



Land South of A271 and East of A22, Lower Horsebridge

Transport Assessment

On behalf of **Hertfordshire Holdings Limited**

Project Ref: 332110699 | Rev: 01 | Date: November 2022

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1 Introduction

1.1 Background

- 1.1.1 Stantec has been commissioned by Hertfordshire Holdings Limited (the Applicant) to provide transport planning advice in support of an Outline Planning Application (OPA) for proposed residential development at land east of the A22 and south of the A271 at Lower Horsebridge, Hailsham, East Sussex.

- 1.1.2 The description of the OPA for the Proposed Development is as follows:

Outline planning application for up to 124 dwellings and associated infrastructure, including structural landscaping, biodiversity enhancements and new vehicular access from the A271 Horsebridge Road (development principle and details of access for approval, with all other matters reserved for future consideration).

- 1.1.3 The application site ('the Site') is located on the southern edge of Lower Horsebridge adjacent to the Boship roundabout junction and is bounded by the A22 Hailsham Bypass to the west, River Cuckmere to the south, and the A271 Horsebridge Road to the north. The total site area is approximately 7.67 hectares. It is the western part of a wider landholding that extends around the south of the village.

- 1.1.4 The site location plan has been included in Figure 2.1, in Section 2 of this report. The indicative Illustrative Masterplan for the Proposed Development is included in Appendix A.

1.2 Development Proposals

- 1.2.1 The Proposed Development includes up to 124 residential dwellings, based on the latest Illustrative Masterplan, comprising a mix of houses and apartment units.
- 1.2.2 It is proposed that vehicular access to the Site is to be provided on the A271 Horsebridge Road via a new priority junction.

1.3 Pre-application Consultation

- 1.3.1 The Applicant's planning team has liaised with Wealden District Council (WDC) in April 2020 and a response letter has been provided by WDC in April 2020. The key issues raised in terms of access and transport include the following:
- Strategic highway modelling would be required to assess the full impacts of the Proposed Development on the wider network
 - Sustainability of the Site with regard to sustainable transport modes, safe and suitable access for all users to the Site being achieved
 - Mitigation of any significant impacts from the development on the transport networks or on highway safety
- 1.3.2 Subsequently, a Transport Assessment Scoping report was prepared and shared with East Sussex County Council (ESCC). The Transport Assessment Scoping Report and response provided by ESCC have been provided within Appendix B.

1.4 Transport Assessment Scope and Structure

- 1.4.1 This TA sets out the anticipated transport impacts of the Proposed Development, and forms part of a collection of documents accompanying the planning application. It has been prepared in accordance with ESCC's Guidance on Transport Assessments and Travel Plans dated 2009.
- 1.4.2 The remainder of the report is structured as follows:
1. Chapter 2 (Site Context) – Outline of the existing site and development proposals, accessibility to key services and markets, a review of relevant national and regional policy and information on committed developments.
 2. Chapter 3 (Transport Context) - Existing sustainable travel access and local highway network, to describe the Site's accessibility for walking, cycling and public transport and peak hour traffic conditions on the network based on site observations, and road traffic accident data.
 3. Chapter 4 (Transport Use and Impacts of Development Proposals) - The peak hour trip generation, distribution and mode share for the proposed residential development is set out. Assessment on scale of impact is provided.
 4. Chapter 5 (Travel Plan Summary and Proposed Transport Improvements) – A summary of the travel plan is provided and the proposed transport improvements as part of the Proposed Development set out.
 5. Chapter 6 (Summary and Conclusions) – Summarises and concludes the TA.

2 Site Context

2.1 Introduction

- 2.1.1 This section of the TA outlines the existing site location and use and provides a description of the Proposed Development. A review of the relevant planning policy and guidance at the national, regional, and local level has also been provided.

2.2 Site Description – Existing

- 2.2.1 The Site is located on the southern edge of Lower Horsebridge adjacent to the Boship roundabout junction and is bounded by the A22 Hailsham Bypass to the west, River Cuckmere to the south, and the A271 Horsebridge Road to the north. It is situated approximately 2.2 km northwest of Hailsham town centre and approximately 6.5 km north of Polegate. The site location plan has been included in Figure 2.1.
- 2.2.2 The Site in its existing state is currently occupied by a mix of agricultural and pastureland and is approximately 7.67 hectares in area. It is the western part of a wider landholding that extends around the south of the village. The Site does not currently generate any trips on the surrounding highway network.
- 2.2.3 Local services and amenities are within walking and cycling distance to the Site and bus services are available within a short walking distance to the Site. Further details of the Site accessible by different modes and to key services is included in Section 3.

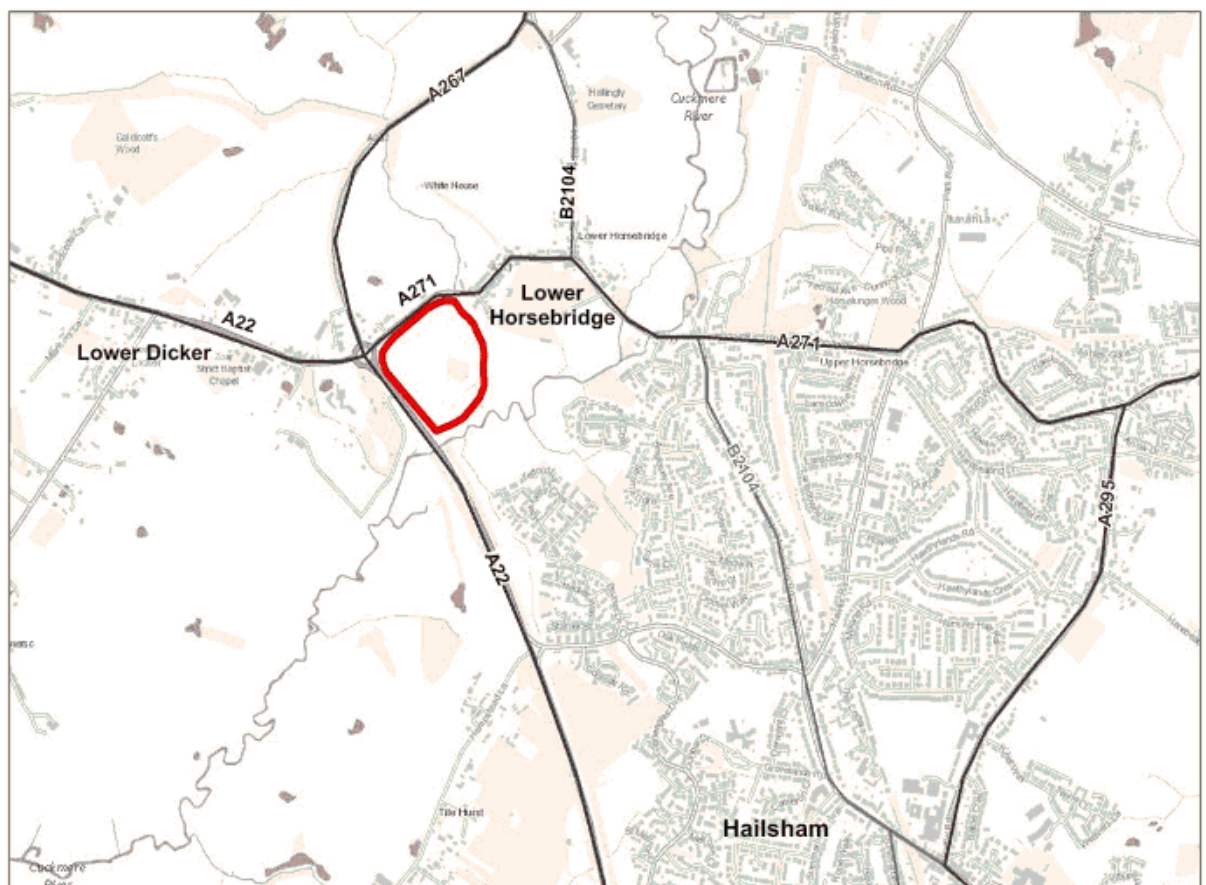


Figure 2.1: Site Location Plan

2.3 Site Description – Proposed

Residential Development

- 2.3.1 The Proposed Development is for up to 124 dwellings, which will include a mix of houses and apartments.
- 2.3.2 The Illustrative Masterplan for the Proposed Development has been included in Appendix A.

Site Access

- 2.3.3 It is proposed that vehicular access to the Site is be provided on the A271 Horsebridge Road via a new priority junction. The site access junction design, based on a ghost island junction configuration, has been included in Appendix C. The visibility splays on the exit from the access junction provide the following levels of visibility:
- 2.4 x 90 meters to the right (east of site access)
 - 2.4 x 210 meters to the left (west of site access)
- 2.3.4 Swept path analysis (SPA) has been undertaken for the internal site layout based on a standard vehicle, refuse collection vehicle and fire tender vehicle. The SPA has been included in Appendix C.
- 2.3.5 It is proposed that the existing 30mph limit is extended further west along the A271 Horsebridge Road to include the proposed site access. Based on the pre-application discussions with ESCC, it is understood that are plans to introduce a 40mph speed limit on all approaches to the Boship Roundabout as part of its future improvement scheme. It is also understood that ESCC would consider extending the future planned 40mph speed limit further east to the location where the 30mph speed limit starts on A271 Horsebridge Road. However, it is proposed that the existing 30mph limit on the A271 Horsebridge Road is extended to the Boship Roundabout approach, as this would avoid having varying speed limits within short distances on the A271 Horsebridge Road. It should be noted that the existing 85th percentile traffic speeds on the A271 Horsebridge Road at the location of the proposed site access are 33mph (eastbound) and 36mph (westbound).
- 2.3.6 The proposals to extend the 30mph limit on A271 Horsebridge Road would be discussed with ESCC and Sussex Police at the appropriate time during post-application stage.

Parking Provision

- 2.3.7 The level of onsite vehicle and cycle parking would be provided in accordance with ESCC's Guidance for Parking at New Residential Development (2017).
- 2.3.8 At this stage the masterplan is indicative only and so the detailed layout of the development including the layout of parking will be agreed at the appropriate time.
- 2.3.9 Table 2.1 sets out the recommended levels of cycle parking provision based on ESCC's Guidance for Parking at New Residential Development (2017). Additionally, a parking provision calculation tool is provided by ESCC as part of its parking guidance document. The guidance states that flexibility should be applied in determining the actual provision at developments a guide of +/- 5% but will also depend on location.

Table 2.1: ESCC's Guidance for Parking at New Residential Development (2017)

Dwelling Type	Number of Bedrooms	Cycle Provision per Unit
Flat	1 & 2	0.5 spaces if communal 1 space if individual
Flat	3 or more	1 space
House	1 & 2	2 spaces
House	3 or more	2 spaces

2.4 Planning Framework

2.4.1 The Proposed Development considers planning policy and guidance at the national, regional and local level. The following policy and guidance documents have been identified as relevant to the Proposed Development:

- National Planning Policy Framework (NPPF) (updated July 2021)
- National Planning Practice Guidance (NPPG) (updated June 2021)
- ESCC Local Transport Plan 3 (adopted 2012)
- ESCC Local Cycling & Walking Infrastructure Plan (2021)
- Wealden District Council (WDC) Core Strategy Local Plan (adopted 2013)
- Hellingly Parish Council Neighbourhood Development Plan (adopted 2021)
- ESCC Guidance Documents:
 - Transport Assessments, Transport Statements and Transport Reports Guidance for Development Proposals in East Sussex (2009)
 - Travel Plans for Development (2020)
 - Local Design Guide for Residential Development (2010)
 - Guidance for Parking at New Residential Development (2017)

National Planning Policy Framework

- 2.4.2 The NPPF, which was updated in July 2021, seeks to facilitate sustainable development. In respect of transport, the NPPF advocates that transport issues should be considered from the earliest stages of plan-making and development proposals, so that:
- a) the potential impacts of development on transport networks can be addressed.
 - b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated.
 - c) opportunities to promote walking, cycling and public transport use are identified and pursued.
 - d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains.

- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.

2.4.3 The Proposed Development aligns with the objectives of the NPPF as it seeks to encourage the use of sustainable modes of transport above the use of private car.

National Planning Practice Guidance

2.4.4 The PPG, updated in March 2021 by the Department for Communities and Local Government, supports the policies outlined within the previous NPPF.

2.4.5 The guidance covers numerous topics, with the 'Travel plans, transport assessments and statements in decision-taking' being the one relevant to transport. This guidance relates only to Travel Plans, Transport Assessments and Statements in relation to decision-taking.

2.4.6 The guidance defines Travel Plans, Transport Assessments and Transport Statements and lays out how these are related to each other, why they are important and what should be considered when preparing a Travel Plan, Transport Assessment and Transport Statement.

ESCC Local Transport Plan 3

2.4.7 The ESCC Local Transport Plan 3, adopted in 2012 stipulates its vision and objectives in relation to transport and is applicable until 2026.

2.4.8 The plan has a strong focus on active travel, identifying that every day journeys by walking and cycling help to reduce car dependency, improve air quality and improve peoples' health and wellbeing. New developments should ensure that the needs of pedestrians and cyclists and their safety should be considered as top priority.

2.4.9 Additional key objectives are as follows:

- Improve strategic and local connectivity of communities
- Reduce congestion by improving the efficiency of the transport network and encouraging greater use of sustainable modes of transport
- Improve maintenance and efficient management of the transport network
- Improve road safety for vulnerable users
- Increase the resilience of transport infrastructure and services

ESCC Local Cycling & Walking Infrastructure Plan

2.4.10 The ESCC Local Cycling & Walking Infrastructure Plan, adopted in 2021 is a 10-year plan that sets out the proposed network of cycling and walking routes and measures in specific areas of the county.

2.4.11 Primarily the plan focuses on a number of county wide issues and opportunities to guide the identification of the proposed network and measures. Relevant opportunities to the Proposed Development include the close proximity of the Site to Hailsham (shorter trips can be completed by active transport), an appetite for active travel, untapped opportunities to promote cycling and walking and smart mobility measures.

Wealden District Council (WDC) Core Strategy Local Plan

- 2.4.12 The Wealden District Council Core Strategy Local Plan, adopted in 2013 sets out the vision and objectives for the district over the 14-year period to 2027. The plan outlines several strategic policy objectives and key planning policies for the area along with stipulations of the volume and types of future development to occur in Wealden.
- 2.4.13 Of most relevance is Policy SP07, that stipulates that the council will promote the use of alternative modes of transport to private vehicles by clustering development close to public transport. The policy also prioritises making it easier to travel by more sustainable modes of transport such as walking, cycling public transport by improving journey quality.

Hellingly Parish Council Neighbourhood Development Plan

- 2.4.14 The Hellingly Parish Council Neighbourhood Development Plan, adopted in 2021 sets out the vision for growth proposed for the area for the period to 2028. The plan identifies suitable areas for growth along with infrastructure to support the growth with a focus on the parish remaining mostly rural in nature.
- 2.4.15 Of most relevance is Policy HNDP 8, that stipulates the need for new developments to provide electric vehicle charging points as a part of the need to support sustainable transport.

3 Transport Context

3.1 Introduction

- 3.1.1 This section of the TA includes a detailed description of the Site's baseline accessibility characteristics, the existing vehicle traffic conditions and a review of the personal injury collisions in close proximity to the Site.

3.2 Walking Accessibility

- 3.2.1 The A271 Horsebridge Road running along the northern boundary of the Site has a narrow footway on the southern side of the road. East of the Site (where the existing urban footprint begins), the A271 Horsebridge Road and A271 Upper Horsebridge Road has a footway on both sides of the road to the urban footprint boundary in Amberstone. Where the footway on both sides of the road begins, east of the Site, street lighting is provided similarly to the urban footprint boundary in Amberstone.
- 3.2.2 The B2104 North Street has a footway on both sides of the road for its entire length between the A267 North Street and the A271 Horsebridge Road. Street lighting is not provided along this section of road.
- 3.2.3 The B2104 London Road has a footway on both sides of the road for its entire length between the A2671 Upper Horsebridge Road and the A295 North Street in the centre of Hailsham. Street lighting is provided along this section of road.
- 3.2.4 A 30-minute walkability catchment map for area surrounding the Site is shown in Figure 3.1. The map shows the Lower Horsebridge area is within a 10-minute walking distance and the Hailsham centre is just over 30-minutes walking distance.

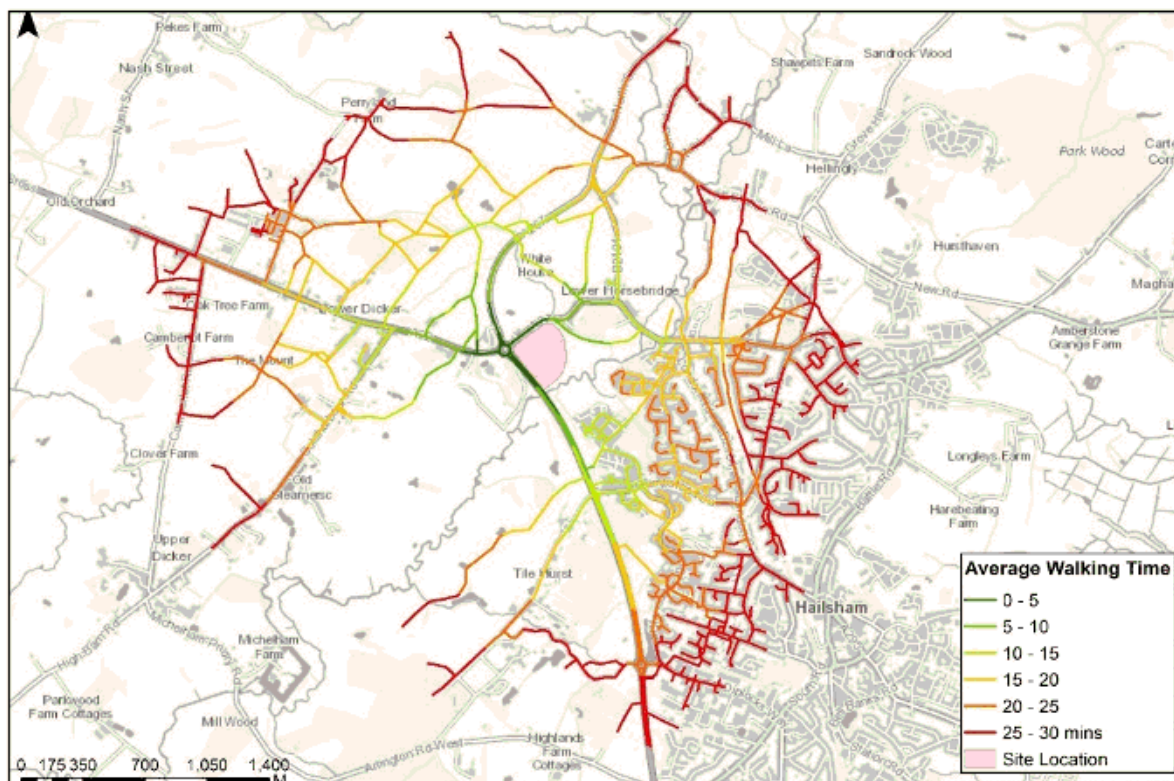


Figure 3.1: Walkability Catchment Map of Site

3.3 Cycling Accessibility

- 3.3.1 With the exception of National Cycling Route 21, there are no dedicated cycling facilities on the A271 Horsebridge Road or the surrounding highway network. A 30-minute cyclability catchment map for area surrounding the Site is shown in Figure 3.2. The map shows the Lower Horsebridge area is within a 5-minute cycling distance and the Hailsham centre is between 10- and 15-minutes cycling distance.
- 3.3.2 A map showing the national cycling infrastructure surrounding the Site is shown in Figure 3.3. The map shows that the National Cycling Route 21 route, a north-south mostly traffic free route is approximately 1km east of the Site, accessible via Horsebridge Road. To the south, connecting to the National Cycling Route 21 route is the National Cycling Route 2 route, an east-west partially traffic free route connecting to Polegate.
- 3.3.3 Other than the dedicated cycling infrastructure shown in the National Cycling Routes, no other existing dedicated cycling infrastructure is available on the immediate surrounding transport network.
- 3.3.4 As set out under Section 3.5, the A271 Horsebridge Road, at the location of the proposed site access is subject to the National Speed Limit and there are no dedicated cyclist facilities on this road.

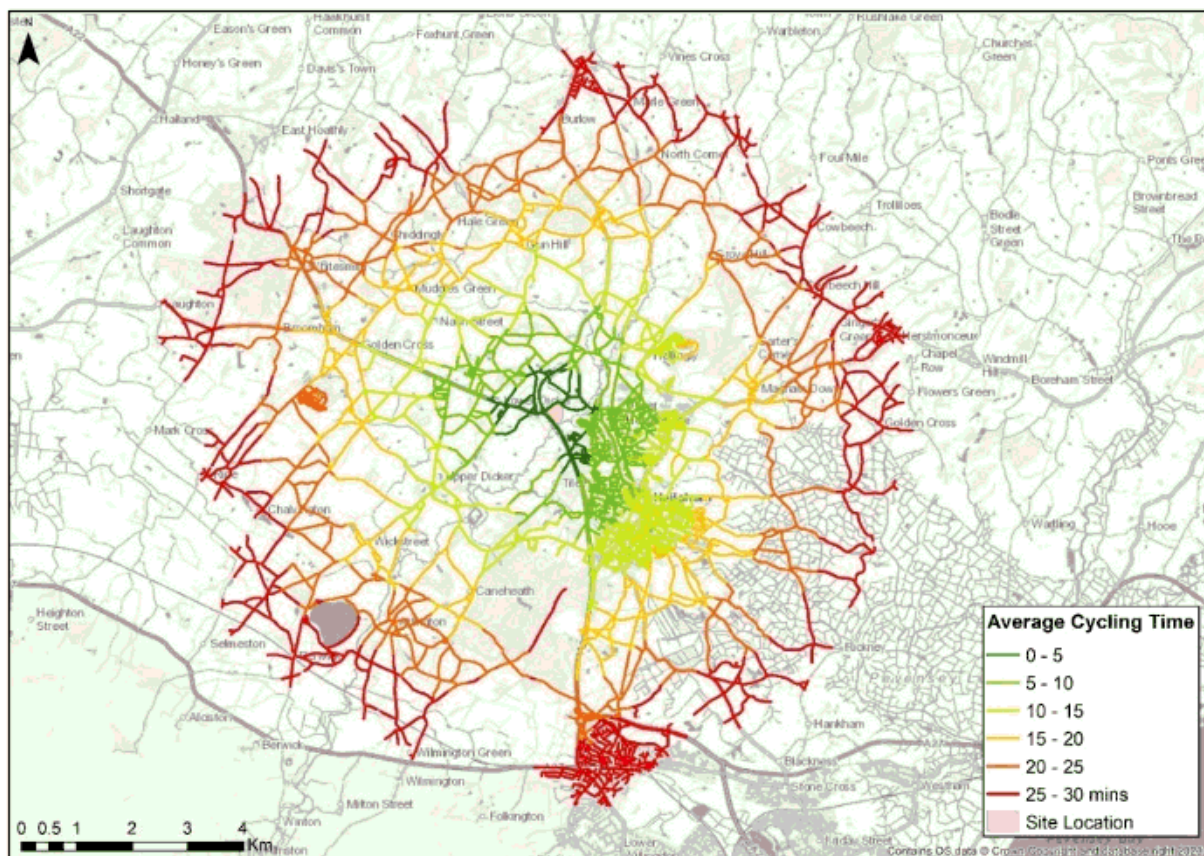


Figure 3.2: Cyclability Catchment Map of Site

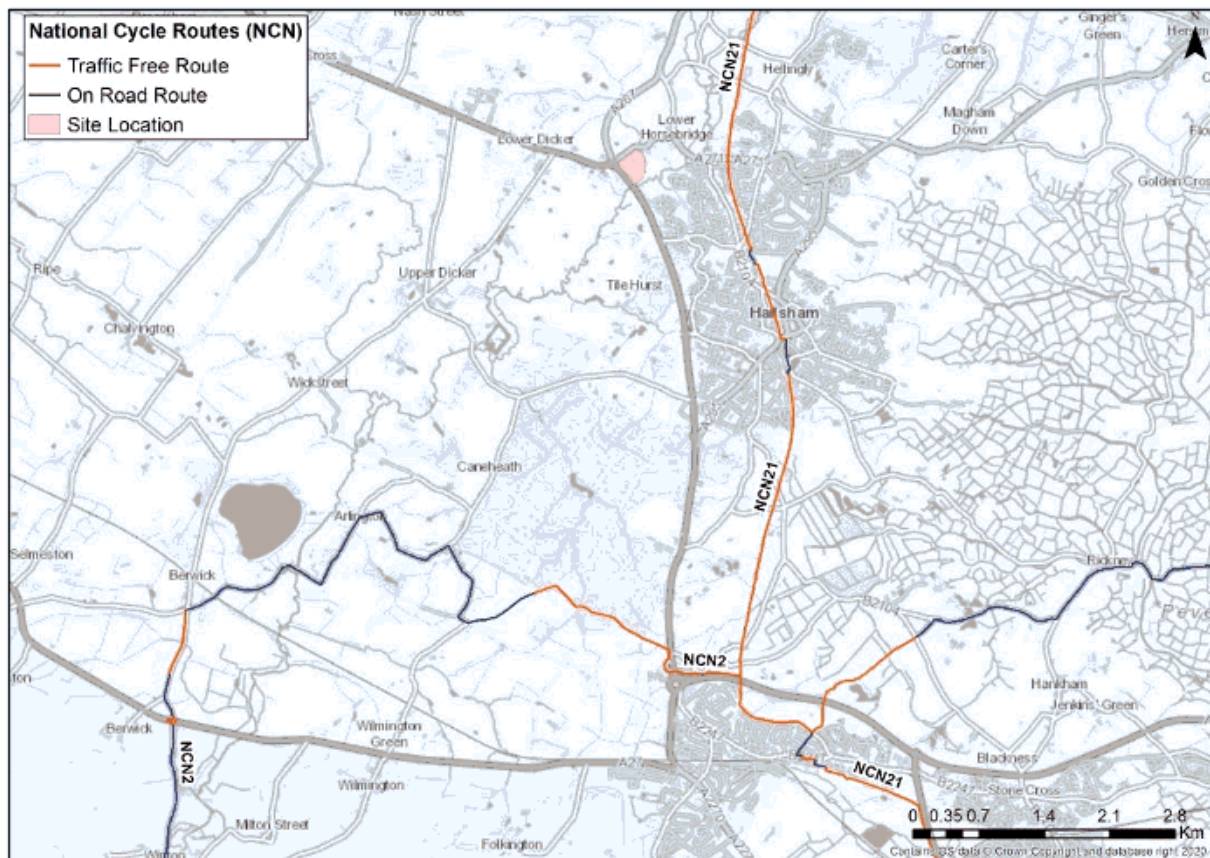


Figure 3.3: National Cycle Routes Surrounding the Site

3.4 Public Transport Accessibility

- 3.4.1 Figure 3.4 shows the nearest bus stops to the Site which are approximately 150m east of the Site on the A271 Horsebridge Road. Additionally, there are several other bus stops located along the A271 Horsebridge Road, A22 and B2104 North Street surrounding the Site.
- 3.4.2 A map showing the bus routes servicing Hailsham, and the subject site is shown in Figure 3.5. This map shows that significant connectivity is provided between Hailsham and surrounding population centres via bus. Some inter-regional services are shown to pass the Site along the A22 and the A271 Horsebridge Road.
- 3.4.3 Table 3.1 provides details on the bus services servicing stops close to the subject site. As shown in the table, a number of bus services are readily available within a short walk from the subject site. Various levels of service are available from each bus service, with some services operating at up to 20-minute frequencies during peak periods down to weekly services.

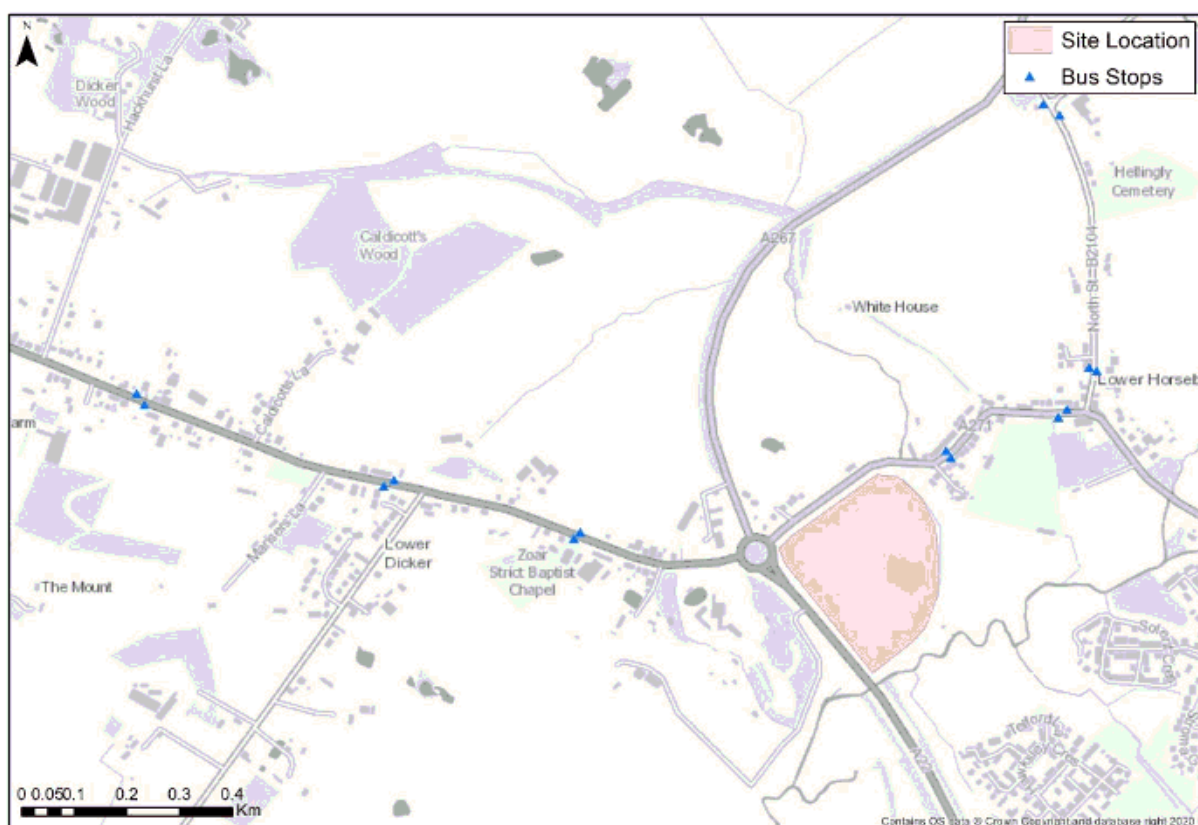


Figure 3.4: Bus Stops Surrounding the Site

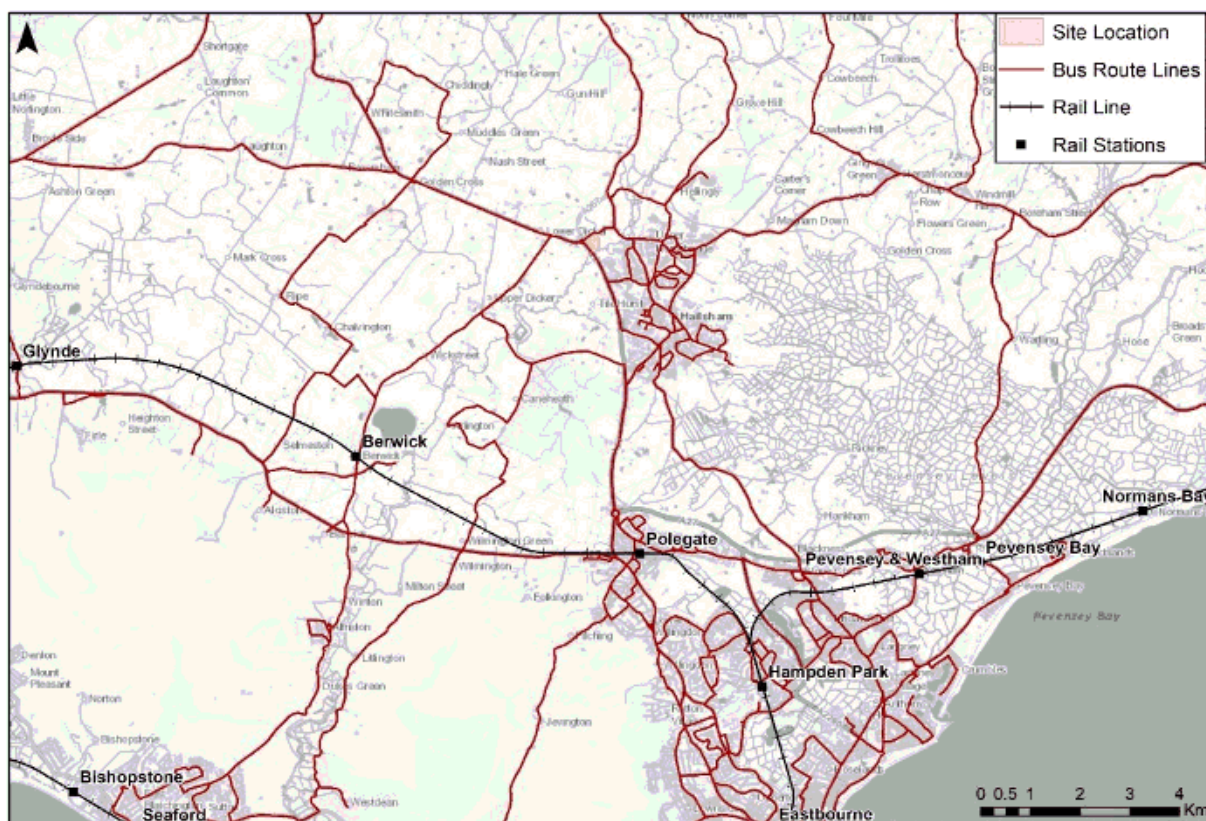


Figure 3.5: Bus Routes Servicing Hailsham

Table 3.1: Bus Stops surrounding Site Service Details

Bus Stop	Distance to site	Service Route	Days of operation	Frequency
Pay Gate Cottages	150m (less than 5-minute walk)	42: Berwick – Hailsham	Wednesday only	Single service
		54: Uckfield – Eastbourne	Monday to Saturday (excl. public holidays)	Hourly from 7:30am to 7:50pm
		142: King's Academy Grounds in King's Academy Grounds – Polegate (school service)	Monday to Friday (excl. public holidays)	Single service in morning (8:00am) and afternoon (3:50pm)
		143: Lewes – Ringmer – Laughton - Hailsham	Monday to Friday (excl. public holidays)	Every 3 hours from 9:10am to 5:25pm
North Street	650m (less than 10-minute walk)	51 (and 51X): Heathfield to Eastbourne	Monday to Sunday	20 minutes during peak periods and 30 minutes outside peak on Monday to Saturday Hourly on Sundays
		269: Cade Street – Hailsham (school service)	Monday to Friday (excl. public holidays)	Single service in morning (7:47am) and afternoon (3:40pm)

3.4.4 The closest railway station is Polegate Railway Station, approximately 6.4km south of the Site. The station is approximately a 30-minute ride from the Site and can be accessed directly using the 51, 51X, 54, 142 and 143 bus services. Access is also available by the surrounding highway network. Southern rail services are available from the station, connecting to surrounding areas such as Brighton, Lewes, Gatwick Airport, East Croydon and London.

3.5 Highway Connectivity

3.5.1 A map showing the A and B roads servicing the Hailsham area is shown in Figure 3.6. This map shows a number of strategic roads connect the Site with the surrounding Hailsham and East Essex area.

3.5.2 The A271 Horsebridge Road and A271 Upper Horsebridge Road is an east-west single carriageway road running from the A22 Boship Roundabout to east of Hailsham. This road is subject to a 30mph speed limit in urban areas with other areas subject to higher speed limits. Between Boship Roundabout to approximately 65m to the east of the proposed site access, the A271 Horsebridge Road has a speed limit of 60mph (National Speed Limit). The A271 is directly accessible from the Site, which in turn provides access to the A22 and B2104.

3.5.3 The A22 is a major north-south road connecting Purley to Eastbourne. This road adjacent to the subject site is a dual carriageway with high standard intersections connecting to the local road network. The A22 within close proximity of the Site is subject to a 40mph speed limit to the west of Boship Roundabout on Lower Dicker and subject to the National Speed Limit to the south of the Boship Roundabout on Hailsham Bypass.

3.5.4 The B2104 North Street and B2104 London Road is a north-south single carriageway road running from the A267 to Eastbourne. The road is subject to a 30mph speed limit in urban areas with other areas subject to higher speed limits.

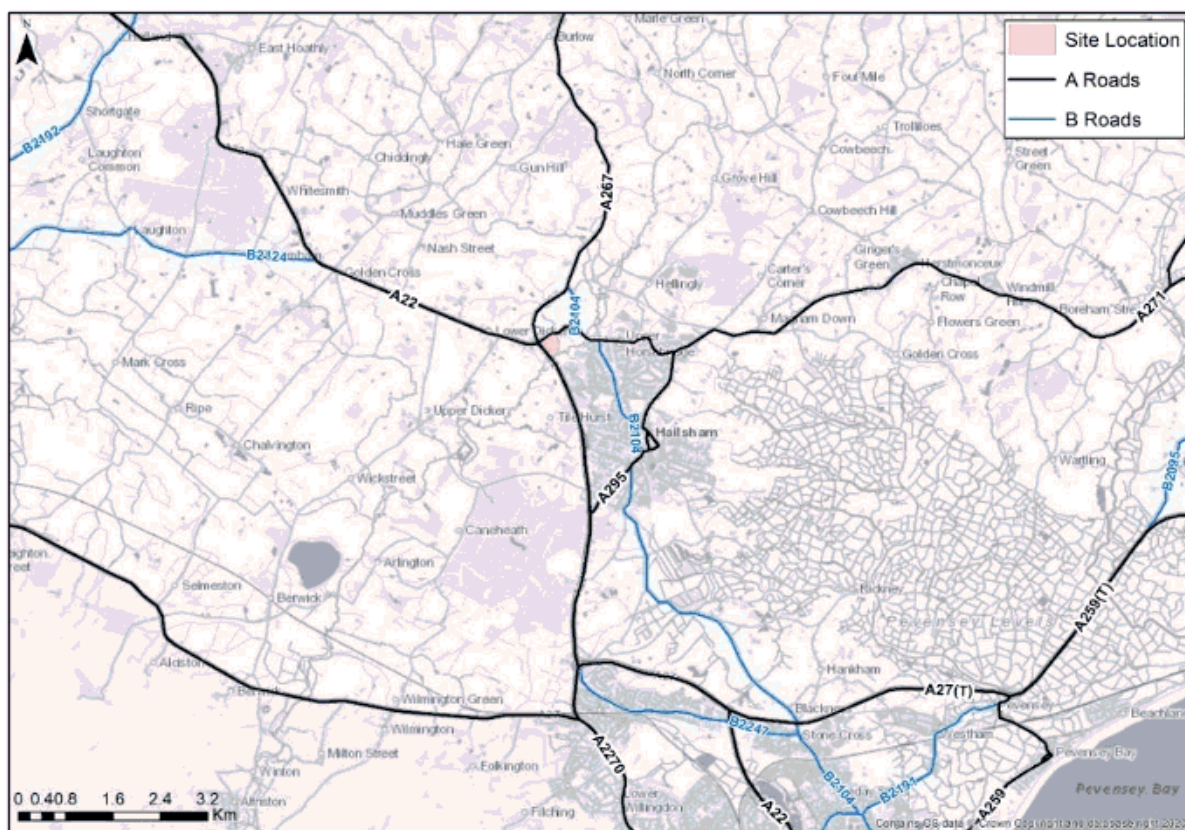


Figure 3.6: Road Hierarchy Map surrounding Site

3.6 Local Services and Facilities

3.6.1 The location of local services and facilities within close proximity to the Site have been identified under Figure 3.2, along with the walking and cycling times to each location. Overall, the Site is located within walking and cycling distance to a range of services and facilities.

Table 3.2: Local Services and Facilities

Land Use	Name	Distance (KM)	Walk Time	Cycle Time	Bus Accessible
Shopping	Co-Op Store	1.4	18 m	4 m	yes
	Shell Petrol Station and Store *	0.3	5 m	3 m	yes
	Hawkwood Store	2.4	27 m	7 m	yes
	Tesco Superstore	3.2	40 m	13 m	yes
Education	Hellingly Community Primary School	0.8	11 m	3 m	No
	Hawkes Farm Primary Academy	1.7	20 m	6 m	Yes
	Hailsham Primary Academy and Pre-School	2.1	25 m	7 m	Yes
	Hailsham Community College	3	36 m	11 m	Yes
Health	Quintin Medical Centre	2.4	29 m	7 m	Yes
Leisure	The White Hart	0.4	5 m	1 m	Yes
	Kings Head	0.5	6 m	1 m	Yes
	Hellingly Sports Club	0.5	1 m	6 m	Yes

Note: Walking and cycle times based on average speeds (4.5 km/h and 16km/h respectively)

* No footways and pedestrian crossing to Shell Petrol Station present

3.7 Existing Mode Share

- 3.7.1 The mode share for the surrounding local area has been determined based on 2011 Census Method of Travel to Work data using an Output-Area (OA) level area selection. An OA level of granularity has been used since higher levels of area selection (i.e. MOSA/ LSOA) include very large areas of land that are considered to have significantly different commuting and travelling characteristics compared to the Proposed Development.
- 3.7.2 The OAs selected to determine the existing mode share for the Site has been shown on Figure 3.7. The existing mode share for the Site has been shown in Table 3.3.

Table 3.3: Existing Mode Share

Mode	%
Train	3%
Bus, minibus or coach	2%
Taxi	0%
Motorcycle, scooter or moped	1%
Driving a car or van	81%
Passenger in a car or van	4%
Bicycle	2%
On foot	6%
Other method of travel to work	1%

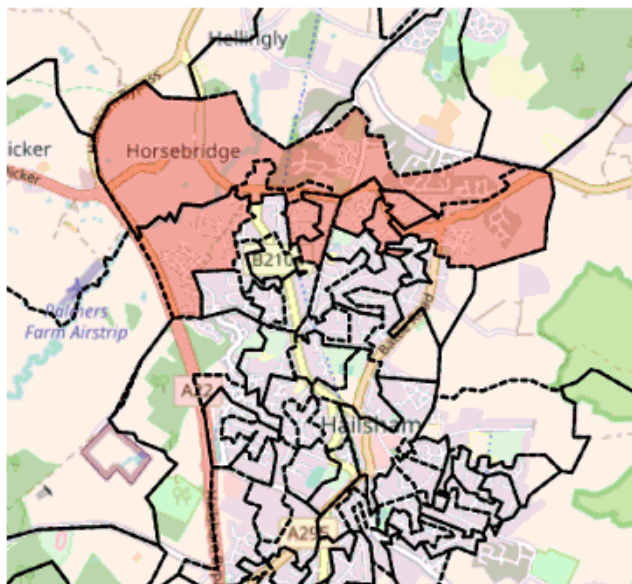


Figure 3.7: OAs Selected for Existing Mode Share Calculation (source: openstreetmap.org)

3.8 Existing Traffic Counts

- 3.8.1 Automatic Traffic Counts (ATC) were conducted on the A271 Horsebridge Road, in close proximity to the Boship Roundabout between 16/05/22 – 22/05/22. The location of the ATCs were approximately 115m east of the Boship Roundabout. Additionally, 2019 Department for Transport (DfT) traffic count data is the latest available data for the A22 between the A295 and A271.
- 3.8.2 A summary of the available traffic data, along with information on the available survey dates, has been shown in Table 3.4. The detailed traffic count data is included in Appendix D.

Table 3.4: Existing AM (0800-0900) and PM (1700-1800) Peak Hour Flows on the A22 and A271

Link	Direction	Count Date	AM Peak Hour	PM Peak Hour
A271 Horsebridge Road	WB	16/05/22 - 22/05/22	289	305
	EB		266	520
A22 Hailsham Bypass	NB	16/10/2019	758	891
	SB		1000	1341

- 3.8.3 In terms of traffic speeds, the 24-hour weekday average 85th percentile speeds from the 2022 A271 Horsebridge Road ATCs are as follows:
- Westbound: 36mph
 - Eastbound: 33mph
- 3.8.4 Additionally, the Wealden Local Transport Study (2018) includes surveyed and forecast traffic flows for the years of 2015 and 2028 (based on various scenarios), at the following junctions in close proximity to the Site:
- A22/ A267/ A271 (Boship Roundabout)
 - A271 Horsebridge Road/ B2104 North Street
 - A271 Horsebridge Road/ B2104 London Road

Personal Injury Safety Analysis

- 3.8.5 The most recent available 5-year accident data has been obtained from Sussex Police (between April 2017 and March 2022) covering the adjacent road network such as the Boship Roundabout, the A271 Horsebridge Road and the B2104. A summary of the number of incidents, grouped by severity and location are summarised in Table 3.5 below. The detailed collision reports along with a map illustrating the location of all collisions are included in Appendix E.

Table 3.5: Summary of Accident Data (April 2017 – March 2022) - Source: Sussex Police (April 2022)

Road	Incident Severity			Total
	Slight	Serious	Fatal	
Boship Roundabout	12	1	1	12
A271 Horsebridge Road	0	4	0	4
B2104	2	1	0	3
Total	12	6	1	19

- 3.8.6 Table 3.5 shows that at the Boship Roundabout and its approach roads there were 12 incidents in the past 5-years with the majority being slight severity incidents. The majority of accidents were caused by driver error such as colliding with the rear of a stationary vehicle or vehicle on the roundabout. Of the 12 incidents, 4 involved collisions with cyclists, all involving the cyclist being on the roundabout and the vehicle entering the roundabout colliding with the cyclist. Of the 4 cyclist collisions, 3 were slight in severity and 1 was fatal. A serious incident also occurred on the A22 to the south of the roundabout which involved a vehicle turning right in the path of a motorcyclist.
- 3.8.7 On the A271 Horsebridge Road, in close proximity to the junction with B2104 North Street, there were 4 serious incidents in the past 5-years. There does not appear to be a similar pattern to the 4 serious collisions on Horsebridge Road.
- 3.8.8 On the B2014 North Street, there 3 incidents in the past 5-years, with one serious and 2 slight in severity. These incidents are centred around the intersection with the A267 and Church Road. The serious accident involved a driver turning right into the B2014 North Street into the path of another vehicle.
- 3.8.9 It should be noted that the incidents recorded on the Boship Roundabout will not be representative of expected accident frequency and patterns in the future due to the ESCC improvements proposed at the roundabout (as set out below).

3.9 Planned Changes to Transport Networks

- 3.9.1 ESCC has identified highway improvements on the A22 and A2290, as set out in the ESCC A22 and A2290 Improvements Consultation¹. These include improvements on Boship Roundabout, Hempstead Roundabout and Eagles Roundabout, as well as additional junction improvements in South Cross and Eastbourne. It is understood that consultation for the improvements closed in September 2021 and that the earliest construction completion date, if approved, would be summer of 2024.
- 3.9.2 Following pre-application discussions with ESCC, the future year assessment of the transport impacts of the Proposed Development will include the proposed improvements on Boship Roundabout.

¹ <https://consultation.eastsussex.gov.uk/economy-transport-environment/a22-a2290-improvements/>
[accessed 07/11/22]

4 Transport Use and Impacts of Development Proposals

4.1 Trip Generation

Trip Rates

- 4.1.1 The proposed trip generation for the Site has been estimated using the TRICS 7.8.4 database. Trip rates per dwellings based on locations and developments with similar characteristics have been obtained.
- 4.1.2 In selecting the TRICS survey sites, the following criteria was used to exclude sites that do not have similar characteristics as the Proposed Development:
- Only regions within England (excluding Greater London) were selected;
 - Town Centre and Edge of Town Centre location types were excluded;
 - Sites in Maresfield and sites located very close motorways were excluded;
 - Only locations with car ownership levels between 1.1 to 2.5 were selected;
 - Sites both with and without a Travel Plan were included; and
 - Only sites with survey dates up to 01/01/2020 were selected to avoid including the effects of the Covid 19 pandemic.
- 4.1.3 Based on the above criteria, sites within the 'Mixed Private House (Flats and Houses)' and 'Mixed Private/ Affordable Housing' residential sub-land-use categories were identified. The average trip rate of the two sub-land-use categories is proposed for the trip generation of the proposed site.
- 4.1.4 Following scoping discussions with ESCC, sites in Maresfield and sites located very close motorways have been excluded from the selections.
- 4.1.5 The selected sites along with their key site and survey characteristics have been shown in Table 4.1. The resulting total person and total vehicle trip rates for each sub-land-use category, as well as the average trip rates are shown in Table 4.2. The full TRICS outputs have been included in Appendix F.
- 4.1.6 It should be noted that the proposed vehicle trip rates shown on Table 4.2 are comparable to the vehicle trip rates used for Hailsham in the Wealden Local Transport Study (2018), which were 0.493 trips per dwelling and 0.508 trips per dwelling during the AM and PM peak hours respectively.

Table 4.1: TRICS Survey Sites Selected

Site	Dwellings	Parking Supply	% Apartments	% Non Privately Owned	Year of Survey
<i>Mixed Private/ Affordable Housing</i>					
ES-03-M-07	188	1.6	29%	25%	2015
ES-03-M-10	108	2.4	15%	32%	2017
ES-03-M-11	354	1.9	10%	29%	2016
ES-03-M-16	119	2.9	61%	42%	2019
ES-03-M-17	91	2.7	9%	27%	2019
HC-03-M-06	328	1.8	52%	40%	2015
HC-03-M-09	157	2.1	21%	34%	2018
KC-03-M-03	140	1.5	7%	29%	2018
NF-03-M-02	250	2.1	5%	33%	2019
WS-03-M-07	90	2.12	22%	40%	2014
Average:	183	2.1	23%	33%	-
<i>Mixed Private House (Flats and Houses)</i>					
CA-03-K-04	65	2.4	28%	22%	2018
CW-03-K-01	89	3.3	40%	16%	2019
ES-03-K-01	65	1.7	36%	23%	2016
WS-03-K-04	372	2	33%	0%	2018
Average:	148	2.4	34%	15%	-

Table 4.2: TRICS Peak Hour Person and Vehicle Trip Rates

TRICS Category	Mode	AM Peak			PM Peak		
		Arr.	Dep.	Total	Arr.	Dep.	Total
Mixed Private/ Affordable Housing	Person	0.198	0.864	1.062	0.617	0.352	0.969
	Vehicle	0.123	0.397	0.520	0.338	0.158	0.496
Mixed Private House (Flats and Houses)	Person	0.148	0.643	0.791	0.610	0.270	0.880
	Vehicle	0.087	0.292	0.379	0.307	0.138	0.445
Average Trip Rates	Person	0.173	0.754	0.927	0.614	0.311	0.925
	Vehicle	0.105	0.345	0.450	0.323	0.148	0.471

Trip Generation

- 4.1.7 The total person and total vehicle trip generation for the Proposed Development, which includes 124 units, has been shown in Table 4.3.

Table 4.3: Peak Hour Person and Vehicle Trip Generation

	AM Peak			PM Peak		
	Arr.	Dep.	Total	Arr.	Dep.	Total
<i>Total Person Trip Generation</i>						
Proposed Trip Rate	0.173	0.754	0.927	0.614	0.311	0.925
Trip Generation	21	93	115	76	39	115
<i>Total Vehicle Trip Generation</i>						
Proposed Trip Rate	0.105	0.345	0.450	0.323	0.148	0.471
Trip Generation	13	43	56	40	18	58

4.2 Trip Distribution and Assignment

- 4.2.1 The trip distribution for the Proposed Development has been based on Census 2011 'Location of usual residence and place of work' based on the same OA area selections as shown in Figure 3.7. This data includes all modes of travel and data for 'car driver' mode of travel, alone, is not available at an OA level of granularity. However, this is not considered to impact the vehicle trip distribution results since the mode-shares for the OAs selected only include a small percentage for public transport and active travel modes (13%).
- 4.2.2 Table 4.4 includes a summary of the assumed trip distribution, grouped into major geographical areas. It should be noted that the trip distribution assumed in the assessment as part of this TA is based on the detailed trip distribution at an OA area level of granularity which includes the distribution internally within Wealden and other key destinations.

Table 4.4: Summary Trip Distribution

Place of Work	Distribution %
Wealden	51.0%
Eastbourne	22.4%
Lewes	7.9%
Rother	3.5%
Brighton and Hove	2.9%
Hastings	2.7%
Tunbridge Wells	2.1%
Mid Sussex	1.8%
Crawley	1.1%

- 4.2.3 Vehicle trips have been assigned to the highway network based on judgement of the most likely routes which primarily focus on route journey times and directness of a route.
- 4.2.4 Appendix G illustrates the Proposed Development vehicle trips assigned to the surrounding highway network.

4.3 Highway Impact Assessment

- 4.3.1 This section of the report outlines the impact of the forecasted net increase in vehicular trip generation of the Site on its surrounding local highway network, during the AM and PM peak hours.

Assessment Methodology

- 4.3.2 The overall assessment methodology has been agreed with ESCC as part of the pre-application discussions and TA Scoping Report.
- 4.3.3 The highway impact assessment undertaken as part of this TA is based on the trip generation associated with 150 residential units as opposed to the 124 units proposed. This provides a robust worst-case assessment in terms of the Proposed Development impacts. The trip generation assessed as part of the highway impact assessment has been shown in Table 4.5.

Table 4.5: Trip Generation Tested as part of Highway Impact Assessment

	AM Peak			PM Peak		
	Arr.	Dep.	Total	Arr.	Dep.	Total
<i>Total Person Trip Generation</i>						
Proposed Trip Rate	0.173	0.754	0.927	0.614	0.311	0.925
Trip Generation	26	113	139	92	47	139
<i>Total Vehicle Trip Generation</i>						
Proposed Trip Rate	0.105	0.345	0.450	0.323	0.148	0.471
Trip Generation	16	52	68	48	22	71

- 4.3.4 The TA includes the following assessment for the Proposed Development when fully occupied:
- Highway link percentage impacts
 - Junction capacity assessment based on local junction modelling
- 4.3.5 The operation of the following junctions has been assessed as part of the TA:
- A22/ A267/ A271 (Boship Roundabout)
 - A271 Horsebridge Road/ Proposed Development Access Road
 - A271 Horsebridge Road/ B2104 North Street
 - A267 New North Street / B2104 North Street
 - A271 Horsebridge Road / B2104 London Road

- 4.3.6 The following scenarios have been included as part of the link percentage impact assessment and local junction modelling:
- **2022 Baseline:** Based on 2017 traffic surveys at Boship Roundabout and 2015 traffic flows included in the Wealden Local Transport Study (2018) for the other junctions, uplifted to 2022 using TEMPro growth factors for Wealden and balanced against 2022 automatic traffic counts on the A271 Horsebridge Road and 2019 DfT traffic counts on the A22 Hailsham Bypass.
 - **2030 Future Baseline (no development):** Based on opening year of 2025 + 5 years. Based on 2028 traffic flows included in the Wealden Local Transport Study (2018) uplifted to 2030 using TEMPro growth factors for Wealden.
 - **2030 With Development:** Based on the 2030 Future Baseline flows with the addition of vehicle trip generation associated with Scheme 1.
- 4.3.7 The traffic survey data which has informed the above scenarios have been included in Appendix D. The AM and PM peak hour traffic flow diagrams associated with the scenarios listed under paragraph 4.3.6 have been included within Appendix G.
- 4.3.8 The forecasted traffic flows included in the Wealden Local Transport Study (2018) are based on an assessment of various highway network scenarios based on various network improvement assumptions. The flows from the Wealden Local Transport Study (2018), including details relating to the scenario of the Wealden Local Transport Study (2018) used, has been included in Appendix H.
- 4.3.9 It should be noted that the majority of the TRCIS sites which inform the vehicle trip rates had a Travel Plan in place at the time of the survey. As such, the proposed vehicle trip rates account for the potential effects of a Travel Plan and, therefore, a repeat of the highway impact assessments, post-Travel Plan, would not be required.

Percentage Impact Assessment

- 4.3.10 A percentage impact assessment has been undertaken which provides a comparison between the 2030 With Development flows and the 2030 Future Base flows. The percentage impacts at key links within proximity of the Site has been provided in Table 4.6.

Table 4.6: Percentage Impact Assessment on the Local Highway Network

Link	Direction	AM Peak Hour		PM Peak Hour	
		Total Trip Gen.	% Impact	Total Trip Gen.	% Impact
A22 (South of Boship Rbt)	NB	7	0.4%	20	1.8%
	SB	22	2.0%	9	0.5%
	2-way	28	1.0%	28	1.0%
A22 (West of Boship Rbt)	EB	5	0.5%	14	0.8%
	WB	15	0.8%	7	0.5%
	2-way	20	0.7%	20	0.7%
A267 (North of Boship Rbt)	NB	2	0.3%	1	0.2%
	SB	1	0.1%	2	0.3%
	2-way	3	0.2%	3	0.2%
A271 (East of Boship Rbt and west of proposed site access)	EB	12	3.2%	37	5.1%
	WB	39	5.6%	17	3.3%

Link	Direction	AM Peak Hour		PM Peak Hour	
		Total Trip Gen.	% Impact	Total Trip Gen.	% Impact
	2-way	51	4.8%	51	4.4%
A271 (East of proposed site access)	EB	12	4.2%	5	0.9%
	WB	4	0.6%	12	2.7%
	2-way	16	1.7%	16	1.6%
A271 (East of A271/ B2104 North St Junction)	EB	10	2.5%	4	0.6%
	WB	3	0.4%	10	1.7%
	2-way	13	1.1%	13	1.0%
A271 (East of A271/ B2104 London Rd Junction)	EB	6	1.4%	3	0.4%
	WB	2	0.2%	6	1.2%
	2-way	8	0.6%	8	0.7%
B2104 North St (North of A271/ B2104 North St Junction)	NB	2	1.4%	1	0.6%
	SB	1	0.5%	2	0.9%
	2-way	3	0.9%	3	0.8%
B2104 London Rd (South of A271/ B2104 London Rd Junction)	NB	1	0.3%	4	1.2%
	SB	4	1.1%	2	0.5%
	2-way	5	0.7%	5	0.8%
A267 (North of A267/ B2104 North St junction)	NB	4	0.5%	2	0.4%
	SB	1	0.2%	4	0.4%
	2-way	6	0.4%	6	0.4%

- 4.3.11 As can be seen in Table 4.6, all of the links assessed have a very minor percentage impact across both the AM and PM peak hours due to the low level of trip generation associated with the Proposed Development. The only link where the 2-way percentage impacts exceed 2% is the A271 Horsebridge Road (immediately to the west of the proposed site access), where the percentage impact across both the AM and PM peak hours is between 4 – 5%. Overall, it is evident that the additional vehicle trip generation on the highway network as a result of the Proposed Development is within typical daily variations in traffic and is not expected to impact the operation of the highway network.

Junction Capacity Assessment

- 4.3.12 Local junction models have been set up for the major intersections within close proximity to the Site which include the junctions set out in Paragraph 4.3.5. The scenarios which have been assessed are set out in Paragraph 4.3.6.
- 4.3.13 The DfT approved Junctions software has been used to assess the capacity of the various junctions as follows: ARCADY has been used to model the roundabouts, whereas PICADY has been used to model the priority intersections. Full modelling reports for all assessments, including origin and destination matrices, are provided within Appendix I.

A271 Horsebridge Road/ Proposed Development Access Road

- 4.3.14 Table 4.7 sets out the PICADY junction capacity assessment results for the proposed access junction.

- 4.3.15 The results show that the proposed access junction operates with significant spare capacity and with minimal queuing and delays in the 2030 With Development scenario. As such, the proposed junction layout and geometry is suitable for the Proposed Development in terms of capacity.

Table 4.7: Proposed Access Junction PICADY Results

	AM (0800 – 0900)				PM (1700 – 1800)			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2030 With Development								
Site Access Right/Left Out	0.2	9.88	0.13	A	0.1	8.02	0.05	A
Right Into Site	0	7.73	0.03	A	0.1	6.97	0.07	A

A22/ A267/ A271 (Boship Roundabout)

Existing Layout

- 4.3.16 Table 4.8 sets out the ARCADY junction capacity assessment results for the Boship Roundabout based on its existing configuration.
- 4.3.17 The results show that the junction is close to maximum capacity under the 2022 Baseline during the PM peak hour with queueing and delays of 22 PCUs and 53 seconds respectively on the A22(W) arm. During the AM peak hour, the junction operates with significant spare capacity with no queuing or delay issues.
- 4.3.18 In the 2030 Future Baseline scenario, the junction operates over capacity during both the AM and PM peak hours. During the AM peak hour, the A22(S) arm operates at an RFC of 1.25 with significant delays and queueing and during the PM peak hour, the A22(W) operates at an RFC of 1.29 with significant delays and queueing. Additionally, the A271 Horsebridge Road operates close to maximum capacity during both the AM and PM peak hours.
- 4.3.19 In the 2030 With Development scenario, the issues on the A22(S), A22(W) and A271 (E) arms that were present in the 2030 Future Baseline scenario are slightly exacerbated and there are very minor increases in the RFC, delays and queues of these junction arms due to the additional development traffic.
- 4.3.20 Overall, the Proposed Development does not have a material impact on the operation of the Boship Roundabout.

Table 4.8: Boship Roundabout (Existing Layout) ARCADY Results

	AM (0800 – 0900)				PM (1700 – 1800)			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2022 Baseline								
A267 (N)	0.9	3.57	0.46	A	1	4.88	0.5	A
A271 (E)	1.1	9.5	0.52	A	1.1	10.9	0.51	B
A22 (S)	3	8.87	0.74	A	1.3	4.5	0.56	A
A22 (W)	1.5	5.75	0.58	A	22.3	53.2	0.98	F
2030 Future Baseline								
A267 (N)	0.8	3.62	0.43	A	1.5	6.24	0.59	A

	AM (0800 – 0900)				PM (1700 – 1800)			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A271 (E)	8.8	43.98	0.91	E	5.8	39.75	0.86	E
A22 (S)	203.8	433.03	1.25	F	2.7	8.07	0.73	A
A22 (W)	2.8	9.23	0.73	A	262.5	569.31	1.29	F
2030 With Development								
A267 (N)	0.8	3.65	0.43	A	1.5	6.34	0.60	A
A271 (E)	14.3	65.84	0.96	F	6.6	44.09	0.88	E
A22 (S)	211.3	459.71	1.26	F	3.0	8.55	0.74	A
A22 (W)	2.9	9.39	0.74	A	285.7	617.07	1.31	F

Proposed Widening of A271 Roundabout Arm

- 4.3.21 The proposed access junction design package includes a wider entry width and longer flare on the A271 Horsebridge Road roundabout entry arm, as shown on Drawing 332110699_5501_SK001 within Appendix C.
- 4.3.22 Table 4.9 sets out the ARCADY junction capacity assessment results for the Boship Roundabout based on the proposed widening of the A271 roundabout arm.
- 4.3.23 The results show that the issues on the A271 Horsebridge Road arm are alleviated due to the widening improvement provided. However, the issues identified on the A22(S) and A22(W) arms, which are the result of the background traffic flows in 2030, remain.

Table 4.9: Boship Roundabout with Proposed Development Improvements ARCADY Results

	AM (0800 – 0900)				PM (1700 – 1800)			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2030 With Development								
A267 (N)	0.8	3.65	0.43	A	1.5	6.34	0.6	A
A271 (E)	3.6	16.44	0.78	C	2.3	14.48	0.69	B
A22 (S)	216.2	461.05	1.26	F	3	8.58	0.75	A
A22 (W)	2.9	9.36	0.73	A	285.7	617.1	1.31	F

ESCC Planned Improvement Layout

- 4.3.24 Junction capacity assessments will be undertaken by ESCC based on ESCC's future planned improvement layout for the junction which includes targeted widening and signalisation. The assessment findings will be provided separately to this TA.

A271 Horsebridge Road/ B2104 North Street

- 4.3.25 Table 4.10 sets out the PICADY junction capacity assessment results for the A271 Horsebridge Road/ B2104 North Street junction.
- 4.3.26 The results show that the junction operates with significant spare capacity with minimal queuing and minor delays across all scenarios tested and therefore can comfortably accommodate the Proposed Development.

Table 4.10: A271 Horsebridge Road/ B2104 North Street PICADY Results

	AM (0800 – 0900)				PM (1700 – 1800)			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2022 Baseline								
B2104 Left Turn	0.2	7.4	0.16	A	0.4	10.02	0.29	B
B2104 Right Turn	0	10.85	0.03	B	0	12.32	0.04	B
A271 Right Turn	1	6.95	0.39	A	0.5	6.41	0.25	A
2030 Future Baseline								
B2104 Left Turn	0.3	8.2	0.23	A	0.8	13.17	0.44	B
B2104 Right Turn	0	12.7	0.04	B	0.1	16.09	0.05	C
A271 Right Turn	1.6	6.29	0.44	A	1.2	7.71	0.42	A
2030 With Development								
B2104 Left Turn	0.3	8.26	0.23	A	0.8	13.23	0.44	B
B2104 Right Turn	0	12.85	0.04	B	0.1	16.28	0.05	C
A271 Right Turn	1.6	6.34	0.45	A	1.3	7.71	0.42	A

A267 New North Street / B2104 North Street

- 4.3.27 Table 4.11 sets out the PICADY junction capacity assessment results for the A267 New North Street/ B2104 North Street junction.
- 4.3.28 In the 2022 Baseline, the results show that the junction operates over maximum capacity during the AM peak hour with the right/ left-turn movement out of the B2104 North Street operating at an RFC of 1.07 with delays of 186s and queues of 28 PCUs.
- 4.3.29 In the 2030 Future Baseline scenario, the operation of the right/ left-turn movement out of the B2104 North Street is made worse with the increased traffic. During the AM peak hour, the RFC increases to 1.13 and there are minor increases in queues and delays. During the PM peak hour, the junction still operates within capacity but there are delays of 57 seconds on this movement.
- 4.3.30 In the 2030 With Development scenario, there are very minor increases in delays and queues as a result of the additional development traffic. During the AM peak hour, the RFC stays at 1.13 and during the PM peak hour, there are minor increases in the RFC but the junction operates within desirable operating RFC levels (considered to be 0.85).
- 4.3.31 Overall, the Proposed Development does not have a material impact on the operation of the A267 New North Street / B2104 North Street junction.

Table 4.11: A267 New North Street / B2104 North Street PICADY Results

	AM (0800 – 0900)				PM (1700 – 1800)			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2022 Baseline								
B2104 Right/Left	27.8	186.2	1.07	F	1.7	28.4	0.62	D
A267 Right Turn	0.2	8.42	0.13	A	0.2	9.91	0.18	A
2030 Future Baseline								
B2104 Right/Left	35.5	254.29	1.13	F	3.9	57.39	0.8	F

	AM (0800 – 0900)				PM (1700 – 1800)			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A267 Right Turn	0.1	8.22	0.1	A	0.4	11.23	0.25	B
2030 With Development								
B2104 Right/Left	37.1	264.58	1.13	F	4	59.01	0.81	F
A267 Right Turn	0.1	8.23	0.1	A	0.4	11.25	0.25	B

A271 Horsebridge Road / B2104 London Road

- 4.3.32 Table 4.12 sets out the PICADY junction capacity assessment results for the A271 Horsebridge Road/ B2104 London Road junction. The results show that the junction operates within capacity and with no queuing issues and with minor levels of delay during the 2022 Baseline, during both the AM and PM peak hours. However, in the 2030 Future Baseline, during the AM peak hour, the left and right-turn out of the B2104 London Road operate over the desirable RFC limit of 0.85 with notable delays. During the PM peak hour, the right-turn out of the B2104 London Road operates over the desirable RFC limit of 0.85 and both the left and right-turn out of the B2104 London Road operate with notable delays.
- 4.3.33 In the 2030 With Development scenario, the existing issues from the 2030 Future Baseline are slightly exacerbated but the junction still operates within capacity during both the AM and PM peak hours.
- 4.3.34 Overall, the Proposed Development does not have a material impact on the operation of the A271 Horsebridge Road / B2104 London Road junction and the capacity issues expected in 2030 are the result of background traffic flows as opposed to the Proposed Development traffic. It should be noted that the level of development traffic which routes via the A271 Horsebridge Road / B2104 London Road junction would be 13 PCUs during the AM peak hour and 14 PCUs during the PM peak hour. This level of traffic equates to a total junction traffic percentage change of less than 1% and is well within daily variations in traffic flow.

Table 4.12: A271 Horsebridge Road / B2104 London Road PICADY Results

	AM (0800 – 0900)				PM (1700 – 1800)			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2022 Baseline								
B2104 Left Turn	1	12.91	0.5	B	0.7	12.38	0.4	B
B2104 Right Turn	0.7	18.11	0.41	C	1.4	28.9	0.59	D
A271 Right Turn	0.3	8.14	0.2	A	0.8	11.55	0.46	B
2030 Future Baseline								
B2104 Left Turn	5.3	84.31	0.9	F	2.6	67.32	0.77	F
B2104 Right Turn	5.4	105.73	0.9	F	5.2	104.13	0.89	F
A271 Right Turn	0.5	12.09	0.32	B	1.6	17.3	0.61	C
2030 With Development								
B2104 Left Turn	6.5	98.87	0.94	F	3.7	92.77	0.86	F
B2104 Right Turn	5.9	114.87	0.92	F	5.6	110.96	0.9	F
A271 Right Turn	0.5	12.29	0.33	B	1.6	17.51	0.62	C

Junction Capacity Assessment Summary

4.3.35 A summary of the junction capacity assessment results is as follows:

- The proposed access junction and the A271 Horsebridge Road/ B2104 North Street junction are expected to operate with significant spare capacity and no delay or queuing issues in the 2030 With Development scenario.
- At the Boship Roundabout (existing configuration), there are existing capacity and delay issues which are expected to be made much worse by 2030 (without the Proposed Development). The Proposed Development is expected to result in very minor impacts on the A22 (W) and A22 (S) arms but would alleviate issues on the A271 Horsebridge Road due to the widening improvements proposed.
- An assessment of the operation of ESCC's improvement layout for Boship Roundabout will be undertaken by ESCC and the modelling results will be provided separately to this TA.
- There are existing issues at the A267 New North Street / B2104 North Street junction which are made worse by 2030 (without the Proposed Development). Impacts at this junction as a result of the development are expected to be minimal. Overall, the Proposed Development does not have a material impact on the operation of the A267 New North Street / B2104 North Street junction.
- At the A271 Horsebridge Road / B2104 London Road junction, there are expected to be capacity and delay issues by 2030 (without the Proposed Development). The addition of the Proposed Development traffic would result in a very minor level increase to queues and delays and therefore the Proposed Development does not have a material impact on the operation the junction.

5 Sustainable Transport Strategy

5.1.1 Overall, the transport strategy for the Site will be in line with key policy objectives and will focus on the following key opportunities for the Site:

- Limiting the highway impacts of the Proposed Development
- Provision of realistic alternatives to private vehicles for a range of journey purposes; and
- Improving the integration of the Site with the surrounding community.

5.2 Walking and Cycling

5.2.1 The Proposed Development will include widening of footways on the southern side of the A271 Horsebridge Road, as shown on Drawing 332110699_5501_SK001, within Appendix C. This provides the opportunity to connect the Proposed Development footway improvements to ESCC's planned improvements at Boship Roundabout which include improved crossing facilities for pedestrians and cyclists.

5.2.2 The indicative design of the Proposed Development considers the movement of pedestrians and cycles within the Site and the detailed design of the Site layout will be in accordance with best design principles as set out in Manual for Streets and East Sussex design guidance.

5.2.3 Cycle use would be encouraged through the provision of excellent cycle parking facilities, in accordance with ESCC parking standards. All roads within the internal site will be designed to allow the implementation of a 20- mph zone.

5.2.4 Walking and cycling use would be promoted and encouraged through the proposed Travel Plan measures, as summarised under Section 5.4 below.

5.2.5 The developer would work with ESCC and Sussex Police regarding the implementation of a reduced speed limit between the Boship Roundabout and the existing 30mph speed limit of the A271 Horsebridge Road.

5.3 Public Transport Improvements

5.3.1 The Proposed Development is located in walking proximity to a number of bus stop which provide frequent services to key locations within Hailsham and beyond.

5.3.2 As part of the pre-application scoping discussions, ESCC have requested contributions to bus services and facilities which include:

- Contribution towards a new pair of bus stops located in close proximity to the proposed site which may also require a raised kerb, bus stop clearway markings, bus stop pole, shelter and a real time information sign.
- Provision of a suitable pedestrian crossing facility on the A271 Horsebridge Road providing safe access to the ESCC proposed new bus stops.
- Contribution towards improving bus services in the area which would include uplifting of the Stagecoach Route 54 frequency.

5.3.3 The Applicant will work with ESCC to ensure that the Site is accessible to bus services and that a proportionate contribution is made towards improvement of bus services and facilities as identified in Paragraph 5.3.3.

5.4 Residential Travel Plan

- 5.4.1 A Framework Travel Plan for the Proposed Development has been prepared and included in Appendix J. The Framework Travel Plan sets out the overall strategy for sustainable transport for the development. Prior to the occupation of the development, a Final Travel Plan will be prepared which will build on the Framework Travel Plan based on the final and detailed information for the Proposed Development and will follow input and guidance from East Sussex County Council.

6 Summary and Conclusions

6.1 Summary

- 6.1.1 Stantec has been commissioned by Hertfordshire Holdings Limited (the Applicant) to provide transport planning advice in support of an Outline Planning Application for proposed residential development at land east of the A22 and south of the A271 at Lower Horsebridge, Hailsham, East Sussex.
- 6.1.2 The application site is located on the southern edge of Lower Horsebridge adjacent to the Boship roundabout junction and is bounded by the A22 Hailsham Bypass to the west, River Cuckmere to the south, and the A271 Horsebridge Road to the north. The total site area is approximately 7.67 hectares.
- 6.1.3 The Proposed Development includes up to 124 residential dwellings, based on the latest Illustrative Masterplan, comprising a mix of houses and apartment units. It is proposed that vehicular access to the Site is be provided on the A271 Horsebridge Road via a new priority junction.
- 6.1.4 The Applicant's planning team has liaised with Wealden District Council East Sussex County Council through the pre-application stage, and this has informed the preparation of the Transport Assessment.
- 6.1.5 The Proposed Development results in low levels of vehicle trip generation on the surrounding highway network.
- 6.1.6 A highway impact assessment was undertaken comprising of link percentage impacts and junction capacity assessments which included the highway network within close proximity to the Proposed Development and assessed the future year of 2030. All of the links assessed have a very minor percentage impact across both the AM and PM peak hours due to the low level of trip generation associated with the Proposed Development. A summary of the junction capacity assessments are as follows:
- The proposed access junction and the A271 Horsebridge Road/ B2104 North Street junction is expected to operate with significant spare capacity and no delay or queuing issues in the 2030 With Development scenario.
 - At the Boship Roundabout (existing configuration), there are existing capacity and delay issues which are expected to be made much worse by 2030 (without the Proposed Development). The Proposed Development is expected to result in very minor impacts on the A22 (W) and A22 (S) arms but would alleviate issues on the A271 Horsebridge Road due to the widening improvements proposed.
 - An assessment of the operation of ESCC's improvement layout for Boship Roundabout will be undertaken by ESCC and the modelling results will be provided separately to this TA. It is expected that the improved Boship Roundabout would alleviate existing capacity issues and would accommodate future background traffic growth, including traffic associated with the Proposed Development.
 - There are existing issues at the A267 New North Street / B2104 North Street junction which are made worse by 2030 (without the Proposed Development). Impacts at this junction as a result of the development are expected to be minimal. Overall, the Proposed Development does not have a material impact on the operation of the A267 New North Street / B2104 North Street junction.

- At the A271 Horsebridge Road / B2104 London Road junction, there are expected to be capacity and delay issues by 2030 (without the Proposed Development). The addition of the Proposed Development traffic would result in a very minor level increase to queues and delays and therefore the Proposed Development does not have a material impact on the operation the junction.

6.1.7 The sustainable transport strategy for the Site focuses of the following measures:

- The Proposed Development will include widening of footways on the southern side of the A271 Horsebridge Road. This provides the opportunity to connect the Proposed Development footway improvements to ESCC's planned improvements at Boship Roundabout which include improved crossing facilities for pedestrians and cyclists.
- The indicative design of the Proposed Development considers the movement of pedestrians and cycles within the Site and the detailed design of the Site layout will be in accordance with best design principles as set out in Manual for Streets and East Sussex design guidance.
- Cycle use would be encouraged through the provision of excellent cycle parking facilities, in accordance with ESCC parking standards. All roads within the internal site will be designed to allow the implementation of a 20- mph zone.
- A Framework Travel Plan has been produced which will be secured through a Section 106 agreement. The Travel Plan sets out measures to increase sustainable modes of transport and reduce vehicle journeys. Walking and cycling use would be promoted and encouraged through the proposed Travel Plan measures.
- The Proposed Development is located in walking proximity to a number of bus stop which provide frequent services to key locations within Hailsham and beyond.
- The Applicant will work with ESCC to ensure that the Site is accessible to bus services and that a proportionate contribution is made towards improvement of bus services and facilities.

6.2 Conclusions

6.2.1 Overall, it has been shown that the Proposed Development at Lower Horsebridge would not have significant residual impacts on the transport network. Based on the expected levels of trip generation and the improvement measures that have been outlined in this TA, the Proposed Development would be sustainable in transport terms and in accordance with policy at a national and local level.

Appendix A Illustrative Masterplan

