS database to determine the traffic generation potential of the site or undertake a turning count survey at the recently constructed development at Pembers Farm Avenue, just to the northwest of the site to provide a robust assessment of local traffic generation characteristics.
- 7.5 A turning count survey was undertaken at the Pembers Farm Avenue / Mortimers Lane junction in November 2023, at which juncture 242 dwellings were understood to be occupied on the site – see Appendix H for all traffic survey results.
- 7.6 These surveys identified 140 two-way trips in the AM peak hour and 104 two-way trips in the PM peak hour. Per dwelling vehicle trip rates can be calculated by dividing these recorded traffic flows by the 242 occupied dwellings on Pembers Farm Avenue. The traffic generation and resultant trip rates are included in Table 6 below.

Table 6: Pembers Farm Development Trip Rates and Trip Generation

Period	Inbound	Outbound	Two-way
Recorded Traffic Generation			
AM Peak (08:00-09:00)	52	88	140
PM Peak (17:00-18:00)	64	40	104
Trip Rate (per dwelling)			
AM Peak (08:00-09:00)	0.215	0.364	0.579
PM Peak (17:00-18:00)	0.264	0.165	0.429

- 7.7 Applying the above trip rates to the 245 proposed dwellings on the site subject of this report gives the following traffic generation:

Table 7: Proposed Vehicular Trip Generation

Period	Vehicle Trip Generation (per dwelling)		
	Inbound	Outbound	Two-way
AM Peak (08:00-09:00)	53	89	142
PM Peak (17:00-18:00)	65	40	105

- 7.8 The proposed development is therefore anticipated to generate 142 two-way vehicle movements in the AM peak hour and 105 two-way vehicle movements in the PM peak hour.

Active Travel and Public Transport Trips

- 7.9 In their pre-application response, the LHA noted that a potential methodology for calculating the number of pedestrian, cycle and public transport trips would be to apply the vehicular trip rates and factor these by the mode shares identified in the 2011 Census or 2022 National Travel Survey.
- 7.10 The 2011 Census database output for Output area Eastleigh 008, in which the site is located, identifies the following mode share for the area:

Table 8: 2011 Census Database Output – MSOA Eastleigh 008

Mode	Respondents to the Census	Percentage
Work mainly at or from home	0	0.00%
Underground, metro, light rail or tram	0	0.00%
Train	6	0.52%
Bus, minibus or coach	32	2.76%
Taxi	2	0.17%
Motorcycle, scooter or moped	16	1.38%
Driving a car or van	815	70.32%
Passenger in a car or van	82	7.08%
Bicycle	35	3.02%
On foot	169	14.58%
Other method of travel to work	2	0.17%
Total	1,159	100.00%

- 7.11 Applying the percentages set out in Table 8 to the vehicular trip generation set out in Table 7, it is possible to calculate the anticipated modal share of pedestrians, cyclists and public transport users:

Table 9: Trip Generation – All Modes

Period	Inbound	Outbound	Two-way
Pedestrian Trip Generation			
AM Peak (08:00-09:00)	8	13	21
PM Peak (17:00-18:00)	9	6	15
Cycle Trip Generation			
AM Peak (08:00-09:00)	2	3	5
PM Peak (17:00-18:00)	2	1	3
Public Transport Trip Generation			
AM Peak (08:00-09:00)	2	3	5
PM Peak (17:00-18:00)	2	1	3

Trip Purpose and Assignment

- 7.12 The methodology to establish the breakdown of trips by trip purpose is summarised below.
- 7.13 The percentage for each journey purpose has been derived from the 2022 National Travel Survey (NTS) using the 'Trip start time by trip purpose' dataset (NTS0502), using the peak periods of 0800-0900 and 1700-1800 for England. The NTS has eight journey purpose categories (commuting, business, education, escort education, shopping, other/personal business, visiting friends/entertainment/sport and holiday).
- 7.14 These trips have been simplified into five categories:
- Employment - business and commuting;
 - Primary School education - escort education;
 - Secondary education;
 - Leisure – other/personal business, visiting friends, entertainment, sport, and holiday; and
 - Shopping.
- 7.15 Table 10 below shows the trip purpose percentage breakdown for the AM peak and PM peak periods.

Table 11: Trip Purpose by Time Period

NTS 0502 Trip purpose	AM Peak	PM Peak
Employment	19.8%	31.8%
Primary education	26.0%	2.4%
Secondary and other education	27.7%	3.50%
Leisure	22.5%	50.1%
Shopping	4.0%	12.2%

- 7.16 Applying the vehicle trips set out in Table 7 to these percentages gives the following breakdown of trips by trip purpose.

Table 11: Vehicle Trips by Trip Purpose

Period	Number of Vehicle Trips by Trip Purpose		
	Inbound	Outbound	Two-way
	Work		
AM Peak (08:00-09:00)	10	18	28
PM Peak (17:00-18:00)	20	13	33
	Education – Primary		
AM Peak (08:00-09:00)	14	23	37
PM Peak (17:00-18:00)	2	1	3
	Education – Secondary		
AM Peak (08:00-09:00)	15	25	40
PM Peak (17:00-18:00)	3	1	4
	Leisure		
AM Peak (08:00-09:00)	12	20	32
PM Peak (17:00-18:00)	32	20	52
	Shopping		
AM Peak (08:00-09:00)	2	4	6
PM Peak (17:00-18:00)	8	5	13

7.17 The assignment of these vehicle trips by trip purpose is explored further in Chapter 8.

Multi-functional Hub

- 7.18 The proposed multi-functional hub will comprise up to 350m² and is proposed to be an ancillary use to the main residential development. The exact use is still under consideration and will be informed by engagement with the local community. This hub could include vehicle charging points, an Automated Teller Machine (ATM) or other facilities subject to local views / commercial interest.
- 7.19 However, the purpose of this use is to primarily serve the residents of the development and to reduce the reliance on a private car. Therefore, it is considered that majority of trips generated by this use will be by walking and cycling by the residents of the development and from nearby streets and it is not considered that it will attract any material level of vehicle trips.
- 7.20 This approach was considered acceptable for other committed development sites with Local Centres, including Land to the North and East of Winchester Street and Land to the West of Woodhouse Lane (planning ref. O/18/83634) and Land at Burnetts Lane, Fir Tree Lane and Allington Lane, Eastleigh, SO50 7BZ (planning ref. O/20/89498).
- 7.21 The LHA raised no objection to the assumption that the hub would not generate peak hour trips, stating 'the applicant does not feel this facility will generate any trips external to the site during peak hours'.
- 7.22 Therefore, no external trips have been assumed for this use.

8.0 Forecast Trip Distribution

- 8.1 The distribution of vehicular trips for the residential dwellings has been carried out based on the methodology set out in the section below.

Residential Trip Distribution

- 8.2 The residential trip distribution has been considered per the trip purpose. The detailed calculations of development generated traffic are included in Appendix K.

Employment

- 8.3 The forecast distribution of employment trips is based on Nomis 2011 Census 'Journey to work data' for Eastleigh 008 (an area in which the site is located). The route distribution was based on Google Maps and the destination was based on a review of major employment sites in each output area. These trips have distributed as shown in Table 12 below:

Table 12: Employment Trip Vehicle Distribution

Route ref.	Route	Proportion of traffic	Destination
A	Mortimers Lane East	9%	East Hampshire, eastern parts of Winchester Borough, Portsmouth
B	Winchester Road South (via Knowle Lane)	13%	Fareham, eastern parts of Southampton, Hamble-le-Rice
C	Bubb Lane (via Knowle Lane)	4%	Herald Industrial Estate and Hedge End Retail Park
D	Allington Lane	20%	Southampton
E	Twyford Road	10%	Boyatt Wood, Bishopstoke, Chandlers Ford
F	Winchester Road North/Junction 11	23%	Winchester, Test Valley, Basingstoke and Deane
G	Church Lane	4%	Hitlingbury, Hursley
H	Station Hill	6%	North Stoneham, Eastleigh retail area
I	Leigh Road	6%	New Forest Borough, Shirley Warren
J	Mortimers Lane West/Fair Oak Road	5%	Fair Oak village centre

Primary Education

- 8.4 The forecast distribution of primary school education-based trips has considered the proximity of local primary schools to the site and journey times from the site. This includes the following schools:
- Fair Oak Infants and Junior School – 2.2km; and
 - Stoke Park Infant School – 4.2km.
- 8.5 For the purposes of the assessment, it is assumed that most vehicle trips will be to Fair Oak Junior and Infant School, due to the proximity to this school and a small proportion will head to Stoke Park Primary School.
- 8.6 Traffic to Fair Oak Junior and Infant School will head west along Mortimers Lane and South along B3354. Traffic towards Stoke Park Primary School will head along Mortimers Lane, south along B3354 and west along B303/Fair Oak Road. Some traffic may turn off at Fair Oak Road, but for the purposes of the assessment it is assumed that all traffic to Stoke Park school will head along B3037/Fair Oak Road. See Appendix L for further details.

Secondary and Further Education

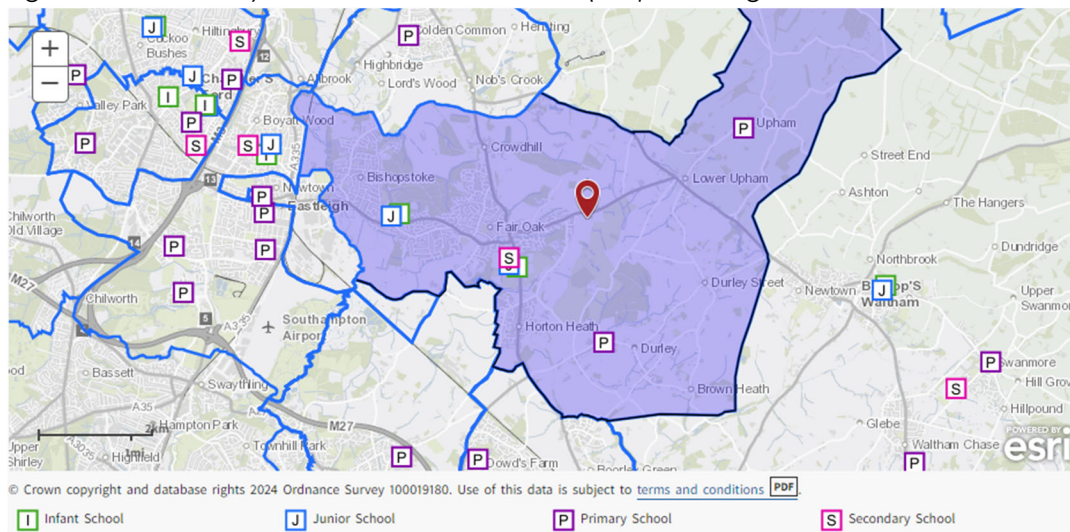
- 8.7 The distribution of secondary school and further education trips has considered the list of education establishments outlined in Table 13 below.

Table 13: Summary of Educational Establishments in the Vicinity of the Site

Destination	Distance (km)
Wyvern College	2.0
The King's School (Independent)	2.6
Eastleigh College	6.9
Crestwood Community School	7.5
Barton Peveril Sixth Form College and Secondary School	7.3
University of Southampton	11.2
Bitterne Park Six Form College	10.6
Woodlands Community College	9.5

- 8.8 Of the above schools, the site is in closest proximity to Wyvern College, with the site only being in the catchment area of Wyvern College, as shown in Figure 10 below. Therefore, most secondary school age children at the site would be expected to travel to Wyvern College.

Figure 10: Secondary School Catchment Areas (maps.hants.gov.uk/SchoolCatchmentAreaFinder)



- 8.9 Notwithstanding the above catchment area, it is often the case that pupils will attend schools further afield, particularly in the early stages of residential development, when pupils living at the site would continue to attend their previous schools and these trips would more likely be undertaken by driving or be part of a trip for other purposes.
- 8.10 For a robust assessment therefore, it has been assumed that only 50% of traffic would travel to Wyvern School, with 10% heading along Allington Lane to The King's School (an independent school), Bitterne Park Six Form College or Woodlands Community College.
- 8.11 The remaining 40% of trips have been anticipated to head west along B3037/Fair Oak Road and south along A335/Station Hill to Eastleigh College, Barton Peveril Six Form College and Secondary School, Crestwood Community School and the University of Southampton.
- 8.12 It is also likely that majority of vehicular trips to the secondary and further education facilities will be drop-off trips or linked trips associated with other trip purposes. It is, therefore, considered that specifically accounting for vehicular trips to secondary schools / further education establishments includes an element of double counting, and this assessment is robust.

Leisure

- 8.13 The leisure trip purpose category includes a range of different purposes such as other/personal business, visiting friends, entertainment, sports, and holidays. It is, therefore, difficult to accurately establish where the residents will go due to a variety of possibilities. Therefore, for the purposes of the assessment, the forecast distribution of leisure trips has been based on the review of the closest facilities including several community and sports facilities. Therefore, the distribution of development traffic will be as follows (see Appendix K for further details):
- 10% along Mortimers Lane East towards Bishop's Waltham;
 - 5% along Knowle Lane towards Hedge End and Portsmouth;
 - 20% along Winchester Road/B3354 north towards Winchester
 - 5% along Botley Road/B3354 south to Lapstone Playing Fields and Tennis Courts, Wyvern College Gym;
 - 30% to Southampton City Centre via Allington Lane; and,
 - 30% to Eastleigh City Centre via B3037/Eastleigh Road

Shopping

8.14 The forecast distribution of shopping purpose trips has considered the proximity of the local facilities in the vicinity of the site. For the purposes of the assessment, it is assumed that the likely vehicle trips will be distributed equally to the following areas (see Appendix K for further details):

- 20% to Fair Oak Village Centre – for daily/convenience shopping;
- 20% to Hedge End Retail Park;
- 20% to Eastleigh Town Centre;
- 20% to Winchester; and
- 20% to Southampton.



9.0 Modelling Inputs

9.1 This Chapter of the TA sets out details of the agreed modelling inputs, parameters, study area, traffic surveys and traffic flow diagrams.

Assessment Years

9.2 The following assessment years were agreed with the LHA at pre-application stage:

- Base Year (from traffic survey data); and
- Future Year.

Future Year Assessment Assumptions

9.3 TEMPro is often used to growth baseline traffic as part of Transport Assessments. However, this inherently includes some level of committed development in its growth rate factors. As such, to avoid double counting, only committed developments have been assumed. As shown below, there are a significant number of large-scale committed developments in the area which have been accounted for in this Transport Assessment, so the assessment is considered robust.

9.4 The following committed developments were agreed to be included in the junction modelling assessment at pre-application stage:

Table 14: Committed Development Inclusions

Planning Ref.	Site Name	Status	Development details
O/15/77190	Pembers Hill Farm, Mortimers Lane, Fair Oak, Eastleigh SO50 7EA	Under construction - 242 occupied as of December 2023	250 dwellings
F/23/94668	Land East of Knowle Lane, Fair Oak, SO50 7DZ	Permission granted (14/07/2023) Under construction	Construction of 5no. general industrial buildings (Use Class B2) containing 15 separate units, including landscaping, parking and associated works (amended description)
F/22/94435	Mortimers Farm, Mortimers Lane, Fair Oak, Eastleigh, SO50 7EA	Permission granted (11/09/2023)	Alterations and extensions and conversion of 4 existing barns including Grade II listed Threshing Barn and Granary to create 4 dwellings, demolition of modern barn and construction of 5 new dwellings with associated gardens parking and car port/bat barn new sewerage treatment and new footpath on the southern side of Mortimers Lane
O/20/89498	Land at Burnetts Lane, Fir Tree Lane and Allington Lane, Eastleigh, SO50 7BZ	Not yet determined. The site is allocated in the EBC Local Plan HH1	Up to 2500 dwellings, a local centre (up to 3.1 ha), further non-residential floor space (up to 5 ha), a primary school, key infrastructure, access from Allington Lane, Fir Tree Lane and Burnetts Lane with improvements to junction Fir Tree Lane/Burnetts Lane

Planning Ref.	Site Name	Status	Development details
O/12/71514	Land to North and East of Boorley Green, Winchester Road, Botley, Southampton SO32 2UA	Permission granted (12/10/2012) Partially completed / Under construction	Development of 1400 homes, extension to existing hotel (including new conference and leisure facilities, 44 no. new bedrooms and car parking), creation of new local centre (incorporating energy centre, pub, assisted living accommodation, retail and employment floorspace, including change of use of Braxells Farm House to employment), primary school, multipurpose community building, sports and open space facilities including play areas, allotments and Multi-Use Games Area, and changing facilities
O/15/75953	Boorley Gardens	Approximately 50 occupations	Outline application for up to 680 residential units, mixed use comprising of retail and/or community/healthcare use, land for two-form entry primary school, formal and informal open space and sports pitches. New access off Winchester Road, associated on-site roads, infrastructure and footpaths/cycleways. Detailed matters for determination access (all other matters reserved - scale, appearance, landscaping and layout).
F/19/84937	Maddoxford Lane	Allowed at Appeal - Under construction	Demolition of an existing residential dwelling and associated farm buildings and construction of a residential development of 73 dwellings, associated landscaping, and amenity areas with access from Maddoxford Lane.
O/16/78389	Crow's Nest Lane	Under construction - some occupations. Construction to be completed by Autumn 2023	Residential development of up to 50no. dwellings with green infrastructure, hard and soft landscape and associated infrastructure, including internal access roads, footpaths/cycle routes, play space and relocation of gas governor and creation of new access on to Maddoxford Lane.
O/18/83634	Woodhouse Lane	Permission granted 06/09/2019	Hybrid planning application for the proposed development of a residential and education led site with access off Woodhouse Lane. Outline: Up to 605 residential dwellings, a local centre, pedestrian and cycle links, a pedestrian SINC crossing, drainage, public open space, landscaping, other supporting infrastructure and mitigation measures (including noise attenuation) associated with the development.
F/19/86233	Land to the North and East of Boorley Green, Winchester Road, Botley, SO32 2UA	Under construction	Demolition of existing buildings and dwelling with the construction of a mixed-use retail and residential development comprising an A1 retail convenience store and flexible retail floorspace (A1 and A2 Use Class), and 67 residential units

Planning Ref.	Site Name	Status	Development details
			(C3 Use Class) with associated access, parking, landscaping, drainage, and ancillary infrastructure including pedestrian and cycle links.

Modelling Scenarios

9.5 The following scenarios will be modelled:

- Base Year.
- Future Year + Committed Development Flows.
- Future Year + Committed Development + Development Flows.

Modelling Time Periods

9.6 The following time periods will be modelled:

- Weekday AM Peak: 08:00-09:00; and
- Weekday PM Peak: 17:00-18:00.

Study Area

9.7 The following study area has been agreed with the LHA, this being any junction which would be subject to an increase in traffic of 5% or more because of the development¹:

- **Junction 0** – Site Access / Mortimers Lane (new junction);
- **Junction 1** – Mortimers Lane/ B3354 Winchester Road priority junction;
- **Junction 6** – B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way traffic signal-controlled junction;
- **Junction 14** – Mortimers Lane/ Knowle Lane priority junction; and
- **Junction 15** – Mortimers Lane/ Pembers Farm Avenue priority junction.

Junction Geometry

9.8 Junction geometry diagrams have been provided for all junctions within the study area which are to be modelled as part of this application, all of which are attached at Appendix M.

Flow Diagrams

9.9 Traffic flow diagrams have been prepared for all modelling scenarios, as shown at Appendix L.

¹ Note – junction numbers refer to the traffic flow diagrams spreadsheets. The scoping study area included 15 off-site junctions; however, it was agreed with the LHA that only five off-site junctions need to be modelled given the proposed development's traffic impact at these junctions.

10.0 Modelling Outputs

- 10.1 Using the parameters and inputs set out in Chapter 9 above, this Chapter of the TA outlines the junction modelling results for all junctions in the study area.
- 10.2 Junctions 0, 1, 14 and 15 are all priority junctions and therefore have been modelled using the PICADY function in Junctions 10. Junction 6 is signalised and therefore has been modelled using Linsig. All junction modelling outputs are provided in full at Appendices N and O.
- 10.3 The capacity of a non-signalised junction is usually expressed in terms of its Ratio of Flow to capacity (RFC) value. The calculated capacities are an average and the values can vary about this average from day to day.
- 10.4 An RFC value typically lies between 0 and 1. An RFC of 1 indicates that the junction is operating at its maximum theoretical capacity, although it is commonly accepted that junctions do continue to operate above this level albeit with some delays. Where RFC values remain less than 0.85, the junction arm in question is considered to remain within operating capacity. An RFC value of 0.85 is the preferred maximum for operational capacity typically accepted by LHA's. Where developments cause junctions to operate over this preferred upper limit, mitigation measures may be required.

Junction 0 – Site Access / Mortimers Lane

Table 15: Site Access / Mortimers Lane Modelling Results

Arm / Movement	Weekday AM Peak		Weekday PM Peak	
	Queue (Veh)	RFC	Queue (Veh)	RFC
	Base Year			
Site Access Left	0.0	0.00	0.0	0.00
Site Access Right	0.0	0.00	0.0	0.00
Mortimers Lane Straight Ahead Right	0.0	0.00	0.0	0.00
	Future Year + Committed			
Site Access Left	0.0	0.00	0.0	0.00
Site Access Right	0.0	0.00	0.0	0.00
Mortimers Lane Straight Ahead Right	0.0	0.00	0.0	0.00
	Future Year + Committed + Development			
Site Access Left	0.2	0.14	0.1	0.06
Site Access Right	0.0	0.01	0.0	0.01
Mortimers Lane Straight Ahead Right	0.1	0.08	0.1	0.10

- 10.5 Table 16 shows that the site access is anticipated to operate well within its design capacity and that the maximum queue of vehicles is anticipated to be less than one vehicle when entering and exiting the site, for all time periods. On this basis it is considered that the site access would operate satisfactorily.

Junction 1 – Mortimers Lane/ B3354 Winchester Road

Table 17: Mortimers Lane/ B3354 Winchester Road Modelling Results – Existing

Arm / Movement	Weekday AM Peak		Weekday PM Peak	
	Queue (Veh)	RFC	Queue (Veh)	RFC
Base Year				
Mortimers Lane Left Right	1.1	0.52	1.8	0.65
Winchester Road Straight Ahead Right	2.1	0.62	1.4	0.51
Future Year + Committed				
Mortimers Lane Left Right	1.4	0.58	2.5	0.73
Winchester Road Straight Ahead Right	3.5	0.72	1.7	0.55
Future Year + Committed + Development				
Mortimers Lane Left Right	2.9	0.76	4.5	0.84
Winchester Road Straight Ahead Right	6.1	0.83	2.6	0.66

- 10.6 Table 18 shows that with the addition of development traffic, Junction 1 is anticipated to operate within its design capacity in the AM and PM peak, with a maximum RFC of 0.84 occurring on the Mortimers Lane arm and 0.83 on the Winchester Road arm.
- 10.7 Additional queuing would occur; however, this would be limited to a maximum of two additional vehicles on the Mortimers Lane arm and three on the Winchester Road arm compared to the without development scenario.
- 10.8 As part of the traffic surveys, queue surveys were undertaken at the junction, and these have been used to validate the queues modelled in Table 18.

Table 19: Queue Length Surveys – AM Peak

Time	Mortimers Lane	Winchester Road Right Turn
08:00	24	4
08:05	22	2
08:10	18	7
08:15	16	4
08:20	16	4
08:25	15	2
08:30	12	3
08:35	9	3
08:40	6	3
08:45	3	2
08:50	3	3
08:55	3	2
<u>Average</u>	<u>12.25</u>	<u>3.25</u>

Table 20: Queue Length Surveys – PM Peak

Time	Mortimers Lane	Winchester Road Right Turn
17:00	11	2
17:05	11	4
17:10	8	2
17:15	7	0
17:20	9	3
17:25	8	2
17:30	9	0
17:35	9	0
17:40	9	0
17:45	5	0
17:50	4	0
17:55	5	2
<u>Average</u>	<u>8.0</u>	<u>1.25</u>

- 10.9 As shown in the above tables, the queues on Winchester Road validate reasonably well against that modelled in Table 17. However, the queues on the Mortimers Lane arm do not validate particularly well.
- 10.10 Upon review of video footage of traffic surveys at the junction, it was evident that some queueing at the junction was because of the influence of features downstream which blocked traffic travelling southbound along Winchester Road:
- Right-turns into the ESSO filling station;
 - Signalised pedestrian crossing; and
 - Right-turns into Fair Oak Road.

Image 1: Winchester Road at ESSO Filling Station Looking Southbound (Google Maps)



- 10.11 Vehicles waiting to turn right into ESSO or Fair Oak Road from Winchester Road, or waiting at the pedestrian crossing, would create queueing on Winchester Road, blocking back to the Mortimers Lane junction and therefore preventing turning manoeuvres out of the minor arm of the junction.

Image 2: Vehicle Blocking at Mortimers Lane / Winchester Road Junction – 08:06



Image 3: Vehicle Blocking at Mortimers Lane / Winchester Road Junction – 08:15



- 10.12 Given the highest recorded queuing occurred at the junction during peak school drop-off times of 08:00-08:30, the pedestrian crossing would be called frequently during this period, and this is likely to be the cause of queueing at the junction as traffic would not be able to move freely along Botley Road.
- 10.13 As such, if the LHA consider it necessary to mitigate queueing on Mortimers Lane, KEEP CLEAR markings or yellow box markings could be provided at the Mortimers Lane / Winchester Road junction to allow vehicles to more easily exit Mortimers Lane.

- 10.14 Considering the above analysis, it is evident that the development would have a modest impact on capacity and queuing at the junction albeit the junction would remain within its preferred capacity, however, some soft mitigation could be delivered through some relatively simple line markings to reduce any queueing which occurs in practice.

Junction 6 – B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way

- 10.15 Signal timings and as-built drawings for Junction 6 have been sourced from HCC. HCC have advised that Junction 6 is MOVA (Microprocessor Optimised Vehicle Actuation) operated, however, owing to an existing fault, the junction is currently operating solely as VA (vehicle actuated).
- 10.16 The LinSig output for the existing arrangement Junction 6 is summarised below and provided in full at Appendix O. The results are presented in the tables below in Degree of Saturation (DOS)², Mean Max Queue (MMQ) and Practical Reserve Capacity (PRC)³.

*Table 18: Existing B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way
Signalised Junction – Base Year*

Movement	Base Year			
	AM Peak		PM Peak	
	DOS	MMQ	DOS	MMQ
B3354 (N) Entry Left Ahead Right	65.1%	11.0	83.8%	19.8
Stubbington Way Entry Right Left Ahead	76.3%	4.7	61.7%	3.4
B3354 (S) Entry Ahead Right Left	80.7: 80.7%	15.2	80.1: 80.1%	18.6
B3037 Eastleigh Road Entry Left Ahead Right	79.6%	11.6	85.6%	13.0
PRC	11.5%		5.1%	

*Table 19: Existing B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way
Signalised Junction – Future Year + Committed*

Movement	Future Year + Committed			
	AM Peak		PM Peak	
	DOS	MMQ	DOS	MMQ
B3354 (N) Entry Left Ahead Right	89.9%	14.5	106.7%	49.2
Stubbington Way Entry Right Left Ahead	84.8%	5.9	61.7%	3.4
B3354 (S) Entry Ahead Right Left	93.0: 93.0%	28.0	85.7: 85.7%	21.5
B3037 Eastleigh Road Entry Left Ahead Right	92.6%	16.5	104.7%	29.6
PRC	-3.3%		-18.5%	

² If an arm of a junction has a DOS of 90% or less, this is an indicator that the junction is operating satisfactorily, with minimal queues experienced.

³ PRC measures how much additional traffic could pass through a junction, whilst still maintaining a maximum DOS of 90%.

Table 20: Existing B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way
Signalised Junction – Future Year + Committed + Development

Movement	Future Year + Committed + Development			
	AM Peak		PM Peak	
	DOS	MMQ	DOS	MMQ
B3354 (N) Entry Left Ahead Right	105.2%	39.4	111.5%	63.5
Stubbington Way Entry Right Left Ahead	84.8%	5.9	61.7%	3.4
B3354 (S) Entry Ahead Right Left	108.8: 108.8%	67.4	114.2: 114.2%	77.7
B3037 Eastleigh Road Entry Left Ahead Right	108.4%	33.8	110.2%	40.6
PRC	-20.9%		-26.9%	

Table 21: Survey Results Summary

Average Queue Length (Veh)		
Arm	AM	PM
B3354 (North)	10	7
Stubbington Way	5	3
B3354 (South)	20	12
B3037 Eastleigh Road	7	15

- 10.17 The results above indicate that the junction is anticipated to be oversaturated in both peaks, without the development once committed development is taken into consideration.
- 10.18 Whilst this is expected to be exacerbated by the development in both peaks, the increase in queue lengths is modest for most movements, although there is a marked increase in queueing in the PM peak on "B3354 (S) Entry Ahead Right Left", from 22 PCU to 78 PCU.

HCC Mitigation

- 10.19 HCC have confirmed that proposals are currently being explored at Junction 6 to improve pedestrian and cycle connectivity at the junction. These draft works are shown at Appendix i and comprise the delivery of advanced cycle lanes on the eastern, southern and western arms of the junction, along with widening of the existing footways to provide footway/cycleways on each arm.
- 10.20 In addition, the works suggest the implementation of a short right turn lane on the northern side of the junction. The impact of the mitigation works is shown in the tables below.

Table 22: HCC Mitigation B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way Signalised Junction – Base Year

Movement	Base Year			
	AM Peak		PM Peak	
	DOS	MMQ	DOS	MMQ
B3354 (N) Entry Left Ahead Right	56.0: 56.0%	10.9	69.7: 69.7%	14.3
Stubbington Way Entry Right Left Ahead	80.7%	5.1	65.2%	3.6
B3354 (S) Entry Ahead Right Left	83.0: 83.0%	15.8	83.4: 83.4%	19.6
B3037 Eastleigh Road Entry Left Ahead Right	79.9%	11.7	82.5%	12.4
PRC	8.4%		7.9%	

Table 23: HCC Mitigation B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way Signalised Junction – Future Year + Committed

Movement	Future Year + Committed			
	AM Peak		PM Peak	
	DOS	MMQ	DOS	MMQ
B3354 (N) Entry Left Ahead Right	63.2: 63.2%	11.4	89.6: 89.6%	21.1
Stubbington Way Entry Right Left Ahead	89.6%	6.6	65.2%	3.6
B3354 (S) Entry Ahead Right Left	95.2: 95.2%	30.2	92.6: 92.6%	25.5
B3037 Eastleigh Road Entry Left Ahead Right	93.0%	16.7	93.8%	18.5
PRC	-5.8%		-4.2%	

Table 24: HCC Mitigation B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way Signalised Junction – Future Year + Committed + Development

Movement	Future Year + Committed + Development			
	AM Peak		PM Peak	
	DOS	MMQ	DOS	MMQ
B3354 (N) Entry Left Ahead Right	98.2: 98.2%	22.4	102.3: 102.3%	40.1
Stubbington Way Entry Right Left Ahead	89.6%	6.6	65.2%	3.6
B3354 (S) Entry Ahead Right Left	99.3: 99.3%	37.5	102.8: 102.8%	43.6
B3037 Eastleigh Road Entry Left Ahead Right	96.2%	19.4	102.6%	28.6
PRC	-10.3%		-14.3%	

- 10.21 Based on the above, it is evident that the proposed works at the junction would result in a marked increase in junction capacity compared to a with development without mitigation scenario, with an improvement of AM peak PRC by 10.6% and in the PM peak by 12.6%. In addition, queuing would reduce by up to 30 vehicles on some arms. It is anticipated that this is primarily because of the introduction of a short right-turn lane on the northern arm of the junction.

Proposed Mitigation

- 10.22 Conscious of the potential works to be delivered by HCC at Junction 6, a further mitigation solution has been prepared for the junction to further improve pedestrian and cycle connectivity towards the schools further to the south, as shown at Appendix J.
- 10.23 As set out in Chapter 6, this comprises the delivery of a 3.0m wide footway/cycleway on the western side of Botley Road, to its junction with Cotsalls and along the southern side of Stubbington Way. This will slightly narrow the approach lanes on the southern and eastern arms of the junction.
- 10.24 Accounting for these mitigation measures, the Linsig modelling has been updated and presented in the Tables below:

Table 25: Proposed Mitigation B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way Signalised Junction – Base Year

Movement	Base Year			
	AM Peak		PM Peak	
	DOS	MMQ	DOS	MMQ
B3354 (N) Entry Left Ahead Right	56.0: 56.0%	10.9	69.7: 69.7%	14.3
Stubbington Way Entry Right Left Ahead	77.1%	4.7	70.0%	3.8
B3354 (S) Entry Ahead Right Left	83.6: 83.6%	15.9	84.2: 84.2%	20.0
B3037 Eastleigh Road Entry Left Ahead Right	83.2%	12.3	82.5%	12.4
PRC	7.6%		6.9%	

Table 26: Proposed Mitigation B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way Signalised Junction – Future Year + Committed

Movement	Future Year + Committed			
	AM Peak		PM Peak	
	DOS	MMQ	DOS	MMQ
B3354 (N) Entry Left Ahead Right	64.6: 64.6%	11.4	91.7: 91.7%	21.9
Stubbington Way Entry Right Left Ahead	96.3%	7.9	70.0%	3.8
B3354 (S) Entry Ahead Right Left	96.0: 96.0%	31.3	93.4: 93.4%	26.0
B3037 Eastleigh Road Entry Left Ahead Right	93.0%	16.7	93.8%	18.5
PRC	-7.0%		-4.2%	

Table 27: Proposed Mitigation B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way Signalised Junction – Future Year + Committed + Development

Movement	Future Year + Committed + Development			
	AM Peak		PM Peak	
	DOS	MMQ	DOS	MMQ
B3354 (N) Entry Left Ahead Right	98.2: 98.2%	22.1	102.3: 102.3%	40.1
Stubbington Way Entry Right Left Ahead	96.3%	7.9	70.0%	3.8
B3354 (S) Entry Ahead Right Left	98.3: 98.3%	35.6	103.7: 103.7%	46.0
B3037 Eastleigh Road Entry Left Ahead Right	100.0%	22.8	102.6%	28.6
PRC	-10.8%		-15.2%	

- 10.25 Comparing the with development scenario in Table 27 to the without development scenario in Table 26, the proposed works would lead to a reduction in PRC at the junction of 3.8% in the AM peak and 11.0% in the PM peak.
- 10.26 Queues would increase but would not block back to any major junctions in the vicinity of Junction 6 such as Mortimers Lane or the access to the school. As such, the increased queueing would not lead to an unacceptable impact on highway safety in the context of paragraph 115 of the NPPF.
- 10.27 The purpose of the enhanced mitigation at the junction is to improve active travel connectivity, towards the schools south of the junction. It is noteworthy that no allowance has been made in the trip generation calculations for any modal shift which may arise because of these enhancements and therefore the traffic impact analysis undertaken is a robust assessment.
- 10.28 In any case, with the mitigation to be delivered by HCC and as part of the proposed development, the junction would operate with more capacity than if the junction was left in its current arrangement.
- 10.29 Furthermore, as noted in the LHA's pre-application response, '*contributions are agreed in the One Horton Heath planning applications towards mitigation at Mortimers Lane/ B3354 Winchester Road priority junction and B3354 Winchester Road/ B3037 Eastleigh Road/ Botley Road/ Stubbington Way traffic signal-controlled junction.*'.
- 10.30 The contributions are only partly secured currently at the time of writing and the LHA are of the view that the impacts of One Horton Heath would not be felt for some time. However, the LHA should have some comfort that, in the long-term, monies will be secured as part of that committed development which could be used to provide further improvements to the junctions.

Junction 14 – Mortimers Lane/ Knowle Lane

Table 28: Mortimers Lane/ Knowle Lane Modelling Results

Arm / Movement	Weekday AM Peak		Weekday PM Peak	
	Queue (Veh)	RFC	Queue (Veh)	RFC
	Base Year			
Knowle Lane Left	0.2	0.15	0.1	0.11
Knowle Lane Right	0.3	0.25	0.1	0.13
Mortimers Lane Straight Ahead Right	0.1	0.13	0.1	0.07
	Future Year + Committed			
Knowle Lane Left	0.2	0.17	0.2	0.13
Knowle Lane Right	0.4	0.26	0.2	0.13
Mortimers Lane Straight Ahead Right	0.2	0.15	0.1	0.08
	Future Year + Committed + Development			
Knowle Lane Left	0.2	0.18	0.2	0.14
Knowle Lane Right	0.4	0.29	0.2	0.15
Mortimers Lane Straight Ahead Right	0.2	0.16	0.1	0.08

- 10.31 Table 28 shows that Junction 14 is anticipated to operate well within its design capacity and that the maximum queue of vehicles is anticipated to be less than one vehicle when exiting the site, for all time periods.
- 10.32 Based on the above it is considered that the junction would operate satisfactorily and that no queuing would occur on either arm.

Junction 15 – Mortimers Lane/ Pembers Farm Avenue

Table 29: Mortimers Lane/ Pembers Farm Avenue Modelling Results

Arm / Movement	Weekday AM Peak		Weekday PM Peak	
	Queue (Veh)	RFC	Queue (Veh)	RFC
	Base Year			
Pembers Farm Avenue Left Right	0.2	0.15	0.1	0.07
Mortimers Lane Straight Ahead Right	0.1	0.06	0.1	0.08
	Future Year + Committed			
Pembers Farm Avenue Left Right	0.2	0.15	0.1	0.07
Mortimers Lane Straight Ahead Right	0.1	0.06	0.1	0.08
	Future Year + Committed + Development			
Pembers Farm Avenue Left Right	0.2	0.16	0.1	0.07
Mortimers Lane Straight Ahead Right	0.1	0.06	0.1	0.08

- 10.33 Table 29 shows that Junction 15 is anticipated to operate well within its design capacity and that no queuing is anticipated in all time periods.

- 10.34 Based on the above, it is considered that the junction would continue to operate satisfactorily once the proposed development is completed.

Summary

- 10.35 It has been demonstrated that all priority junctions within the agreed study area would continue to operate within their design capacity following the implementation of the proposed development or could be duly mitigated to do so.
- 10.36 Whilst the Botley Road / Stubbington Road signalised junction would operate above its design capacity in the future, this would be the case irrespective of whether the proposed development comes forward owing to the impact of committed developments in the area.
- 10.37 Furthermore, in line with the goals of their LTP4, HCC are bringing forward an active travel scheme at the junction to improve pedestrian and cycle connectivity. The proposals set out in this report would further enhance this active travel scheme, providing improved links from the site to the primary and secondary schools further to the south on Botley Road.
- 10.38 Given the evidence set out in the Chapter 9 above, it has been demonstrated that given the traffic impact and potential mitigation measures in place, the proposed development would not result in a severe cumulative impact on the local highway network or an unacceptable impact on highway safety in the context of paragraph 115 of the NPPF.

11.0 Policy Context

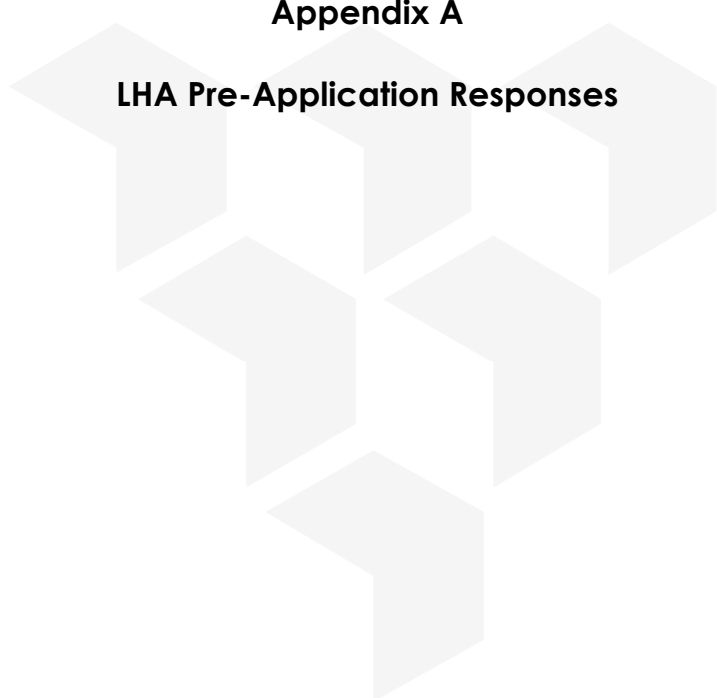
- 11.1 A comprehensive review of national, regional and local policy is set out in the accompanying WCHAR. The WCHAR reviewed the following documents.
- National Planning Policy Framework (NPPF) December 2023;
 - Gear Change: A Bold Vision for Walking and Cycling (2020);
 - Manual for streets and Manual for Streets 2;
 - GG142- Walking, cycling and horse-riding assessment and review (November 2019) Revision 0;
 - HCC Technical Guidance Note TG19 – Walking, Cycling and Horse-Riding Assessment and Review (WCHAR);
 - Eastleigh Borough Local Plan 2016-2036 (April 2022);
 - Hampshire Local Transport Plan (LPT 3);
 - Hampshire Local Transport Plan (LPT 4); and
 - Eastleigh Local Cycling and Walking Infrastructure Plan (LCWIP).
- 11.2 In general terms, national, regional and local policy require development proposals to demonstrate that they can
- 1) Deliver safe and appropriate access arrangements for all modes of travel;
 - 2) Are accessibly located or can be made to be accessibly located providing genuine choices for future residents and visitors to travel to and from the site for all trip purposes by sustainable modes of travel as genuine alternatives to single occupancy car travel given the type of development and location; and
 - 3) Will not result in any unacceptable impact on local highway safety or severe residual impacts on the operation of the road network.
- 11.3 It is concluded that safe and suitable access to the site can be provided via a proposed right turn lane ghost island priority junction with Mortimers Lane. Swept path assessments have also been provided which detail that servicing vehicles can access and egress the site in a safe and suitable manner.
- 11.4 The proposed multi-functional hub will reduce the propensity for off-site travel and for residents from nearby streets to travel less distance to this facility when compared to the distance to the amenities and facilities in the centre of Fair Oak.
- 11.5 It is concluded that the application site is accessibly located as the existing and proposed walking, cycling and public transport opportunities provide realistic active travel and sustainable transport choices to local and wider destinations and reduce the dependence on travel by car, also supported by the measures, initiatives, targets and monitoring proposals set out in the Framework Residential Travel Plan.
- 11.6 The cumulative impact on the local highway network is not forecast to be material and will not result in any adverse highway safety issues.

12.0 Conclusions

- 12.1 This Transport Assessment has been prepared by Glanville Consultants on behalf of Bloor Homes Limited to accompany an outline planning application for residential development of up to 245 dwellings, along with a multi-functional hub on Land South of Mortimers Lane, Fair Oak, Eastleigh.
- 12.2 The basis of this Transport Assessment has been scoped with the Local Highway Authority at Hampshire County Council, who have confirmed the appropriateness of the transportation work undertaken.
- 12.3 It is concluded that safe and suitable access to the site can be provided via a proposed right turn lane ghost island priority junction with Mortimers Lane. Swept path assessments have also been provided which detail that servicing vehicles can access and egress the site in a safe and suitable manner.
- 12.4 The proposed multi-use community will reduce the propensity for off-site travel and for residents from nearby streets to travel less distance to this facility when compared to the distances to the amenities and facilities in the centre of Fair Oak.
- 12.5 It is concluded that the application site is accessibly located as the existing and proposed walking, cycling and public transport opportunities provide realistic active travel and sustainable transport choices to local and wider destinations and reduce the dependence on travel by car, also supported by the measures, initiatives, targets and monitoring proposals set out in the Framework Residential Travel Plan.
- 12.6 The junction capacity assessments undertaken indicate that development trips will have a non-material impact on the local highway network.
- 12.7 It is finally concluded that there are no valid highway or transportation reasons which should prevent the proposed development.

Appendices





Appendix A

LHA Pre-Application Responses



Hampshire 2050
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Miguel Moya
Mode Transport Planning
(via email)

Enquiries to	Jon Huggett	My reference	6/3/9/320
Direct Line	0370 779 5397	Your reference	
Date	14 th September 2023	Email	jon.huggett2@hants.gov.uk

Dear Miguel,

Pre-application enquiry for 225 residential dwellings and Land South of Mortimers Lane, Fair Oak

Thank you for your pre-application enquiry in regards to the above site. We have reviewed the site and the submitted Initial Scoping Report and can provide the following comments.

Sustainable Access

Walking and Cycling

The site is located some distance from local shops and services, as well as the local schools, with Figure 3.2 showing that a majority of destinations are over 20 minutes walk from the site. The scoping report states that “more remote locations will see people being prepared to walk further to their end destination” however it is not clear that this would be the case and the distance to local facilities is likely to encourage short trips by private car rather than active travel.

With this in mind the quality of active travel provision connecting the site to the village centre and local schools will be important in determining the sustainability of the site. It should be noted that there is a scheme planned which will widen the southern footway on Mortimers Lane to at least 3m in width to provide a Shared Use Path.

The footway on the northern side of Mortimers Lane is intermittent and so will not likely be used for walking into the village centre although it does provide access to leisure routes and Public Rights of Way.

Director of Hampshire 2050
Gary Westbrook

With regards to Figure 3.3 it is not clear what the proposed cycle network is based on. Some of the routes are in the Eastleigh LCWIP however it should be noted that this is a long-term strategy for walking and cycling in the Borough with routes identified for future improvement. As such the routes should not be considered committed schemes at this stage.

Buses

The level of bus provision from the site is limited. Whilst the scoping report notes that there are regular services from the village centre the closest bus stops for these routes are over a kilometre from the site. The closest bus stops are served by the hourly no.69 service.

The accessibility of the site by bus is therefore limited and any future application will need to consider how this can be improved to reduce the reliance on the private car from any future development.

Summary

Overall the location of the site is considered likely to result in an overreliance on the private car, particularly given the distance to key local services such as schools, which are likely to preclude walking as a preferred option. Also, a lack of cycle routes in the area would encourage non-regular cyclists to use the private car to access shops and services; and limited options for public transport use for journeys further afield may also result in overreliance on the private car. Given the scale of the proposed development, the Highway Authority would likely require significant sustainable modes mitigation in order to consider the site acceptable.

Travel Plan

A Residential Travel Plan will need to be submitted with the application providing a strategy for encouraging travel by sustainable modes of travel from the site. The Travel Plan should be developed in accordance with HCC's Guide to Development Related Travel Plans - <https://documents.hants.gov.uk/transport/guide-to-travel-plans.pdf>

Site Access

With regards to the visibility splays, in line with HCC's Technical Guidance 3, these should be calculated on the basis of speeds at the y distance for the speed of the road from the proposed access in either direction. For more information please see:

<https://documents.hants.gov.uk/transport/TG3TechnicalGuidanceNote-StoppingSightDistancesandVisibilitySplays.pdf>

In addition it would be beneficial for the visibility splay plan to include the highway boundary so that it can be confirmed that visibility is achievable without the need for third party land.

Given the proposals for a 3m wide Shared Use Path along the southern side of Mortimers Lane it is requested that any future access includes a 3m wide

footway connection from the site to the existing footway provision which currently ends opposite the access to the Pembers Farm development.

The access arrangements have been reviewed by an HCC engineer who has provided the following comments:

Junction Form/Layout:

1. A priority ghost island right turn lane junction is consistent with other junctions along Mortimers Lane (B3037) and therefore could be acceptable providing that the junction has sufficient capacity to cope with the anticipated traffic generated by the development.
 - a. The designer has selected the junction type based on flows using the approximate junction provision selection in Figure 2.3.1, CD123, DMRB.
 - b. Junction geometry shall accord to CD123, DMRB.
 - c. Junction geometry has been based design speed of 70kph (40mph). However, a large part of the junction currently sits within a national speed limit.
 - i. Consideration should be given to relocating the 30mph speed limit terminal sign further east beyond the extent of the right turn lane. The 30mph speed limit sign will be in the centre of the proposed junction and will need to be moved anyway.
 - ii. HCC's Traffic Management team should be consulted about extending the 30mph limit further east.
 - d. Is reservoir queuing needed? A deceleration length of 50 metres has been proposed, which is slightly more than required for a 70kph design speed.
 - e. 5.6.3, CD123 (DMRB): At ghost island junctions where no diverge or merge tapers are provided, the corner radii should be 15 metres followed by a corner taper of 1:6, over a distance of 30 metres.
 - f. Given that 85%ile speeds were 49.3 (Location 2 - Westbound), the designer should consider a 1:25 taper (85kph) for the eastern side of the junction
 - i. The designer is encouraged to create a smoother transition back to the existing kerb line on the eastern side.
 - g. The stagger distance between the proposed junction and a private access (Little Dower House) to the north-west is less

than 50 metres. However, it is extremely unlikely that vehicle movements will occur between the two.

2. Confirmation is required as to whether an RSA Stage 1 has been undertaken.

ATC (85%ile speed measurements):

3. ATC data is comprehensive, but it appears that the developer has placed the speed measuring equipment at the location of the 30mph speed limit sign. TG3:
 - a. Measurements should be taken at a point just before the scheme length, or in respect of observed vehicle speeds.
 - b. Measurements should not be taken at or near junctions, accesses or changes in speed limits where 'free flow' conditions may be compromised.
 - c. Measurements shall be taken at both ends of the scheme so that traffic approaching from both directions is covered.

Visibility:

4. The proposed 2.4m 'x' distance is not in accordance with TG3.
 - a. 3.4.1, TG3: All other priority junctions where the speed limit is above 40mph = 4.5m 'x' distance.
 - b. DfS will be required if a 4.5m 'x' is unachievable.
 - i. This could have a greater impact on Trees and hedgerows.

Drainage:

5. Drainage along the southern kerbline is verge runoff, including highway grips.
 - a. This might need to be changed to gullies depending on levels given that existing channel kerbs will be replaced with full height kerbs.
6. There is an ordinary water course on the northern side of Mortimers Lane
 - a. <https://www.hants.gov.uk/landplanningandenvironment/environment/flooding/changewatercourse>

Impact on trees

Our Arboricultural Team have been consulted on the proposals with respect to the impact on trees and have provided the following response:

There are some valuable trees bordering Mortimer's Lane at this location. There is limited tree detail within the supplied report. The tree survey plan indicates that the trees surveyed are limited to the red line boundary for the planning application only. This plan does not currently show tree removals, however I appreciate a number of trees are likely to be impacted looking the visibility splays for the access. Consideration will need to be given to how visibility will be achieved and if tree removal is the only option.

Impact to trees is likely to be greater than that of the visibility splays. The proposed 2m footpath is in close proximity to trees, as is the kerb realignment to the north of Mortimers Lane, therefore consideration needs to be given to the impact any proposed construction will have and if it is compatible with tree retention.

The application will need to meet the submission requirements as outlined in section 4 of TG15 Trees, Landscape and Ecology. I would encourage the developer to read and understand this document early to avoid issues down the line.

Personal Injury Accidents (PIA)

It should be noted that the County Council require PIA data to be provided from Hampshire Constabulary rather than Crashmap and as such this data should be included in the Transport Assessment. In addition the scope of the analysis should be widened to include:

- Knowle Lane
- Winchester Road-Botely Road between Colden Common and Horton Heath
- Eastleigh Road-Fair Oak Road

Highway Impact

Whilst the scoping report sets out the findings of the Transport Assessment undertaken to consider the impact of the Strategic Growth Option (SGO), it should be noted that the SGO was recommended to be removed by the inspector as part of the Examination of the Eastleigh Local Plan 2016-2036.

Therefore the impact that the proposed development would have on the local highway network needs to be assessed independently of the wider SGO site.

The proposed trip rates as set out in Table 5.1 are lower than would be expected from a site such as this. From a review of information provided the TRICS analysis includes one site that is from a Neighbourhood Centre which wouldn't reflect the trip generation from this site. In addition, some of the surveys may have been undertaken during various Covid restrictions and therefore may not be representative of typical trip generation. Any such surveys should be removed from the analysis (the TRICS program highlights such surveys).

Given the highway impact will need to be assessed independently of previous work associated with the SGO, a methodology for trip distribution and assignment will be required. Once this has been determined the scope of junctions to be assessed can then be confirmed. It is anticipated, however that the scope of junction assessment is likely to include at least the following:

- Mortimers Lane/Knowle Lane priority junction
- Mortimers Lane/Winchester Road priority junction
- Botley Road/Eastleigh Road signal junction

Conclusions

Specific points have been raised above regarding the information that has been submitted at this stage. I trust that the above is clear but do not hesitate to contact Jon Huggett if you wish to discuss this further.

Yours sincerely

Gemma McCart
Team Leader - Development Planning Team

Response to the Local Highway Authority's Comments – Pre-App Ref. 6/3/9/320 Land South of Mortimers Lane, Fair Oak, Eastleigh

Glanville has been appointed by Bloor Homes Southern (herein 'the Applicant') to provide transport planning advice in respect of a residential development of up to 250 dwellings and a supporting community / multi-use hub (herein known as 'the site') on land to the south of Mortimers Lane in Fair Oak, Eastleigh.

A Transport Scoping Note was previously accompanied a pre-application submission to the Highway Authority at Hampshire County Council (HCC) for the site (pre-app ref.6/3.9/320) by Mode Transport. The Highway Authority provided a pre-app response dated 14th September 2023 and a response to these comments is provided below.

Where possible, the purpose of this note is to seek to obtain certainty on the proposed scope and methodology of TA with the Highway Authority at Hampshire County Council with respect to:

- (i) Scope of study areas and methodology:
 - a. Walking, Cycling and Public Transport Networks in Fair Oak;
 - b. Personal Injury Collisions;
 - c. Trip Rates;
 - d. Trip Assignment and Distribution
 - e. Committed Developments / Growth Rates; and
 - f. Junction capacity assessments.

Further clarification is sought from the applicant with respects to the Highway Authority's view in its pre-app response dated 14th September 2023 to explain why it currently considers the location of the site is likely to result in an overreliance on the private car, particularly when compared to the consented and now constructed Pembers Farm development located opposite the site that is considered to be located at similar walking and cycling distances to the amenities and facilities located within Fair Oak and access to the same level of bus services and frequency.

The applicant would also be grateful for any views from the Highway Authority may be able to provide to confirm the mitigation measures, infrastructure improvements and S106 contributions it could seek as part of the development proposals to improve the accessibility of the development proposals in this respect.

The proposed access arrangement with Mortimers Lane has been amended to seek to incorporate the comments provided by HCC Highways Engineers. However, the applicant is of the view that the amended access fully accommodating the Highway Engineers comments to provide the 1:6 corner tapers over a 30 metre distance results in a junction design that is oversized when compared to the similar junction arrangements that Mortimers Lane has with the Pembers Farm development and Knowle Lane to the west. The applicant also considers that the amended junction design fully incorporating the Highways Engineers comments will lead to detrimental impact on other planning issues such as landscape, ecology, and arboriculture.

The applicant therefore is seeking the Highway Authority's view on a third access option that removes the 1:6 tapers with the junction design providing 15 metre junction bellmouth corner radii.

The following Appendices are included in this Technical Note:

- Appendix A – Facilities within 2 km walk distance and 5km cycle distance, local bus routes and collision data extent;
- Appendix B – Knowle Lane appeal decision;
- Appendix C – Local facilities table and comparison with Pembers Farm development;
- Appendix D – Updated site access drawing fully incorporating HCC Highway Engineers comments;
- Appendix E – Updated site access drawing without 1:6 corner tapers over a 30 metre distance;
- Appendix F – Swept Path Analysis for a 11.2 metre refuse collection vehicle;
- Appendix G – TRICS trip generation rates;
- Appendix H – Trip generation comparison; and
- Appendix I – Junctions for junction capacity analysis.



	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
1.	The majority of facilities are located over 20minute walk from the site. The scoping report states that “more remote locations will see people being prepared to walk further to their end destination” however it is not clear that this would be the case and the distance to local facilities is likely to encourage short trips by private car rather than active travel. Therefore, the quality of active travel provision connecting the site to the village centre and the local schools will be important in determining the sustainability of the site. There is a scheme planned to widen the southern footway on Mortimers Lane to at least 3m o provide a shared cycleway/footway. With regards to Figure 3.3 it is not clear what the proposed cycle network is based on. Some of the routes are in the Eastleigh LCWIP however it should be noted that this is a long-term strategy for walking and cycling in the Borough with routes identified for future improvement. As such the routes should not be considered committed schemes at this stage.	The quality and attractiveness of the existing walking, cycling and public transport facilities, as well the walking and cycling distances and times to local amenities and facilities in Fair Oak will be described in detail in the supporting Transport Assessment. The proposed walking and cycling study areas are shown in Figures 1 and 2 in Appendix A are based on a walking distance of preferred maximum of 2km (based on the guidance set out in CIHT's Guidelines for Providing Journeys on Food (2000) and Manual for Streets (paragraph 4.4)) and a cycle distance of up to 5 miles (8km) is considered acceptable in sustainability terms based on guidance set out in Manual for Streets and LTN 1/20 (paragraph 2.2.2) The times it will take future residents to walk and cycle to local amenities and facilities in Fair Oak will be calculated based on an average walking speed of 80 metres per minute (derived from Section 6.4 of CIHT's Planning for Walking (2015) document) and average cycling speed of 270 metres per minute (derived from the LTN 1/20, which states that average cycle speed is 10 mph). We note that the TA should not rely on any of the walking and cycling routes proposed in the Eastleigh LCWIP as being committed schemes at this stage. However, where possible, we would request that the Highway Authority provides an update on the status of reviewing the implementation of these routes, potential funding revenues and approximate timescales for implementation. The development proposals will also review the feasibility of providing a 3m wide shared cycleway/footway on the southern side of Mortimers Lane from the proposed site access at Mortimers Lane to the Fair Oak village centre and the B3354 – Winchester Road to the west.

	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
		The development proposals will also include for the provision of a multi-functional community hub that will encourage higher levels of self-containment within the site and minimise the need to travel to some of the amenities and facilities located in the centre of the village, as well as providing closer amenities and facilities for existing residents residing in the eastern area of Fair Oaks near the site.
2.	The level of bus provision from the site is limited. Whilst the scoping report notes that there are regular services from the village centre the closest bus stops for these routes are over a kilometre from the site. The closest bus stops are served by the hourly no.69 service. The accessibility of the site by bus is therefore limited and any future application will need to consider how this can be improved to reduce the reliance on the private car from any future development.	The TA will confirm the location of the nearest bus stops to the site on Mortimers Lane and will also provide details with respect to: i. the bus numbers that service these bus stops and the key destinations they provide access to; ii. details on first and last buses that stop at the bus stops in both directions; iii. average frequency per hour; and iv. average travel times to key destinations. The development proposals will explore opportunities to providing additional bus stops on Mortimers Lane near the development sites northern site boundary to minimise the walking distances to a bus stop for future residents of the scheme, as well as existing residents on Knowle Lane and within the Pembers Farm development. The TA will also review the location and distances to other bus stops located in Fair Oaks that are serviced by other Bus services and describe the criteria as advised in items i to iv above. The TA will also describe any community bus services that are operating in Fair Oak and the local area that future residents could use such as Eastleigh connect. The applicant would also be grateful for the Highway Authority's views on other similar initiatives that it is aware of that are operating in the local area, as well as any car clubs.

	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
3.	Overall the location of the site is considered likely to result in an overreliance on the private car, particularly given the distance to key local services such as schools, which are likely to preclude walking as a preferred option. Also, a lack of cycle routes in the area would encourage non-regular cyclists to use the private car to access shops and services; and limited options for public transport use for journeys further afield may also result in overreliance on the private car. Given the scale of the proposed development, the Highway Authority would likely require significant sustainable modes mitigation in order to consider the site acceptable.	The applicant would be grateful if the Highway Authority can provide further clarification to support its view in its pre-app response dated 14th September 2023 why it currently considers the site is likely to result in an overreliance on the private car. This is sought with consideration to the consented and now constructed Pembers Farm development that is in a similar location to the development proposals with similar walking and cycling distances to amenities and facilities located in Fair Oak and access to the same level of bus services and service frequency. When the planning application for the Pembers Farm development was consented paragraph 152 of the committee report for the planning application advised that: <i>'It is considered that the proposed development would be sited in a location that is sustainable in transport terms and could be made more sustainable with the off-site highway improvements and financial contributions required by HCC for improving connectivity and sustainable transport opportunities. Indeed, this was the view given by the Planning Inspector when allowing the Knowle Lane site opposite. The site is reasonably well served by public transport with bus stops on Mortimers Lane with current hourly services to Southampton, Eastleigh and Bishop Waltham, but this would need improvement through transport contributions. Thus the site's location is sufficiently sustainable in transport terms in relation to its proximity to Local facilities transport infrastructure, with the site's overall sustainability increasing further if it becomes part of any strategic development site.'</i> In addition, the Planning Inspectorate stated in the appeal decision (see Appendix B) for a combined development of 14 dwellings Knowle Lane that (refs. APP/W1715/W/17/3173253 and APP/W1715/W/17/3178540) that: <i>'Although beyond the urban edge, the site is located within reasonable walking distance of several local facilities including a shop and schools. There is also a range of local facilities at the nearby Fair Oak village. The site is also within walking distance of a local bus service which connects with Bishops Waltham, Southampton and Eastleigh.'</i>

	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
		<i>For both appeals, the appellant has agreed to provide a new pedestrian footway leading from the site to the existing footpath on Knowle Lane. With the introduction of this footway, I consider that the site would enjoy reasonable access to facilities, services and employment, without the need to rely extensively on the use of the private car.'</i> Table in Appendix C outlines all the facilities accessible within a 20-minute walk or cycle journey. This table also compares walking and cycling distances from the proposed development and the Pembers Farm development. Following the above, to further encourage future residents to use sustainable modes of transport as alternatives to single occupancy, the following measures and improvements will be considered: • Consideration to providing a multi-function community hub on site to seek to reduce the propensity for future residents to travel off-site and minimise the walking and cycling distances to local amenities and facilities. This would also provide a benefit to existing residents that reside in the eastern area of Fair Oaks; • Provision of a 3m wide shared cycleway/footway could be provided from the site access along Mortimers Lane, where feasible, for approximately 1.4km to the west up to the junction with Winchester Road; • Discussions will be held with the local bus providers to provide new bus stops at the sites' northern site boundary with Mortimers Lane; • Review options to provide a bus passes or cycle shop vouchers will be explored. • Explore the provision of car club space on-site, as it is stated in the Eastleigh's Draft Parking Standards, that one car club space is required per 100 dwellings. The applicant would also be grateful for any views from the Highway Authority with respect to the propensity of the above measures to address its views in the pre-app dated 14th September 2023.

	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
		The applicant would also be grateful if the Highway Authority can advise on the mitigation measures, infrastructure improvements and S106 contributions it could seek as part of the development proposals in addition to the above to improve the accessibility of the development proposals.
4.	Residential Travel Plan will need to be submitted with the application providing a strategy for encouraging travel by sustainable modes of travel from the site. The Travel Plan should be developed in accordance with HCC's Guide to Development Related Travel Plans	It is agreed to provide a Framework Residential Travel Plan to support the outline planning application. We would kindly request that the Highway Authority confirms what initiatives and measures the FRTP should provide at the outset and if any S106 contributions will be required for the Highway Authority to monitor and implement the Travel Plan and costs.
5.	With regards to the visibility splays, in line with HCC's Technical Guidance 3, these should be calculated on the basis of speeds at the y distance for the speed of the road from the proposed access in either direction. In addition it would be beneficial for the visibility splay plan to include the highway boundary so that it can be confirmed that visibility is achievable without the need for third party land. Given the proposals for a 3m wide Shared Use Path along the southern side of Mortimers Lane it is requested that any future access includes a 3m wide footway connection from the site to the existing footway provision which currently ends opposite the access to the Pembers Farm development. The highways engineer provided further comments: A. Priority ghost island right turn lane junction is consistent with other junctions along Mortimers Lane (B3037) and therefore could be acceptable providing that the junction has sufficient capacity to cope with the anticipated traffic generated by the development.	Please find attached the updated site access drawing included at Appendix D that has been amended to accommodate the highway engineers' comments provided in the pre-application response from the Highway Authority dated 14th September and: • Includes for the provision of a three metre wide shared/cycleway/footway on southern side of the Mortimers Lane carriageway and a two metre wide footway on the northern side of the Mortimers Lane carriageway; • Includes the extent of the existing public highway overlaid on the drawing and confirms that the proposed junction and achievable visibility splays can be delivered with land controlled by the applicant and / or adopted highway extents; • Designed in accordance with CD123, with tapers and radii amended as per HCC comments; and • The junction is designed for a speed road of 40mph. Further discussions are required to establish whether the speed limit could be moved further to the east to include the site access.

COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
b. Junction geometry shall accord to CD123, DMRB. c. Junction geometry has been based design speed of 70kph (40mph). However, a large part of the junction currently sits within a national speed limit. Consideration should be given to relocating the 30mph speed limit terminal sign further east beyond the extent of the right turn lane. HCC's Traffic Management team should be consulted about extending the 30mph limit further east. d. Is reservoir queuing needed? A deceleration length of 50 metres has been proposed, which is slightly more than required for a 70kph design speed. e. 5.6.3, CD123 (DMRB): At ghost island junctions where no diverge or merge tapers are provided, the corner radii should be 15 metres followed by a corner taper of 1:6, over a distance of 30 metres. f. Given that 85thile speeds were 49.3 (Location 2 - Westbound), the designer should consider a 1:25 taper (85kph) for the eastern side of the junction i. The designer is encouraged to create a smoother transition back to the existing kerb line on the eastern side. g. The stagger distance between the proposed junction and private access (Little Dower House) to the north-west is less than 50 metres. However, it is extremely unlikely that vehicle movements will occur between the two.	We can confirm that the visibility splays of shown at 2.4 metre 'X' metre distance of 144.7 metres to the nearside carriageway edge looking left out of the access to the east and 124.1 metres looking right out of the site access to the west are correct with consideration to the Highway Authority's Technical Guidance 3 (TG3) and the recorded 85thile vehicle speeds. A new ATC survey is also proposed to be carried out and the results of this survey will further confirm the appropriateness of the achieve visibility splays at the proposed site access with Mortimers Lane. However, it is considered that the amended access, providing the 1:6 corner tapers over a 30 metre distance results in a junction design that is oversized when compared to the similar junction arrangements that Mortimers Lane has with the Pembers Farm development and Knowle Lane to the west. The applicant also considers that the amended junction design fully incorporating the Highways Engineers comments will lead to detrimental impacts on other planning issues such as landscape, ecology, and arboriculture. The applicant therefore is seeking the Highway Authority's view on a third access option that removes the 1:6 tapers with the junction design providing 15 metre junction bellmouth corner radii and a 5.5 metre access leading into the site. The Drawing is shown at Appendix E. This access option is considered appropriate with consideration to the HCC Technical Guidance Note TG17 – Departures from Standard and paragraph 1.1 clarifying the requirement of the meaning and usage of the verbs 'must', 'shall', 'should' and 'may' in the Design Manual for Roads and Bridges (DMRB). To this end, guidance on the consideration of 1:6 tapers over 30 metres is set out in paragraph 5.6.3 of the DMRB CD 123 – Geometric Design of At-grade Priority and Signal Controlled Junctions that advises:

	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
	Confirmation is required as to whether an RSA Stage 1 has been undertaken.	<i>"At ghost island junctions where no diverge or merge tapers are provided, the corner radii should be 15 metres followed by a corner taper of 1:6, over a distance of 30 metres."</i> HCC TG17 advises that the verb 'should' indicates advice expressed as a recommendation and that these should be followed wherever possible. The 'Terms and Definitions' in CD 123 advises that a Corner Taper is a short taper following the corner radius provided to accommodate the swept path of larger vehicles. Appendix F shows that a 11.2 metre refuse vehicle can turn into and out of the proposed site access without overhanging onto the opposite side of the Mortimers Lane or the access road without the need for the 1:6 corner tapers. It is therefore considered that subject to the appropriate technical case being made in the Transport Assessment including for junction capacity assessments and the outcome of a Stage One Road Safety Audit and Designers Log, that the proposed right turn lane junction with only 15 metre junction bellmouth corner radii is appropriate to serve the proposed development. We can confirm that the proposed site access will be subject to a Stage 1 Road Safety Audit (RSA) with a designer's log prepared in response to any issues raised. It is proposed to issue a Briefing Note to be agreed with the Highway Authority to the safety auditors in advance of the RSA being carried out. CVs of the appointed safety auditors can be provided, as necessary.
6	ATC data is comprehensive, but it appears that the developer has placed the speed measuring equipment at the location of the 30mph speed limit sign. TG3: a. Measurements should be taken at a point just before the scheme length, or in respect of observed vehicle speeds.	Two new ATC surveys will be undertaken one located either side of the proposed site access following the guidance outlined in TG3, and the results will help inform the required visibility splays at the site access. This will be detailed in the in the supporting Transport Assessment.

	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
	b. Measurements should not be taken at or near junctions, accesses or changes in speed limits where 'free flow' conditions may be compromised. c. Measurements shall be taken at both ends of the scheme so that traffic approaching from both directions is covered.	
7	The proposed 2.4m 'x' distance is not in accordance with TG3. a. 3.4.1, TG3: All other priority junctions where the speed limit is above 40mph = 4.5m 'x' distance. b. DfS will be required if a 4.5m 'x' is unachievable. This could have a greater impact on Trees and hedgerows.	Appendix E show that the required visibility splay at 4.5 metre 'x' distance looking right out of the proposed site access to the nearside kerb can be achieved based on the recorded 85thile vehicles speeds and considered to be deliverable within land controlled by the applicant and the adopted highway extents. Appendix E also shows that the required visibility at a 4.5 metre 'x' distances looking left out of the proposed site access can be achieved to the centre of the Mortimer Lane within land controlled by the applicant and the adopted highway extents. This is appropriate on account of the provision of a two metre wide refuge island provide in advance of the eastbound right turn lane into site and with consideration to paragraph 3.3.2 of TG3 that advises: <i>"The point to which the Y distance to the left is measured may be relaxed by measuring to the major road centreline, where there is:</i> • A refuge island with high level keep left signs within the Y distance or • Double white line road markings exist for the length of the Y distance." The Highway Authority's views are sought on the appropriateness of the amended proposed site access arrangement with Mortimers Lane as shown at Appendix E.

	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
8	There are some valuable trees bordering Mortimer's Lane at this location. There is limited tree detail within the supplied report. The tree survey plan indicates that the trees surveyed are limited to the red line boundary for the planning application only. This plan does not currently show tree removals, however I appreciate a number of trees are likely to be impacted looking the visibility splays for the access. Consideration will need to be given to how visibility will be achieved and if tree removal is the only option. Impact to trees is likely to be greater than that of the visibility splays. The proposed 2m footpath is in close proximity to trees, as is the kerb realignment to the north of Mortimers Lane, therefore consideration needs to be given to the impact any proposed construction will have and if it is compatible with tree retention. The application will need to meet the submission requirements as outlined in section 4 of TG15 Trees, Landscape and Ecology. I would encourage the developer to read and understand this document early to avoid issues down the line.	The submitted planning application will set out in detail the impact of the proposed access arrangements with Mortimers Lane included at Appendix E on trees and suitable construction details with consideration to HCC TG15.
9	It should be noted that the County Council require PIA data to be provided from Hampshire Constabulary rather than Crashmap and as such this data should be included in the Transport Assessment. In addition the scope of the analysis should be widened to include: • Knowle Lane • Winchester Road-Botely Road between Colden Common and Horton Heath • Eastleigh Road-Fair Oak Road	Data will be obtained from Hampshire Constabulary, with details included in the support Transport Assessment. The proposed PIA study area is set out in Figure 3 for agreement with the Highway Authority.

	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
	Whilst the scoping report sets out the findings of the Transport Assessment undertaken to consider the impact of the Strategic Growth Option (SGO), it should be noted that the SGO was recommended to be removed by the inspector as part of the Examination of the Eastleigh Local Plan 2016-2036. Therefore, the impact that the proposed development would have on the local highway network needs to be assessed independently of the wider SGO site.	It is agreed to assess the impact of the proposed development on the local highway network independently of the wider SGO. However, confirmation is sought from the Highway Authority on whether the TA needs to consider specific committed / allocated developments or whether these can be accounted for using Temprow Growth rates. Should the Highway Authority seek that the TA accounts for future growth on the local highway network using Temprow Growth rates, the following growth rates are proposed for agreement: • Year of application (2024); and • Year of opening (2029).
10	The proposed trip rates as set out in Table 5.1 are lower than would be expected from a site such as this. From a review of information provided the TRICS analysis includes one site that is from a Neighbourhood Centre which wouldn't reflect the trip generation from this site. In addition, some of the surveys may have been undertaken during various Covid restrictions and therefore may not be representative of typical trip generation. Any such surveys should be removed from the analysis (the TRICS program highlights such surveys).	A further review TRICS trip generation database (v. 7.10.3) has been undertaken and the following criteria has been applied: • Land use – residential; mixed private/affordable housing • Survey days – Monday to Thursday • Size of selected sites – 100 to 500 • Regions selected – UK (excluding Greater London, Northern Ireland, and Ireland) • Locations – Edge of town and suburban area • All sites in after February 2020 and 2021 have been excluded. A total of 23 sites were selected and following TRICS best practice guidance, 85th percentile trip rates have been used. The trip rates are included in full in Appendix G and show that the proposed development could generate up to 160 vehicle movements in the AM peak and 144 movements in the PM peak.

	COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
		These trip rates are considered robust and are similar to the trip rates used for Pembers Farm development, which was granted consent. Appendix H sets out a trip rate comparison between the Pembers Farm development, Knowle Farm development and Mode Transport Planning pre-app trip rates with the proposed trip rates, although they are slightly higher in the AM peak and lower in the PM peak, compared to the Pembers Farm development. Alternatively, the trip rates could be derived based on Pembers Farm as it has now been constructed and occupied. A multi-modal manual turning count survey is proposed to be undertaken at the Pember Farm development to inform the junction capacity assessments of the proposed site access. The results of these surveys could be used to derive a residential trip rate that is bespoke to the scheme and likely to be more accurate for forecast travel trends, given that this development is for a similar to the proposed development in terms of location and the number of dwellings. Confirmation of occupied dwellings will be sought if this is required. The Highway Authority's views is sought to confirm if the trip rates for the proposed development should be calculated based on TRICS or bespoke local trip rates derived by carrying out MTC surveys at the Pembers Farm development.
11	Given the highway impact will need to be assessed independently of previous work associated with the SGO, a methodology for trip distribution and assignment will be required. Once this has been determined the scope of junctions to be assessed can then be confirmed. It is anticipated, however that the scope of junction assessment is likely to 7 include at least the following: • Mortimers Lane/Knowle Lane priority junction • Mortimers Lane/Winchester Road priority junction	It is proposed to distribute the traffic associated with the site as follows: - work based trips are proposed to be distributed in accordance with data extracted from the Nomis website; - education based trips are proposed to be distributed having regard to the proximity of primary and secondary schools to the site, and typical journey times extracted from on-line travel planning tools; and - leisure and retailed based trips would be to destinations that are located within the average journey times identified on the National Travel Survey Fact Sheets.

COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
Botley Road/Eastleigh Road signal junction	As part of planning application for the Pembers Farm development a total of 13 junctions were assessed: • Mortimers Lane/Winchester Road Lane priority junction • Mortimers Lane/Knowle Lane junction • Winchester Road/Sandy Lane priority junction • Winchester Road/Portsmouth Road traffic signal controlled junction • Winchester Road/Church Lane/Wessex Way roundabout junction • Winchester Road/Eastleigh Road/Botley Road/Stubbington Way traffic signal controlled junction • B3354 Botley Road/Burnetts Lane/Knowle Lane traffic signal controlled junction • Allington Lane/Fair Oak Road priority junction • B3354 Botley Road / Snakemoor Lane/Winchester Road roundabout junction • Maunsell Way/Tollbar Way roundabout junction • Bishopstoke Road/Twyford Road/Coles Close/Station Hill/Romsey Road roundabout junction • Bishopstoke Road/Chickenhall Lane roundabout junction The location of these junctions is included in Figure 4 in Appendix I. It is proposed to only assess those where increase in vehicle movements are forecast to be in excess of 10% or if the junctions are operating at or near capacity, It is proposed that the junctions to be assessed will be confirmed in separate TN to be agreed prior to submission of the planning application once in receipt of the traffic surveys results and the trip rates. The view of the Highway Authority is sought on the appropriateness of this approach. The Highway Authority's views are sought on the appropriateness of the proposed methodology to assign trip and to consider the impact of the development proposals on the local highway network.

COUNTY DETAILED COMMENTS	GLANVILLE RESPONSE / COMMENTS
Further Topics to Be Agreed	
Car parking	Car parking for the development will be provided in accordance with the Draft Eastleigh Borough Council's Parking Standards SPD (Dated July 2023), which will replace the 2009 Parking Standards. The standards acknowledge that some developments will provide parking below the standards and states that parking provision below the standards '<i>will be supported where alternative modes, public transport are readily available to serve the proposed development</i>' and the justification needs to be set out in the supporting Transport Assessment. The draft parking standards outline parking requirements for different scale and type of bedrooms proposed. It also outlines the typical car parking space dimensions. It is noted that triple tandem spaces are not acceptable. Confirmation is required if reliance on 2023 draft parking standards is appropriate and if the Highway Authority are aware when the document will be fully adopted.
Cycle parking	Cycle parking will be provided in accordance with the local guidance.
Electric vehicle (EV) charging	EV charging spaces will be provided in accordance with Part S of Building Regulations Document and the Draft Eastleigh Borough Council's Parking Standards SPD (Dated July 2023).

Appendix A

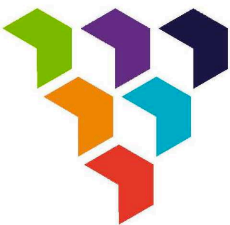
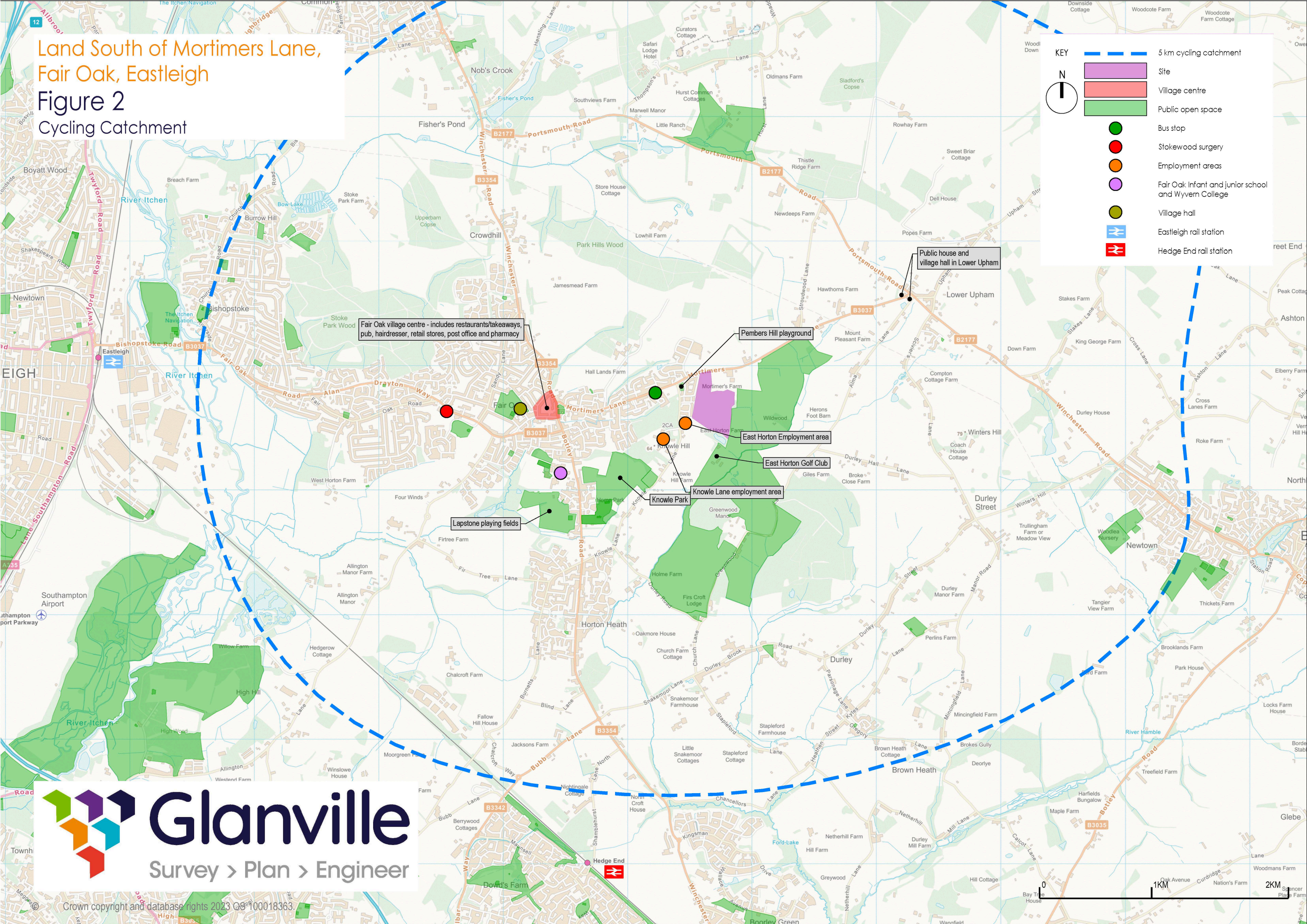


Figure 1

Walking Catchment



Land South of Mortimers Lane,
Fair Oak, Eastleigh
Figure 2
Cycling Catchment



Glanville
Survey > Plan > Engineer

Figure 5

Public Transport

