

Highgate*Transportation*

**Land East of Shripney Road, Shripney
Arun**

Transport Statement

September 2019

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1.0 Introduction

- 1.1 Highgate Transportation have been appointed by Hanbury Properties to prepare this Transport Statement in support of their outline planning application for 46 residential dwellings on land east of Shripney Road, Shripney, Arun with all matters reserved except for access.
- 1.2 This site is currently a field with existing residential development on all sides except to the east where there are also fields. The development will be served by a new ghost island right turn junction broadly at the location of the existing field gate.
- 1.3 Initial discussions with highway officers at West Sussex County Council confirm that following the approval (ref: BE/63/17/OUT) for residential development adjacent to the Robin Hood public house, the location of the application site, is in transport development terms, considered to be acceptable in principle.
- 1.4 Public consultation was held on the 5th September 2019 where the proposals were generally well received. In transport terms the most frequent issue raised related to concerns that the proposed Shripney Bypass did not bypass the section of Shripney Road fronting the application site.
- 1.5 In highway and transport terms the issues arising can be summarised as:
 - i. Amount of development traffic
 - ii. Proposed site access arrangements
 - iii. The amount of existing and future traffic using the A29 through Shripney
 - iv. Speed of traffic along Shripney Road
 - v. Recent local accident history
 - vi. The provision of cycle and car parking
 - vii. Design of the internal access road and the ability for a service vehicle to manoeuvre through site
 - viii. Provision for pedestrians
- 1.6 This report considers all of the above issues and concludes the application proposals are acceptable in transport development terms.

2.0 Existing Situation

Site description

- 2.1 The site frontage consists of verge, overgrown vegetation and street furniture including lighting, telegraph poles and signage. The site is currently access via a field gate.
- 2.2 **Photographs 1 and 2** show the site frontage looking north and south from the existing site access location respectively.

Photograph 1 – Location of the existing site access looking north



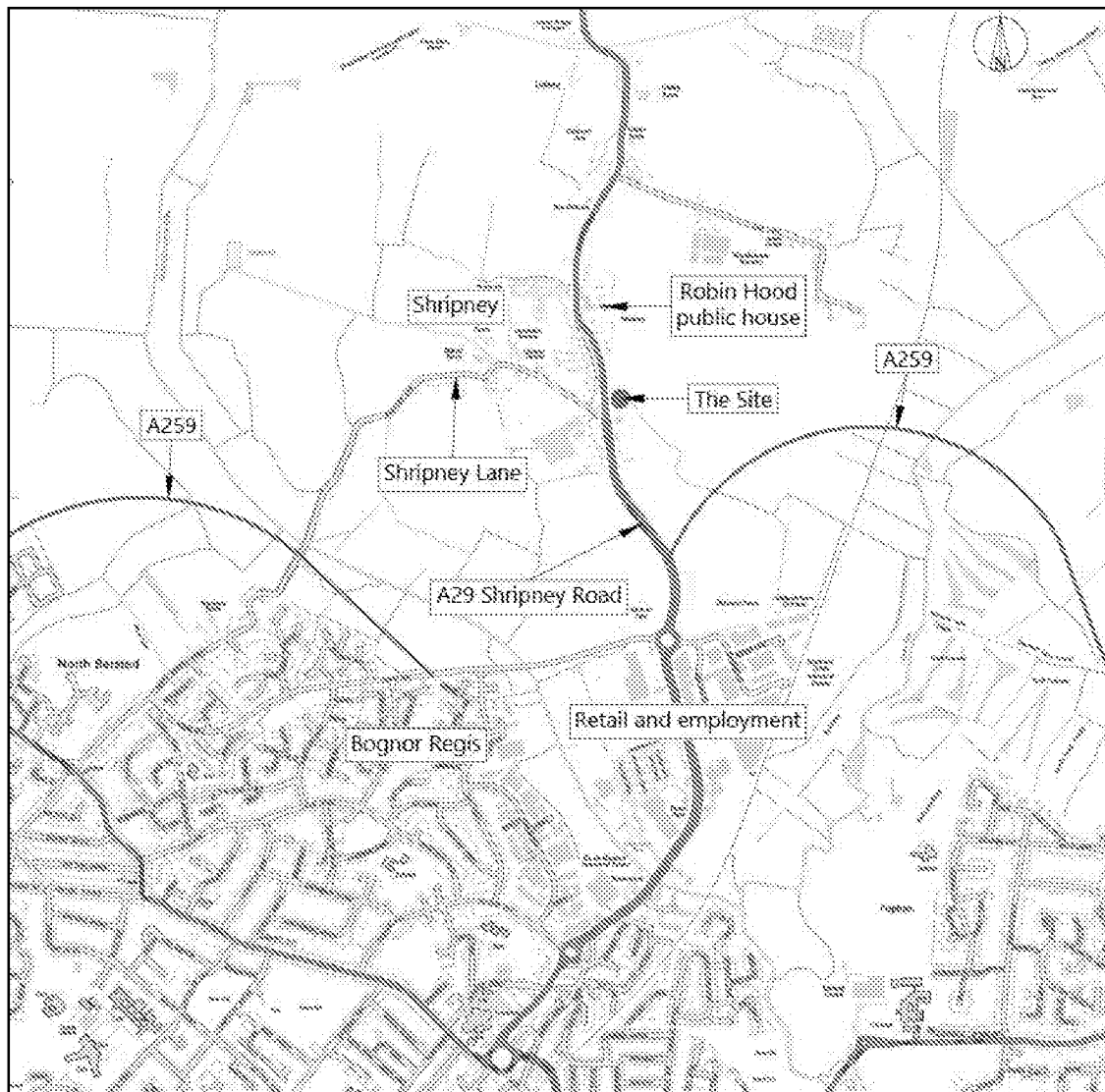
Photograph 2 – Location of the existing site access looking south



Local transport network

- 2.3 Shripney Road forms part of the A29 which connects Bogor Regis to the south with Fontwell to the north where it also joins the A27(T). Approximately 500 metres to the south of the site is the recently constructed three arm roundabout junction that forms part of the A259 Bognor Regis Relief Road.
- 2.4 The site location and surrounding area is shown in **Figure 2.1**. It should be noted that the A259 has not yet been added to the base Ordinance Survey map and has therefore been added indicatively for reference.

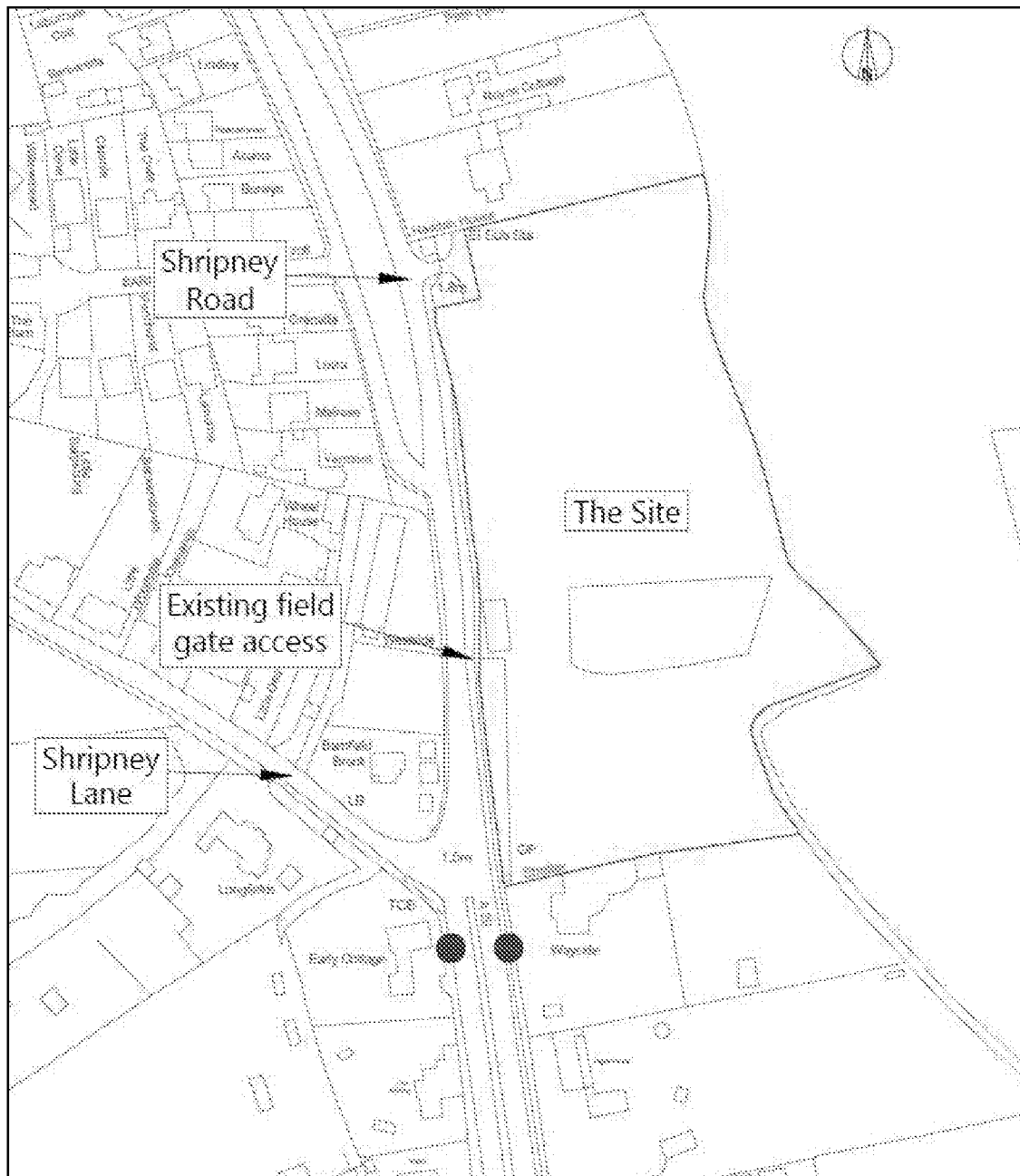
Figure 2.1 – Site location plan



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- 2.5 Along the site frontage, Shripney Road is single carriageway and approximately 5.5 to 6.0 metres wide. Immediately to the south of the junction with Shripney Lane, Shripney Road becomes a dual carriageway with two lanes in each direction.
- 2.6 In the vicinity of the site, Shripney Road is subject to a 40mph speed limit, has street lighting, with a footway along the western side of the road (which is set back in places) and no footway along the eastern side. The speed restriction along the dual carriageway is also 40mph.
- 2.7 The site and immediate area is shown in **Figure 2.2** with the closest bus stops to the site denoted by blue circles.

Figure 2.2 – Site and immediate area



- 2.8 The existing pedestrian network comprises footways along the western side of Shripney Road (intermittently along the eastern side) and several uncontrolled crossing points. The footways connect with Bognor Regis to the south and to other parts of Shripney including the Robin Hood public house to the north.
- 2.9 **Appendix 1** contains a plan showing the highway records local to the site. From this, it can be seen that the Shripney Road carriageway past the site is public highway along with most of the verged area.
- 2.10 The existing cycle network comprises off-carriageway cycle facilities adjacent to the A259 and A29 to the south of its roundabout junction with the A259.

- 2.11 **Photograph 3** shows the existing pedestrian crossing of Shripney Lane to the south of the site.

Photograph 3 – Pedestrian crossing of Shripney Lane



- 2.12 **Photograph 4** shows the transition of Shripney Road from dual carriageway to single carriageway to the south of the site. This is accompanied with 40mph repeater signs and associated end of dual carriageway signage.

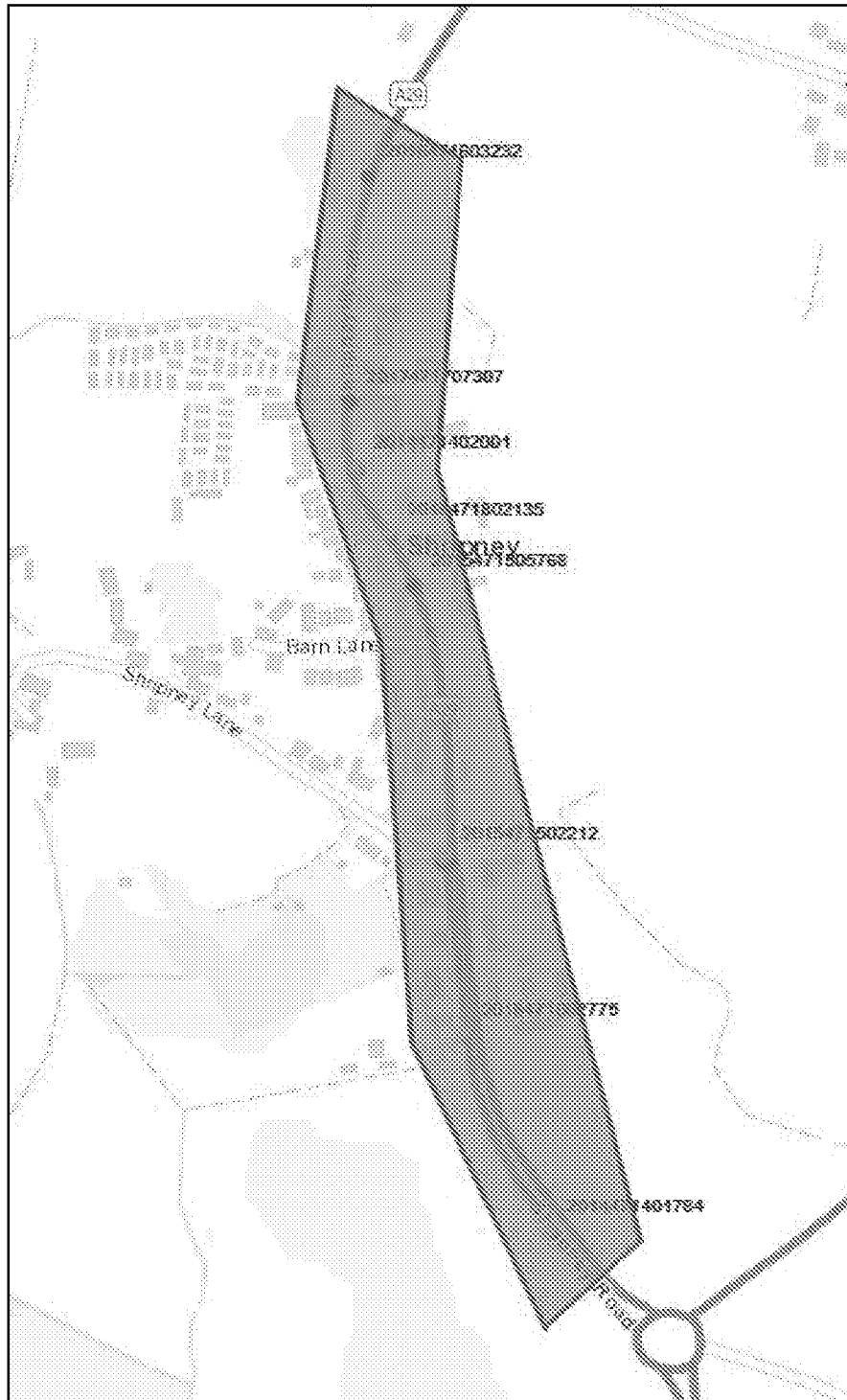
Photograph 4 – Transition of Shripney Road from dual carriageway to single carriageway where two lanes merge into one lane



Accident History

- 2.13 Road traffic accident data has been obtained from Crashmap Pro for the study area shown at **Figure 2.3**.

Figure 2.3 – Road Traffic Accident Study Area



- 2.14 During the five year study period of 01/01/2014 – 31/12/2018 a total of twelve accidents were recorded in the study area. Of the twelve accidents, one was classified as 'fatal', four were classified as serious and the remainder were classified as 'slight'.
- 2.15 The fatal accident involved a side-side collision between a vehicle overtaking another vehicle on the inside. From the Crashmap accident report it appears that after the collision, the vehicle overtaking on the nearside collided with a tree. It is noted that the undertaking manoeuvre happened where the two lanes of the northbound A29 carriageway merge into one at the priority junction with Shripney Lane.
- 2.16 Three other accidents, all classified as 'slight', occurred in the vicinity of the A29 Shripney Road / Shripney Lane priority junction. All three of the 'slight' accidents involved a collision between a vehicle turning right out of Shripney Lane and a vehicle travelling ahead on the A29 Shripney Road.
- 2.17 The 'serious' accidents can be summarised as follows:
- 2017471707307 (approximately 275 metres north of proposed site access) – This was a single vehicle accident. A van or goods vehicle of less than 3.5 tonnes mgw hit a telegraph/electricity pole in wet conditions.
 - 2016471603232 (approximately 500 metres north of proposed site access) – This was a side-side collision between two vehicles travelling in opposite directions
 - 2015471505768 (approximately 100 metres north of proposed site access) – This was a single vehicle accident. A car collided with a wall or fence in dry conditions during hours of darkness.
 - 2018471802517 (approximately 150 metres south of proposed site access) – This was a two vehicle incident involving a motorcycle travelling ahead and a car undertaking a U-turn.
- 2.18 The 'fatal' accident in the vicinity of the site is clearly tragic. However, as no other accident of any severity was recorded similar to this at the location then this is not representative of a road layout deficiency.
- 2.19 There appears to be a potential pattern in accidents involving vehicles losing control and leaving the carriageway before colliding with trees or street furniture. As set out at **Section 4.0** a speed survey has identified 85th percentile vehicle speeds past the site of 41.3mph northbound and 42.2mph southbound. As part of the development proposals existing vegetation will be set back in order to achieve visibility splays commensurate with vehicle speeds along the A29. Any new or relocated street furniture as part of the development will be located as to minimise the potential harm to errant vehicle passing the site on the A29.

Public Transport Network

- 2.20 The nearest bus stops are located on Shripney Road approximately 40 metres south of the southern boundary of development site.
- 2.21 These bus stops are served by the 66A and 66C services which operate between Bognor Regis and Yapton via slightly different routes. There are a total of five services each way Monday-Friday and four services each way on a Saturday with no services on a Sunday.
- 2.22 The nearest railway stations are in central Bognor Regis to the south and Barnham to the north east. Bognor Regis is the terminus of a branch line that connect to Barnham on the West Coastway Line. Notable stations along the route include Southampton, Brighton and Portsmouth. It is also possible to get direct trains to London Waterloo via Gatwick Airport.

Local Services and Amenities

- 2.23 Local services and amenities required on a daily basis are found in Bognor Regis. Bognor Regis railway station is around 3km walk/cycle distance south of the site and therefore large parts of Bognor Regis are within easy walking and cycling distance of the application site.
- 2.24 The 66 A and C bus services which stops near the site travels into central Bognor Regis which includes stops near a Sainsburys and Tesco supermarkets approximately 1.8km to the south.

Local Facilities

- 2.25 A selection of local facilities are set out in **Table 2.1** below.

Table 2.1 – Local facilities

Facility	Approximate Walk/Cycle Distance
The Robin Hood Public House	300m
Industrial Estates east of A29 and south of A259	1.0km
Retail Park including Lidl and KFC	1.1km
Lloyds Pharmacy (in Sainsburys Superstore)	1.8km
Bognor Regis War Memorial Hospital	2.4km
Bersted Green Surgery	2.4km
Bersted Green C of E Primary School	2.6km
Knights Dental Surgery	3.0km
Bartons Primary School	3.0km
University of Chichester (Bognor Campus)	3.1km
Felpham Community College	3.5km
Regis School	3.7km

Conclusion

- 2.26 The application site is suitably located to accommodate 46 residential dwellings.

3.0 Development Proposals

Application Proposals

- 3.1 The planning application is for 46 residential dwellings. The access will be in the form of a ghost island facility and will be broadly situated where the existing field gate access is located. The dwellings comprise 8 x one-bed units, 17 x two-bed units, 16 x three-bed units and 5 x four-bed units.
- 3.2 The Architect's site layout plan (ref: DLA.1948.L.06.S10) is contained in **Appendix 2** and an extract shown in **Figure 3.1**.

Figure 3.1 – Extract of Architect's proposed site layout plan

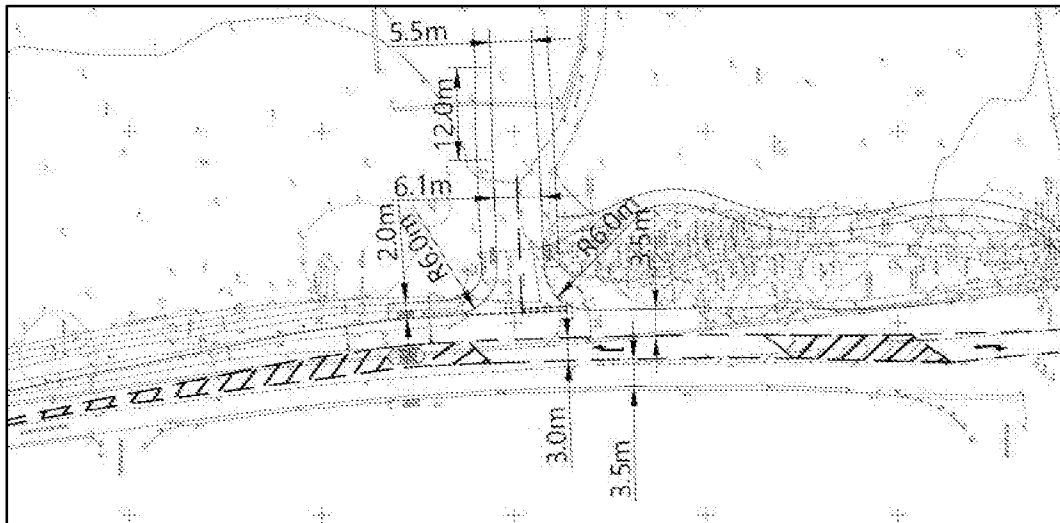


3.3 From the plan it can be seen that:

- i. The internal access road has generally been designed as 4.8 metre wide distributor road (with widening on bends as determined by swept path analysis) from which various shared surface areas take access.
- ii. The site will be accessed from a ghost island right turn junction
- iii. Off-street car parking will be provided for most dwellings with other served by demarcated parking bays.

3.4 The proposed site access arrangements are shown on the drawing provided at **Appendix 3**. An extract of this plan is shown at **Figure 3.2**.

Figure 3.2 – Proposed site access arrangements



3.5 From this it can be seen that:

- i. The site will be accessed by a ghost island right turn facility.
- ii. Through lanes of 3.5 metres in width are proposed with a 3.0 metre wide lane for vehicle waiting to turn right into the site.
- iii. A pedestrian refuge crossing of Shripney Road is proposed to the north of the site access.
- iv. An indicative alignment for the footway through the site connecting to the footway along Shripney Road to the south is shown in the vicinity of the southbound bus stop.
- v. The ghost island right turn facility for Shripney Road will be maintained, with minor modifications to white lining to tie into the access proposals.

3.6 Swept path analysis is shown in **Appendix 4** and this that it is possible for an 11.2 metre refuse vehicle to enter the site in a forward gear, travel around the site, turn within the site and re-join Shripney Road in a forward gear.

Pedestrian Connectivity Improvements

- 3.7 As part of the development proposals, a pedestrian refuge island will be provided to the north of the site, close to the site access junction which will connect the development site with the existing pedestrian network and existing northbound bus stop along the A29.
- 3.8 A pedestrian link will also be provided within the site, close to the site frontage, to connect the development with the existing southbound bus stop along the A29 to the south of the site.
- 3.9 The refuge island and pedestrian link through the site will also improve connectivity for local residents, including to/from the bus stops.

Cycle Parking

- 3.10 Arun District Council's parking guidelines SPD does not provide guidance for cycle parking provision.
- 3.11 A number of dwellings will be provided with garages, these will be large enough to accommodate cycle storage in addition to car parking.
- 3.12 For dwellings without garages, secure undercover cycle storage will be provided gardens (rear/side where present).

Car Parking

- 3.13 Arun District Council's parking guidelines SPD (extracts contained in **Appendix 5**) sets out that for housing estates with 16 or more houses sets out that:
 - i. A maximum of two car parking spaces should be provided for a "*smaller house size*".
 - ii. A maximum of three car parking spaces should be provided for a "*larger house size*".
 - iii. A maximum of 0.2 spaces per dwelling for visitors and service vehicles.
- 3.14 No explicit mention as to what constitutes "*smaller*" or "*larger*" house size. However, from reading other entries it appears that three bedroomed or fewer dwellings would be classified as "*smaller*". Therefore four or more bedrooms would be classified as "*larger*".
- 3.15 The development will be supported by the following approximate ratios:
 - i. 1 space per one-bedroomed dwelling
 - ii. 2 spaces per two-bedroomed dwelling
 - iii. 3 spaces per three or four-bedroomed dwelling
- 3.16 Each dwelling with off-street parking will be provided with one electric vehicle charging point. This will be in the garage where the property has a garage, otherwise the charging point will be on the driveway.

Travel Plan Measures

- 3.17 A planning condition to secure a Residential Travel Plan is expected as part of any planning approval and is anticipated to include the appointment of a Travel Plan Co-ordinator, a Travel Information Pack and sustainable travel vouchers. These vouchers will comprise £250 per dwelling per year for a period of two years to assist the purchase of sustainable travel modes such as bus or train travel and/or cycle acquisition and training.
- 3.18 The Travel Plan will include the production and promotion of the Travel Information Pack to be provided on first occupation and will include details of:
- i. Local pedestrian and cycle routes and the health benefits of walking and cycling.
 - ii. The location of local bus stops, bus transport routes and frequency of service.
 - iii. Information regarding best value ticketing.
 - iv. How to claim the travel vouchers.
 - v. The accessibility of nearby services and facilities (including cycle shops).
 - vi. Links to travel related and foodstore delivery websites and taxi firms
 - vii. Local public electric vehicle charging point locations.
 - viii. The contact details of the Travel Plan Co-ordinator.

4.0 Traffic Impact

Existing Traffic Flows

- 4.1 Traffic surveys were undertaken during March 2019. The surveys included an ATC undertaken between 21st March 2019 and 27th March 2019 along the site frontage. An MCC was undertaken on 21st March 2019 at the A29/A259 roundabout to the south of the site.
- 4.2 The ATC survey identified the following flows for an average weekday during the study period.

Table 4.1 – Existing A29 Shripney Road Traffic Flows

	07:00-08:00	16:00-17:00	Daily
A29 Shripney Road – Northbound	588	466	6,707
A29 Shripney Road – Southbound	523	725	6,899

Table 4.2 – Existing A29 Shripney Road Speeds

	Average	85 th Percentile
A29 Shripney Road – Northbound	35.6mph	41.3mph
A29 Shripney Road – Southbound	36.1mph	42.2mph

- 4.3 As shown in **Table 4.1**, around 1,100-1,200 two-way movements currently occur along the A29 Shripney Road at peak times and less at other times.
- 4.4 As shown in **Table 4.2**, the majority of vehicles travel below the 40mph signed speed limit while 85th percentile speeds of 41.3mph northbound and 42.2mph southbound.
- 4.5 The 41.3mph (66.1kph) and 42.2mph (67.5kph) observed vehicle speeds would equate to site access visibility splays of 108.8 metres looking south and 112.7 metres looking north. For the purposes of the proposed site access arrangement, these speeds have been referenced against the DMRB SSD for 70.0 kph (43.8 mph) to provide a robust scenario.

Background Traffic Growth

- 4.6 The TEMPRO database has been used to determine growth factors for a future assessment year of 2024. Growth factors for rural principal roads for the geographic area of 'Arun 012 (E02006553)'.
- AM Peak Hour: 1.0801
 - PM Peak Hour: 1.0783

- 4.7 Applying the above growth factors to the flows set out in **Table 4.1** results in the following flows.

Table 4.3 – Forecast 2024 A29 Shripney Road Traffic Flows

	07:00-08:00	16:00-17:00	Daily
A29 Shripney Road – Northbound	635	503	7,244
A29 Shripney Road – Southbound	564	782	7,440

Forecast Development Trips

- 4.8 Version 7.6.2 of the TRICS database has been used to provide an indication of the likely number of AM and PM peak hour weekday person trip movements. The database provides a trip rate per unit for residential (class C) developments calculated from surveyed movements each hour across the day at similar sites.
- 4.9 The latest TRICS database has been searched for privately owned houses. A summary of the trip generation and attraction is provided below for each land use, and the full multi-modal TRICS reports are contained in **Appendix 6** of this report.
- 4.10 The TRICS database search for the residential units was carried out using the default survey dates and the following criteria:
- Land use 'Residential – Houses Privately Owned'.
 - Multi-modal trip rate surveys.
 - All regions in Great Britain (excluding Greater London).
 - The range of 20 to 80 units.
 - Use of weekday data (Saturdays and Sundays excluded).
 - Sites within Edge of Town locations only.
- 4.11 The average total person trip rates for the surveyed network AM and PM peak hours (08:00-09:00 and 16:00-17:00) are set out in **Table 4.4** for the proposed development. The trips rates for pedestrians, cyclists and total vehicles are also provided.
- 4.12 The resultant total person and vehicular trip generation is set out in **Table 4.5** and for robustness, a development of up to 50 residential units has been assessed.

Table 4.4 – Proposed development trip rates

	Trip Rates (per residential unit)				
	AM Peak Hour		PM Peak Hour		Daily
	Arrival	Departure	Arrival	Departure	
Total Person	0.215	0.708	0.542	0.234	7.392
Pedestrians	0.041	0.091	0.060	0.048	0.975
Cyclists	0.002	0.034	0.019	0.003	0.173
Vehicles	0.137	0.383	0.342	0.140	4.685
Public Transport	0.000	0.012	0.014	0.002	0.184

Table 4.5 – Proposed development trip generation

	Trip Generation (50 Houses)				
	AM Peak Hour		PM Peak Hour		Daily
	Arrival	Departure	Arrival	Departure	
Total Person	11	35	27	12	370
Pedestrians	2	5	3	2	49
Cyclists	0	2	1	0	9
Vehicles	7	19	17	7	234
Public Transport	0	1	1	0	9

4.13 As set out at **Table 4.5**, up to 26 vehicles will access the application site at peak times and less at other times. For reference, 26 vehicles entering or exiting the site during the peak hour equates to less than one vehicle every two minutes averaged over the hour.

Junction Capacity Analysis

4.14 The proposed site access junction has been assessed using PICADY which forms part of the Junctions 9 software suite.

4.15 The forecast 2024 base traffic flows have been combined with the calculated site trip generation for the AM and PM peak hours to form the capacity assessment base.

4.16 The output of the PICADY assessment is set out at **Table 4.6**.

Table 4.6 – PICADY Outputs

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2024								
Stream B-AC	0.1	11.49	0.07	B	0.0	14.66	0.03	B
Stream C-AB	0.0	7.32	0.01	A	0.0	9.04	0.03	A

4.17 It is evident that the site access junction will operate well within capacity and with low average delays for waiting vehicles.

5.0 Conclusions

- 5.1 This Transport Statement has been prepared in support of the planning application for 46 residential dwellings on land east of Shripney Road, Shripney, Arun. The application site is suitably located for residential development.
- 5.2 This Transport Statement concludes that:
- i. The development will be accessible by non-car modes.
 - ii. The proposed site access arrangements are suitable and appropriate.
 - iii. Visibility splays commensurate with the 85th percentile surveyed and signed speed restriction of the road can be achieved.
 - iv. The pedestrian connectivity improvements will be beneficial for existing and future residents in the local area.
 - v. The car and cycle parking provision is appropriate.
 - vi. Access for delivery and refuse collection vehicles is appropriate.
 - vii. The development proposals will result in around 26 additional vehicles during the peak hours, and less at other times.
 - viii. The site access junction is forecast to operate well within capacity.
- 5.3 Therefore, it can be finally concluded that the proposed development is acceptable in transport development terms.