MIXED-USE, RETAIL LED DEVELOPMENT
WATERSMEAD BUSINESS PARK

Hallway Properties Ltd

Transport Assessment

APRIL 2025

Proposed Retail, Food, Beverage & Leisure Development

Land at Norway Lane, Littlehampton, West Sussex

Transport Assessment

Client:	Hallway Properties Limited
Project Name:	Proposed Retail, Food, Beverage & Leisure Development
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TA2.1	3rd Draft Issue	15.05.2025	JC	NB	NB

Contents

List of Tables

List of Figures

List of Appendices

1.0 INTRODUCTION

1.1 Appointment of Connect Consultants

1.1.1 Connect Consultants Limited is a firm of transport planning and highway design consultants that have been instructed by Hallway Properties Limited in relation to a proposed retail, food, beverage & leisure development at land off Norway Lane in Littlehampton, West Sussex.

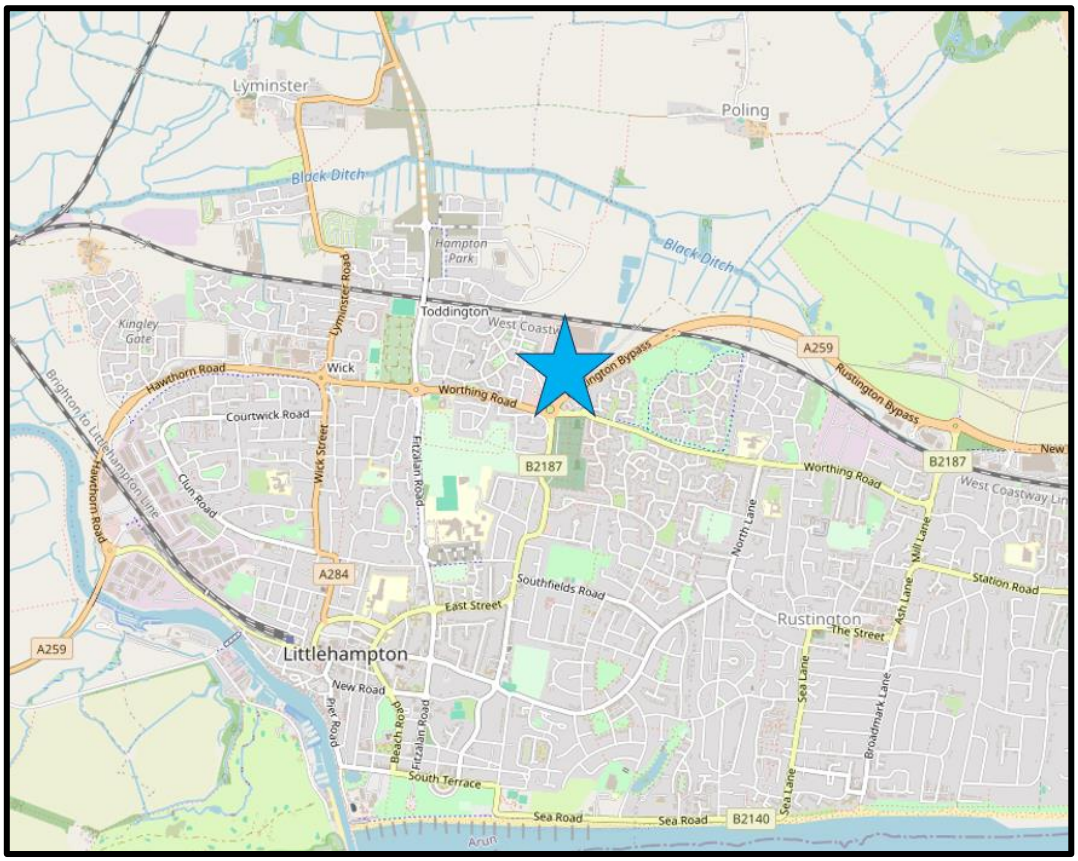
1.2 Site Location

1.2.1 The proposal site (herein referred to as 'the Site') is located at the Watersmead Business Park, which is located approximately 1.5km northeast of central Littlehampton. The site comprises vacant distribution warehouses (unit 5 and unit 6) and a vacant office building (unit 7) which is currently being demolished.

1.2.2 The Site is bound to the north by a warehouse, to the east by a landscaped area and the A259, to the south by the A259 and to the west by Norway Lane. The site has historically been occupied by the headquarters of the cosmetics company 'The Body Shop'.

1.2.3 The location of the Site is shown at Figure 1.1 below.

Figure 1.1 – Site Location Plan

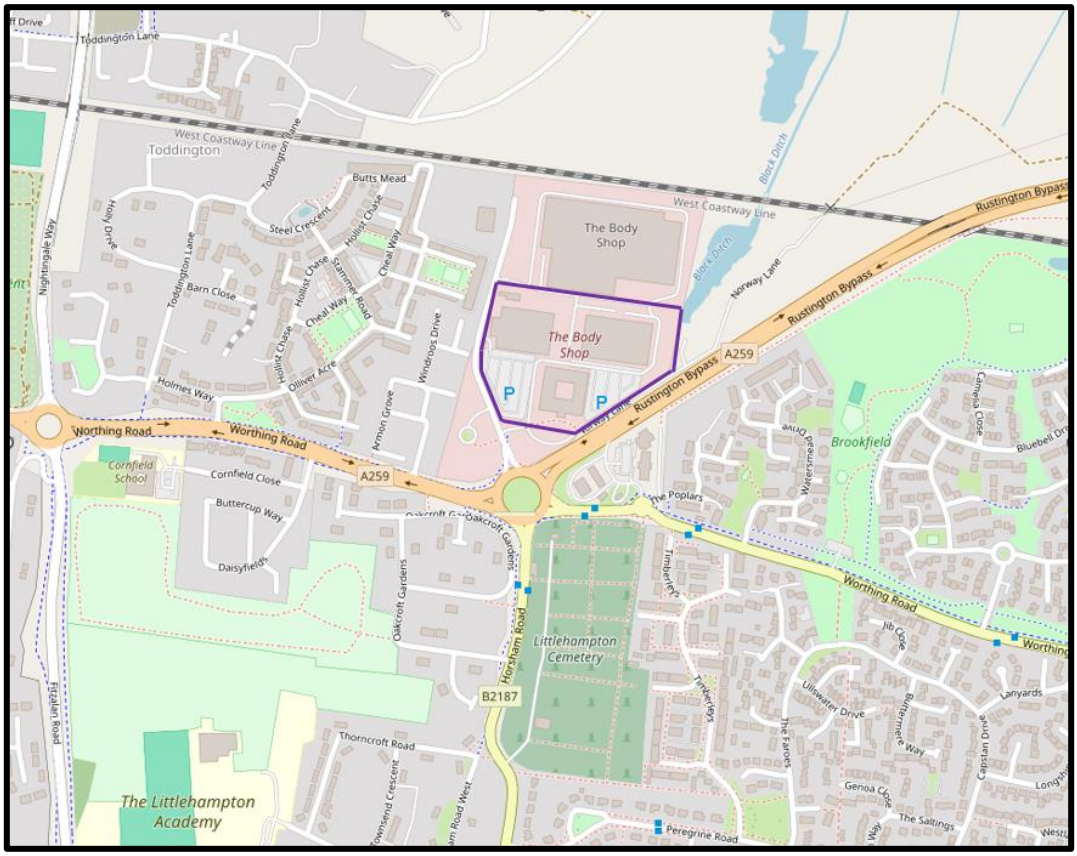


Source: OpenStreetMap.org. N.B. Site location indicated by blue star.

1.2.4 The Site is located in a largely built-up urban area with a number of residential dwellings in close proximity.

1.2.5 Figure 1.2 below identifies the context of the Site in relation to the local area.

Figure 1.2 – Site in its Local Context



Source: OpenStreetMap.org. N.B. Approximate site boundary indicated by purple line

1.3 Development Proposals

1.3.1 The development proposals are shown on the plan provided at Appendix 1. The proposal is for a retail-led, mixed-use development to replace the existing Body Shop Offices and two warehouses that are on site.

1.3.2 The development comprises 9 units of varying size and use. The total gross floor area is 13,693sq.m. The proposed development is for the part demolition, conversion, refurbishment and re-elevation of units 5 and 6 and construction of retail (food and non-food), leisure and food & beverage units (Use Class E), together with associated car parking, access, loading areas, landscaping and associated works. Unit 7 is being demolished to facilitate the proposed development and as a first enabling phase. The demolition of Unit 7 forms part of an earlier Prior Notification of demolition application (ref. LU/27/25/DEM).

1.3.3 A car park comprising 420 spaces will be shared between the units; 32 spaces will be disabled/accessible spaces, 28 spaces will be for parent and child parking and 20 spaces will be provided for electric vehicle charging as active spaces, with a further 62 as passive electric spaces.

1.3.4 There will be 12 spaces will be provided for motorcycle parking, and 70 cycle spaces in the form of 35 Sheffield stands, which will be covered.

1.3.5 A brief description of the proposed access arrangements is set out below, which are also shown on the site layout plan at Appendix 1:-

- Vehicular access will be provided from the northern arm of The Body Shop roundabout (Norway Lane) using the existing site accesses.
- Customers and service vehicles will access the Site via separate accesses on Norway Lane.
- The Norway Lane approach to the Body Shop roundabout will be subject to localised widening.
- A new sheep-pen, signalised pedestrian crossing will be provided on the eastern A259 arm of the Body Shop Roundabout.
- Pedestrian access will be provided from the footways flanking Norway Lane and also from a new direct link from the proposed signalised crossing on the A259.

1.3.6 The Local Planning Authority is Arun District Council (ADC) the Local Highway Authority is West Sussex County Council (WSCC).

1.3.7 The applicant has engaged in pre-application consultation with ADC and WSCC. The discussions with ADC commenced in October 2023 and with WSCC in September 2024. The proposal and this report have been guided by the pre-application comments received.

1.4 National and Local Transport Planning Policy

National Planning Policy Framework (NPPF), December 2024

1.4.1 The National Planning Policy Framework (NPPF) was first published on the 27th March 2012. A revised NPPF was published on 12th December 2024, with a minor update on 7th February 2025. It sets out the Government's planning policies for England and sets out a framework for local authorities to produce their own local plans.

1.4.2 The key purpose of the NPPF is to contribute to the achievement of sustainable development. It sets out three overarching interdependent objectives as, a) an economic objective, b) a social objective, and c) an environmental objective.

1.4.3 At its heart, the NPPF maintains its presumption in favour of sustainable development.

1.4.4 Paragraph 109 sets out how transport solutions should be based on a vison-led approach:

> *"109. Transport issues should be considered from the earliest stages of plan-making and development proposals, using a vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places. This should involve:*
>
> *a) making transport considerations an important part of early engagement with local communities;*
>
> *b) ensuring patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places;*
>
> *c) understanding and addressing the potential impacts of development on transport networks;*
>
> *d) realising opportunities from existing or proposed transport infrastructure, and changing transport technology and usage – for example in relation to the scale, location or density of development that can be accommodated;*
>
> *e) identifying and pursuing opportunities to promote walking, cycling and public transport use; and*

f) identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains."

1.4.5 Paragraphs 115 – 118 address how development proposals are to be considered:

"115. In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

a) sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location ;

b) safe and suitable access to the site can be achieved for all users; and

c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and

d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach."

"116. Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios."

"117. Within this context, applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."

"118. All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed and monitored."

West Sussex Transport Plan 2022 – 2036

1.4.6 WSCC have adopted the West Sussex Transport Plan (WSTP) which covers the period between 2022 and 2036. WSTP sets out WSCC's strategies and objectives relating to transport and the transport network.

1.4.7 Section 3 of the Executive Summary establishes an over-arching vision for transport in West Sussex, which is as follows: -

> *"A West Sussex transport network in 2036 that works for communities in the Coastal West Sussex, Gatwick Diamond and Rural West Sussex economic areas by helping to address the spatial economic challenged of the County, level up the coastal economy and provide access to employment and services countywide.*
>
> *The transport network will be on a pathway to achieve net zero carbon emissions by 2050 through more local living, increased use of electric vehicles and reduced use of fossil-fuels. It will also be safer, more efficient and resilient overall with more walking, cycling and use of public or shared transport and less congestion on major routes that connect West Sussex towns with Gatwick Airport, London and nearby cities.*
>
> *The transport network will connect communities and allow residents to live health lifestyles with good access to the West Sussex coast and the protected South Downs, High Weald and Chichester Harbour.*
>
> *Active travel modes, public or shared transport will be attractive options in built up areas and between towns, and rural communities will have access to the services they need.*
>
> *Transport impacts such as air pollution, noise and rat-running on adjacent communities and the environment will be minimised to protect a quality of life that reflects the characteristics of the County."*

1.4.8 Area-specific transport strategies have been identified, and those for Arun are as follows: -

> *"Our transport strategy for the Arun area (in no particular order) is to:*
>
> - *Improve the performance of the A27;*
> - *Upgrade the A29, A259 and A284 including infrastructure for active and shared transport modes;*
> - *Facilitate the introduction of on-street electric vehicle charging infrastructure, initially in Littlehampton followed by other areas;*
> - *Improve active travel facilities within existing communities and between settlements, particularly on priority routes and where strategic development is planned;*
> - *Dedicate space for shared transport priority where land is available;*
> - *Support new frequent shared transport services linking various planned strategic developments as they come forward;*
> - *Use on-street parking and traffic management techniques in Bognor Regis, Littlehampton, Arundel and Barnham to manage demand;*
> - *Tackle inappropriate speed and use of unsuitable rural routes using behavioural initiatives; and*

- *Work with strategic partners to deliver faster rail services from Barnham to Brighton and the Solent cities in the long term."*

Arun Local Plan 2011 – 2031

1.4.9 Arun District Council adopted the Arun Local Plan (ALP) in July 2018. The document identifies strategies and objectives for the long-term development of the Arun district, covering the time period between 2011 and 2031.

1.4.10 It is noted that the adopted Local Plan 2011-2031 is undergoing a review to cover the period 2023 – 2041. The 2011 – 2031 is the document adopted for development control purposes.

1.4.11 Section 4.2 of the adopted ALP sets out the vision for the district of Arun, which is provided below: -

> *"By 2031 Arun will be a safer, more inclusive, vibrant and attractive place to live, work and visit. Arun's residents will be healthier and better educated, with reduced inequalities between the most and least affluent."*

1.4.12 Section 15.1 of the ALP identifies the strategic objectives for transport in the Arun district, which are set out below: -

> *"Reduce the need to travel and promote sustainable forms of transport."*
>
> *"Plan for climate change and work in harmony with the environment to conserve natural resources and increase biodiversity."*
>
> *"Create vibrant, attractive, safe and accessible towns and villages that build upon their unique characters to provide a wide range of uses and which are a focus for quality shopping, entertainment, leisure, tourism and cultural activities."*
>
> *"Promote strong, well integrated and cohesive communities, through the promotion of healthy lifestyles, provision of good quality accessible community facilities and a safe environment, which delivers an enhanced quality of life for all."*
>
> *"Strengthen Arun's economic base and provide local job opportunities by increasing, diversifying and improving the quality of employment within the District through the provision of appropriate employment sites, better infrastructure, including road and rail access, quality affordable accommodation and the development of business support and partnerships."*

1.4.13 Policy T SP1 relates to transport and development, and states the following: -

> *"To ensure that growth in the District strengthens Arun's economic base, reduces congestion, works to tackle climate change and promotes healthy lifestyles; the Council will ensure that development provides safe access on to the highway network; contributes to highway improvements and promotes sustainable transport, including the use of low emission fuels, public transport improvements and the cycle, pedestrian and bridleway network.*
>
> *The Council will support transport and development which:*

a. *Is designed to reduce the need to travel by car by identifying opportunities to improve access to public transport services and passenger transport services whilst making provision for safe access to the highway network though improvements to the existing road network and the promotion of vehicles which use low-carbon energy;*

b. *Is incorporated into the District's green infrastructure network and gives priority to pedestrian and cycle movements;*

c. *Protects committed and indicative lines of major road schemes from development and, where applicable, contributes towards new road schemes which improve north-south links between Bognor Regis and Littlehampton and the A27, to ensure that they are delivered in line with strategic growth in the District;*

d. *Incorporates appropriate levels of parking in line with the West Sussex County Council guidance on parking provision and the forthcoming Arun Design Guide taking into consideration the impact of development upon on-street parking and;*

e. *Is supported by an effective and deliverable Transport Assessment which demonstrates that the transport effects of development on the local and strategic road network can be satisfactorily mitigated and a Travel Plan, which is effective and deliverable, and;*

f. Explains how the development has been designed to:

   i. Accommodate the efficient delivery of goods and supplies;

   ii. Give priority to pedestrian and cycle movements and have access to high quality public transport facilities;

   iii. Create safe and secure layouts for traffic, cyclists and pedestrians whilst avoiding street clutter;

   iv. Incorporate facilities for charging electric and plug-in-hybrid vehicles (where charging facilities are to be omitted from the development, evidence of market demand and viability must be provided); and

   v. Consider the needs of people with disabilities by all modes of transport.

g. *Provides improved crossing points over the railway line to improve transport links between the coast and the A27, in particular at Ford."*

1.4.14 Policy T DM1 of the ALP concerns sustainable travel. It is set out below: -

"New development must ensure ease of movement, prioritising safe pedestrian and cycle access to the green infrastructure network and access to public transport and community transport services where a need has been identified. Access to alternative modes of transport including public transport services, the public right of way and cycle networks, must be available and accessible to all members of the community.

Proposals for all new development must:

a. *Be located within easy access of established public transport service(s), existing pedestrian and cycle networks, the committed and aspirational cycle networks and the green infrastructure network which links the development with key destinations including places of work, education, leisure and town centres;*

b. *Where applicable, contribute to the extension of public transport services to serve the development and community transport services to ensure that a wide range of transport services are available to all residents;*

c. *Make provision for cycling and pedestrian facilities to meet the County Council Parking Standards, including cycle storage, convenient and secure cycle parking in association with retail and educational uses and sufficient secure parking and changing/showering facilities at places of work;*

d. *Contribute towards the provision of a joined up cycle network and Public Rights of Way network, taking into account the aspirational cycle network, which provides convenient, accessible, safe, comfortable and attractive routes for pedestrians and cyclists and; where appropriate, horse riders, both within the development and in the form of links between the development and;*

   i. *Places of work, education, leisure and food retail;*

   ii. *The South Downs National Park*

   iii. *Along the coast particularly between Bognor Regis and Littlehampton*

   iv. *Along the coast to Chichester,*

   v. *Bognor Regis to Arundel, and*

   vi. *Littlehampton to Goring."*

1.5 Car Parking Policy

1.5.1 NPPF Chapter 9 *Promoting sustainable transport* sets out at paragraph 111 that,

"If setting local parking standards for residential and non-residential development, policies should take into account:

a) the accessibility of the development;

b) the type, mix and use of development;

c) the availability of and opportunities for public transport;

d) local car ownership levels; and

e) the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles."

1.5.2 Paragraph 112 states,

"Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport (in accordance with chapter 11 of this Framework). In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists."

Adopted Local Parking Standards – Arun District Council

1.5.3 Policy T SP1 of the Arun District Council Local Plan (adopted July 2018) relates to transport and development, part of which states the following: -

"The Council will support transport and development which:

d. Incorporates appropriate levels of parking in line with West Sussex County Council guidance on parking provision and the forthcoming Arun Design Guide …

e. Is supported by an effective and deliverable Transport Assessment which demonstrates that the transport effects of development on the local and strategic road network can be satisfactorily mitigated and a Travel Plan, which is effective and deliverable, and;

f. Explains how the development has been designed to:

- *i. Accommodate the efficient delivery of goods and supplies;*
- *ii. Give priority to pedestrian and cycle movements and have access to high quality public transport facilities;*
- *iii. Create safe and secure layouts for traffic, cyclists and pedestrians whilst avoiding street clutter;*
- *iv. Incorporate facilities for charging electric and plug-in hybrid vehicles (where charging facilities are to be omitted from the development, evidence of market demand must be provided); and*
- *v. Consider the needs of people with disabilities by all modes of transport."*

1.5.4 The parking standards relevant to the proposed development can be found in the ADC Parking Standards Supplementary Planning Document, which was adopted in January 2020.

1.5.5 Under Guiding Principles for Developments, Principle 1 notes how;

Parking provision should be sufficient to accommodate demand

1.5.6 Principle 7 notes how;

The amount of car parking should be based on:

a) The development's land-use,

b) Trip rate associated with the development (including base and forecast mode share)

1.5.7 Paragraph 4.6 notes how;

> *It is the responsibility of the developer to provide evidence that adequate facilities are provided on site for the proposed use.*

1.5.8 Table 4.1 of the ADC Parking Standards Supplementary Planning Document sets out the parking standards for vehicles and cycles. An extract is provided at Figure 1.3 below, showing the parking standards applicable to the units of the proposed development. They are described as a guide and are therefore neither minimum nor maximums.

Figure 1.3 – Parking Standards

Use Class	Vehicular	Cycle
A1 Shops	1 space per 14sqm	1 space per 100sqm for staff and 1 space per 100sqm for customers
A3 Restaurant and Café	1 space per 5sqm of public area and 2 spaces per bar (or 5m length of bar for large bars) for staff parking to be clearly designated	1 space per 4 staff and 1 space per 25sqm for customers

Source: ADC Parking Standards Supplementary Planning Document, 2020.

1.5.9 With regards disabled parking provision, the ADC, at page 10, notes how;

> *Spaces for disabled people – Provision should be consistent with guidance in "Manual for Streets".*

1.5.10 Manual for streets, at 8.3.26 notes the following:

> *In the absence of any specific local policies, it is recommended that 5% of residential car-parking spaces are designated for use by disabled people*

1.5.11 Although not a residential development, the figure of 5% is often used as a disabled parking level.

1.5.12 With regards electric car parking, a footnote on the webpage for the Parking Standards Supplementary Planning Document reads as follows:

> *Please note that the Building Regulations have been updated (for example recently with respect to electric vehicles). Current and future Building Regulations will take precedence over elements of the Arun Parking Standards where appropriate.*

1.6 Proposed Development Vision

1.6.1 In line with paragraph 109 of the NPPF, the vision of the proposed development is to provide a retail led development that has safe and suitable access by sustainable travel modes, and encourages their use, with an emphasis on travel by foot as this is the most relevant non-car travel mode for retail uses. Also, that the development provides safe and suitable access by vehicular modes, to achieve reduced travel distances, and also encourage the use of electric vehicles. Furthermore, that the development does not unacceptably impact on the operation of the surrounding road network.

1.7 Report Overview

1.7.1 The remainder of this report is divided into five further sections, which are as follows:-

Section 2.0 Site Transport Context

1.7.2 This section of the report provides details of the Site context, including its accessibility by all relevant transport modes, and a road safety review.

Section 3.0 Proposed Development

1.7.3 The various components of the development proposal, including the Site access arrangements and parking provision, are described within this section of the report.

1.7.4 Section 3.6.4 A car parking assessment will be undertaken to assess car parking capacity. Disabled car parking is provided for at a rate that is policy compliant. EV parking is aligned with requirements and cycle parking use will be monitored through the sites travel plan.

Traffic Assessment

1.7.5 This report section provides an assessment of the vehicular attraction of the proposed development and its traffic effects.

Section 5.0 Junction Capacity Assessment

1.7.6 The results of the traffic assessment have been used to inform junction capacity assessment, and the methodology and results are outlined in this section of the report.

Section 6.0 Summary and Conclusions

1.7.7 A summary and the conclusions of the report are provided in this section.

2.0 SITE TRANSPORT CONTEXT

2.1 Introduction

2.1.1 This section of the report considers the accessibility of the Site in terms of a range of transport modes.

2.2 Pedestrian Access

2.2.1 The Department for Transport's (DfT) document titled 'Manual for Streets' dated 2007 provides guidance in relation to walk distances. Section 4.4 gives the following advice:-

> *"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800 m) walking distance of residential areas which residents may access comfortably on foot".*

2.2.2 The CIHT document 'Planning for Walking' (April 2015) reiterates the advice presented in 'Manual for Streets', Section 6.4 of 'Planning for Walking' states the following:

> *"Walking neighbourhoods are typically characterised as having a range of facilities within 10 minutes' walking distance (around 800 metres). However, the propensity to walk or cycle is not only influenced by distance but also the quality of the experience; people may be willing to walk or cycle further where their surroundings are more attractive, safe and stimulating. Developers should consider the safety of the routes (adequacy of surveillance, sight lines and appropriate lighting) as well as landscaping factors (indigenous planting, habitat creation) in their design."*

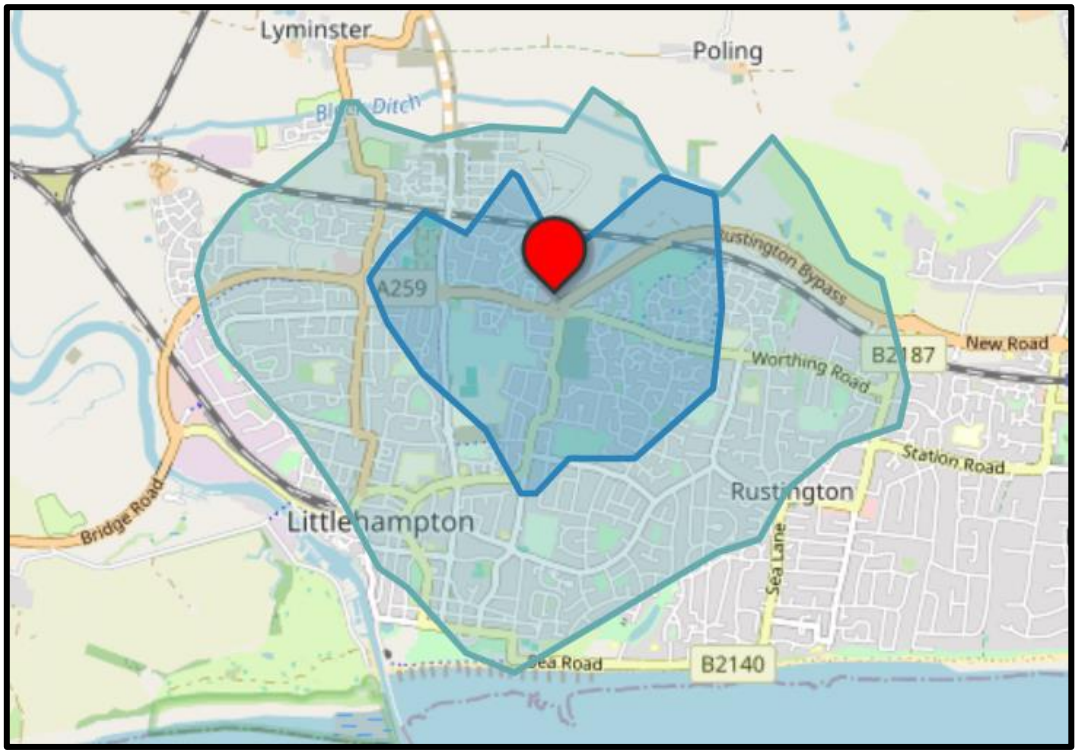
2.2.3 Furthermore, 'Planning for Walking' indicates that approximately 80% of journeys shorter than 1 mile (1.6km) are made wholly on foot.

2.2.4 Table 3.2 of The Institute of Highways and Transportation (IHT) guidance document titled 'Providing for Journeys on Foot' identifies a maximum walk distance of 2.0km for commuter, school and sightseeing walk trips, 800m for town centre walk trips and 1.2km for trips elsewhere.

2.2.5 The actual distance that people will be prepared to walk will vary depending on the trip purpose and other factors such as the presence of road crossings, terrain, and the attractiveness of the environment. For retail trips, the likely maximum walk distance is 800m due to the fact that shoppers will be carrying bags on their return journey, while for work-based / commuting trips, people are likely to be prepared to walk further.

2.2.6 Based on walking distances of 800m and 2km, the indicative walking catchments of the Site are shown at Figure 2.1 below. These have been shown as 1km and 2km isochrones.

Figure 2.1 – Indicative 1km and 2km Walk Catchments



Source: Openrouteservice.org

2.2.7 The walk catchments above indicate that there are residences within a 1km walk of the Site, as well as a substantial staff pool within the 2km walk catchment.

2.2.8 Norway Lane is flanked by a footway on its eastern side and partially flanked by a footway on its western side, connecting the Site to the local pedestrian network.

2.2.9 Uncontrolled pedestrian crossing facilities are provided on Norway Lane.

2.2.10 The Body Shop Roundabout has pedestrian crossing facilities on all arms, with the crossing facility provided on the western A259 arm being signalised.

2.2.11 The B2187 Worthing Road, the B2187 Horsham Road, and the A259 west are all flanked by footways on both sides.

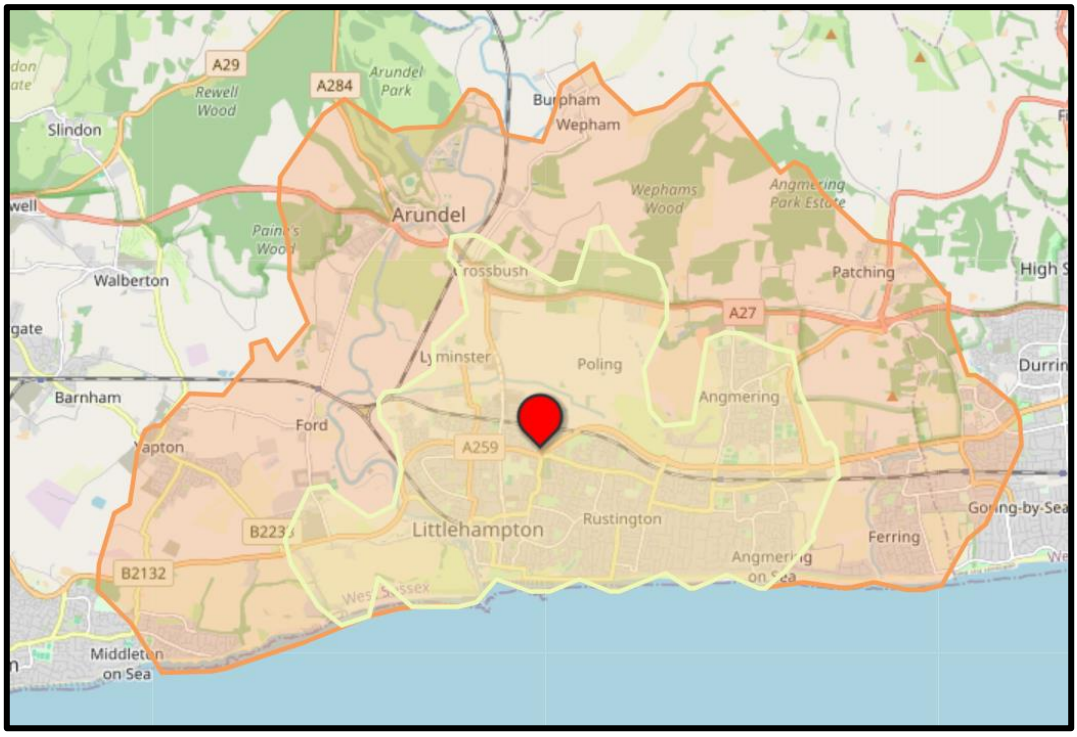
2.2.12 In light of the local pedestrian facilities, the Site is well connected to the local pedestrian network with opportunities for customers and employees to make trips by foot.

2.3 Access by Cycling

2.3.1 The 2023 National Travel Survey table NTS0303 identifies average journey lengths by cycle in England of c.4.8km. The CIHT document titled 'Planning for Cycling' (October 2014) indicates that 80% of cycling trips are up to five miles (8km) and 40% are less than two miles (3.2km). This suggests that cycling can offer an alternative to car travel particularly for trips of less than 8km.

2.3.2 Indicative cycle catchments are shown at Figure 2.2 below, being a 5km catchment (representing the 4.8km NTS average cycling distance) and an 8km catchment (being the distance of 80% of cycle trips).

Figure 2.2 – Cycle Catchment Area

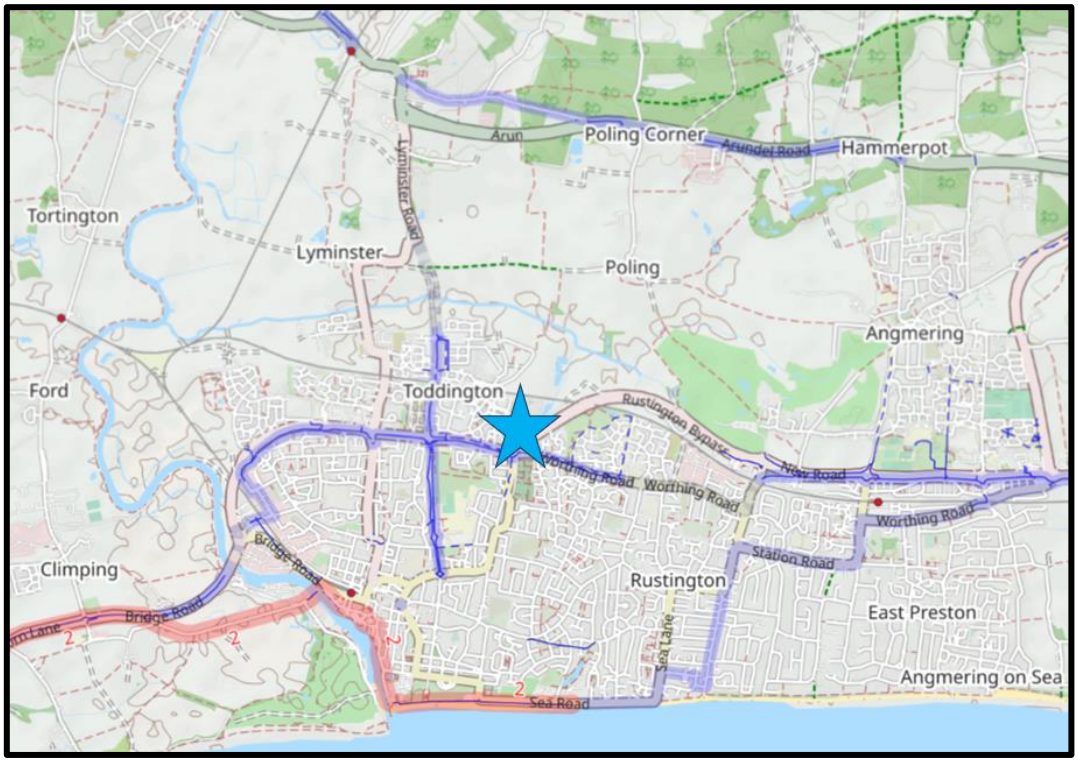


Source: Openrouteservice.org. N.B. The yellow boundary indicates a 5km cycle catchment and the orange boundary represents an 8km cycle catchment.

2.3.3 The 5km cycle catchment includes all of central Littlehampton, Rustington, Poling, Angmering and parts of Angmering on Sea, Lyminster and Crossbush. The 8km cycle catchment includes, in addition to the aforementioned, all of Ferring, Patching, Arundel and Ford as well as Middleton on Sea, Yapton as well as parts of Goring by Sea and Durrington. There is therefore a significant population within cycling distance of the Site.

2.3.4 Figure 2.3 below, shows a cycle map for Littlehampton and the surrounding areas taken from OpenStreetMap, showing local and national cycle ways in the area.

Figure 2.3 – Local Cycle Map



Source: OpenStreetMap. N.B. The proposal site is indicated by a blue star.

2.3.5 There are numerous local cycle routes within the vicinity of the Site, the closest being on the B2187 Worthing Road and the A259 Worthing Road.

2.3.6 National Cycle Route 2 (NCR2) is located to the south of the Site on The Promenade. NCR2 provides a cycle route between Littlehampton and Bognor Regis to the west.

2.3.7 There are numerous local cycle routes within the vicinity of the Site, the closest being on the B2187 Worthing Road and the A259 Worthing Road.

2.3.8 The numerous local cycle routes allow for travel within and around the urban area of Littlehampton.

2.3.9 Considering that the roads local to the Site are urban in character, and that the local topography is generally gentle, and the presence of cycle infrastructure, there are realistic and viable opportunities for customers and employees to make trips by cycling.

2.4 Access by Bus

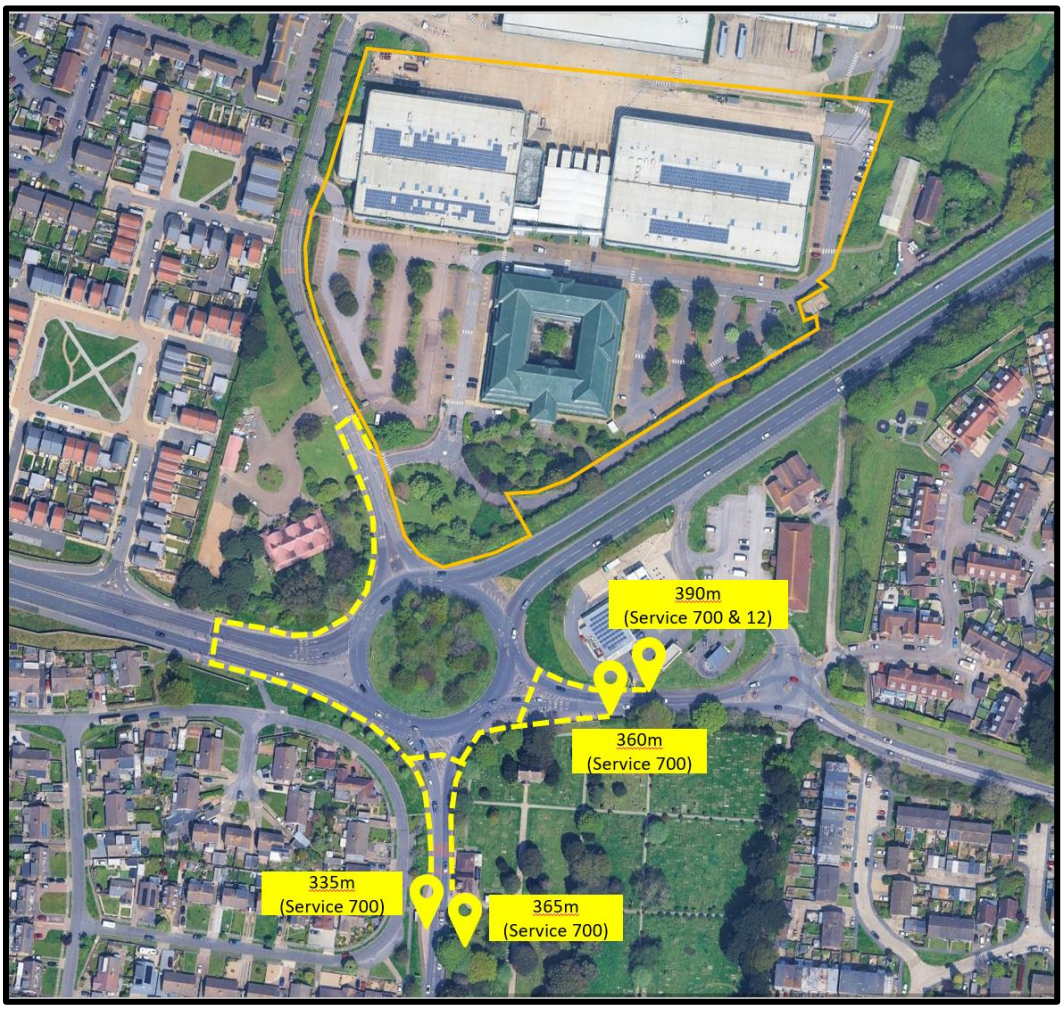
2.4.1 The publication 'Planning for Public Transport in Developments' produced by the Institution of Highways and Transportation (IHT) specifies that new developments should be located within 400m of the nearest bus stop.

2.4.2 The nearest bus stops to the Site are located on the B2187 Horsham Road, and are approximately 335m (northbound stop) and 365m (southbound stop) walking distance from the Site via the signalised pedestrian crossing on the western arm of the A259 Worthing Road. The northbound bus stop benefits from a bus shelter with seating and timetable information as well as a bus layby. The southbound bus stop is indicated by a flag-and-pole and benefits from timetable information and bus cage markings.

2.4.3 Further bus stops are located on the B2187 Worthing Road to the south of the Site, which are approximately 360m (westbound stop) and 390m (eastbound stop) walking distance from the Site, also via the signalised pedestrian crossing on the western arm of the A259 Worthing Road. Both bus stops are indicated by a flag-and-pole.

2.4.4 The bus stops and the current walking routes to/from the Site, preferentially using signal controlled facilities are shown at Figure 2.4 below. It is noted that the future provision of a signalised pedestrian crossing on the eastern A259 arm will reduce walk distances over those shown.

Figure 2.4 – Bus Stop Locations



Source: Google. N.B All Distances, Locations and Areas approximate. Pedestrians improvements to easternmost A259 arm will reduce walk distances given above.

2.4.5 Table 2.1 below summarises the routes that serve the above bus stops.

Table 2.1 – Bus Service Details

Service	Route	Approximate Peak Frequency (first/last service)		
		Monday - Friday	Saturday	Sunday
700	Littlehampton – Brighton	Every 12 minutes (05:50 / 23:29)	Every 12 minutes (05:50 / 23:29)	Every 20 minutes (06:30 / 22:29)
12	East Preston - Littlehampton	Every 60 minutes (10:15 / 15:20)	--	--

2.4.6 Having regard to the proximity of the bus stops, the frequency of buses and the areas that the existing local buses serve, the Site is accessible by public transport.

2.5 Access by Rail

2.5.1 The guidance contained within the IHT Guidelines titled 'Planning for Public Transport in Developments' suggests railway stations have an 800m catchment area, albeit that 800m is not an absolute barrier, and longer walk distances are common.

2.5.2 Littlehampton Station is operated by Southern Railway, with frequent trains to destinations including London Victoria, Chichester and Brighton.

2.5.3 The station is approximately 2.2km from the Site, via the B2187 Horsham Road, East Street and Franciscan Way. It is therefore feasible that some longer journeys to/from the proposed development can be made by train, such as business trips, with the connection between the station and the site being made by bike, taxi, bus, or car-share.

2.6 Vehicular Access

2.6.1 The proposed development will be served directly from Norway Lane which is the northern arm of the Body Shop Roundabout.

2.6.2 Norway Lane is a single carriageway road of approximately 7.3m width, with a speed limit of 10mph in the vicinity of the Site.

2.6.3 To the south of the site, Norway Lane connects to the Body Shop Roundabout, providing access to the A259, the B2187 Worthing Road, and the B2187 Horsham Road.

2.6.4 The A259 allows for travel to Bognor Regis to the west and to Worthing to the east. At Wick Roundabout, to the west of the Site, the A259 connects to the A284, which facilitates access to the A27 to the north. At this locale, the Lyminster bypass is in the process of being constructed. The bypass will mean that vetches no longer have to travel through Lyminster when heading to/from the north and the hence the A27.

2.6.5 The A27 provides a route westward to Chichester and eastward to Brighton.

2.6.6 The B2187 Horsham Road provides a direct route into central Littlehampton before connecting to the A259 again at the Bridge Road Roundabout.

2.6.7 The B2187 Worthing Road allows for travel to Rustington and surrounding residential areas.

2.6.8 Figure 2.5 below shows the site in its local highway context.

Figure 2.5 – Highway Network

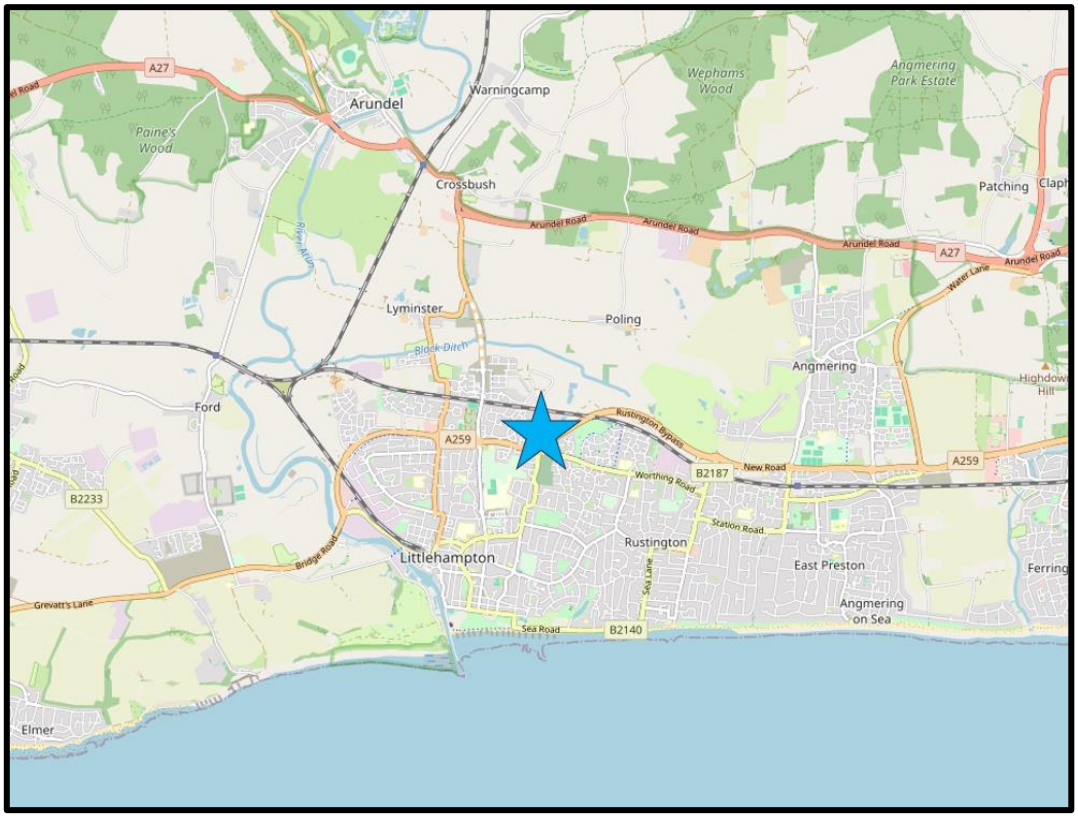


Image Source: OpenStreetMap.org

2.6.9 Overall, the Site has a prominent location in relation to the local road network from which it is readily accessible.

2.7 Road Safety Review

2.7.1 Publicly available official collision records include collisions which resulted in a personal injury and which were reported to the police. The data does not include details of damage-only collisions or those which were not reported to the police.

2.7.2 Personal-injury collisions are classified by the police as one of either 'Slight', 'Serious' or 'Fatal'. Where more than one personal injury occurs, the classification is determined by the most serious. A description of each classification is provided in the DfT publication Instructions for the Completion of Road Accident Reports dated October 2004, summarised below:

<u>Slight:</u>

- Sprains, not necessarily requiring medical treatment
- Neck whiplash injury
- Bruises
- Slight cuts
- Slight shock requiring roadside attention.
- (Persons who are merely shaken and who have no other injury should not be included unless they receive or appear to need medical treatment).

Serious:

- Fracture
- Internal injury
- Severe cuts
- Crushing
- Burns (excluding friction burns)
- Concussion
- Severe general shock requiring hospital treatment
- Detention in hospital as an in-patient, either immediately or later
- Injuries to casualties who die 30 or more days after the accident from injuries sustained in that accident.

Fatal:

- 'Fatal' injury includes only those cases where death occurs in less than 30 days as a result of the accident. 'Fatal' does not include death from natural causes or suicide.

2.7.3 During the pre-application discussion with WSCC, they indicated that a collision review should cover the area between the Worthing Road Roundabout and the Mill Lane Roundabout. This area is essentially the Body Shop roundabout and one roundabout junction to the east and one to the west

2.7.4 The official collision records for the above area were obtained from the Sussex Safer Road Partnership for a five-year period covering 01.01.2020 to 31.12.2024.

2.7.5 The collision report notes how the collision data *should not be transmitted to a person without their consent, including reports for the general public.* No details pertaining to each collision are provided in the collision report.

2.7.6 Over the entire collision review area, 47 collisions were recorded over the five-year period, 16 were serious and 31 were slight. The collision review area includes a considerable length of the A259 between roundabout junctions, totalling some 2.8km.

2.7.7 Of the 47 collisions in the collision review area, 12 collisions occurred on the A259 link sections rather than at the junctions. Of the 12 collisions, four are serious and eight are slight. These collisions were disbursed o over the 2.8km stretch of the A259. For this reason they have been omitted as their dispersed nature indicates no clear pattern that warrants further assessment.

2.7.8 At the roundabout to the west, referred to within the pre-app consultation as the Worthing Road roundabout, there are three collisions, two slight and one serious. This is less than one collision a year.

2.7.9 At the roundabout to the far east, referred to as the Mill Lane roundabout within the pre-app response, there were nine collisions; eight slight and one serious.

2.7.10 A total of 23 collisions occurred at the Body Shop Roundabout over a 5-year period. The location of the collisions can be seen at **Figure 2.6.**

Figure 2.6 – Collisions at the Body Shop Roundabout (5 Year)

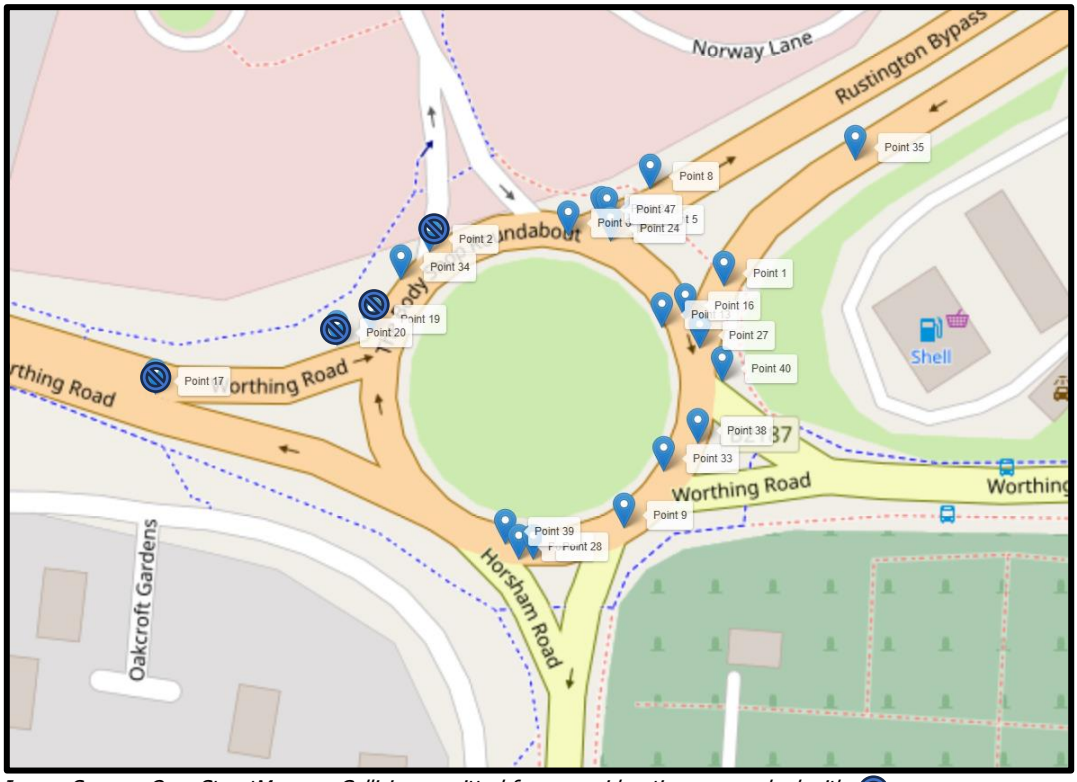


Image Source: OpenStreetMap.org Collisions omitted from consideration are marked with

2.7.11 Seven of the collisions were serious and 16 are slight. This equates to an average of 4.6 collisions on average every year at the Body Shop roundabout. Table 2/1 of TD 16/07 'Geometric Design of Roundabouts' indicates that a five arm roundabout has an average accident frequency of 3.80 accidents per year where at least one of the arms is a dual carriageway. This figure of 3.80 is aligned with the 4.6 average seen at this location.

2.7.12 It is noted that the A259 to the west of the Body Shop roundabout, as well as localised sections of the Body Shop roundabout, were subject to comprehensive reworking under the 'A259 Littlehampton Improvements' scheme. The scheme saw approximately 2km of the A259 to the west of the Body Shop Roundabout upgraded to dual carriageway, from single carriageway.

2.7.13 Within the vicinity of the Body Shop roundabout, the key upgrade works saw the western A259 arm of the roundabout being upgraded from single to dual carriageway and the A259 approach onto the roundabout being reconfigured. The roundabout was modified to include carriageway markings.

2.7.14 Although the large part of the construction took place off-line over the construction period there were various forms of temporary traffic management measures in place on and around the Body Shop Roundabout. The main construction commenced in 2020 and the upgraded road was opened to traffic on 28th April 2023. Hence, collisions at the Body Shop Roundabout prior to 28th April 2023 would have occurred at the old roundabout and potentially have been affected by the traffic management measures in place.

2.7.15 As the road layout is now considerably different to that which existed prior to 28th April 2023 it is not appropriate to consider collisions that occurred at the Body Shop roundabout prior to this date.

2.7.16 If the supplied collision data is reviewed for collisions at the Body Shop after 28th April 2023 then Figure 2.5 shows that the collision area spread over the roundabout and it is not highly concentrated at a particular point. A review of the direction of travel indicates that a number of the collisions are potentially rear-end shunts with vehicles travelling in the same direction. These types of collisions are more common at roundabouts as they can experience start-stop traffic conditions.

2.8 Section Conclusion

2.8.1 The Site is surrounded by a pedestrian network that includes a number of crossing facilities, and a residential catchment within walking distance.

2.8.2 The area local to the Site is conducive to cycling, and there are good opportunities for customers and staff to make their journeys by bike.

2.8.3 The bus stops local to the Site are served by frequent bus services, which provide access to / from a variety of destinations.

2.8.4 Littlehampton rail station is also within cycling distance of the site; some longer journeys to/from the proposed development can be made by train, with the connection between the station and the Site being made by bike, taxi, bus, or car-share.

2.8.5 The proposal site also has a prominent location relative to the local highway network, and the recent local collision records indicate that there is no existing road safety problem in the vicinity of the Site.

2.8.6 Overall, the site has a good level of accessibility by all relevant transport modes, thereby complying with national and local transport planning policy including the vision of the proposed development.

3.0 PROPOSED DEVELOPMENT

3.1 Development Proposals

3.1.1 The development proposals are shown on the plan provided at Appendix 1. The proposed development is for the part demolition, conversion, refurbishment and re-elevation of Units 5 and 6 and construction of retail (food and non-food), leisure and food & beverage units (Use Class E), together with associated car parking, access, loading areas, landscaping and associated works. Unit 7 is being demolished to facilitate the proposed development and as a first enabling phase. The demolition of Unit 7 forms part of an earlier Prior Notification of demolition application (ref. LU/27/25/DEM).

3.1.2 The development comprises nine units of varying size and use. Total gross floor area is 13,693 sq.m. The floor area breakdown is as per Table 3.1.

Table 3.1 – Floor Area – Breakdown By Unit

Unit Reference	Area (sq.m.)	Proposed Use
A1	1,922	Non-Food 70%/Food 30%
A2	2,906	Food Retail
A3	140	Food & Drink Take Away
A4	929	Non-Food
A5	2,066	Food Retail
A6	2,040	Non-Food
A7	1,027	Non-Food
A8	1,008	Non-Food
A9	507	Gym
Garden Centre	878	Non-Food
SUB TOTAL	**13,423**	**-**
Plant	270	N/A – Assumed to not generate trips
TOTAL	**13,693**	-

3.1.3 For assessment purposes, this Transport Assessment also considers a garden centre with a floor area of up to 878sq.m. being provided on site. Although permission for this floor area is not being sought, the potential for this future use has been identified and this has been considered within the Transport Assessment such that should any future variation come forward, the traffic/transport effects have been assessed. This explains the increased scheme floorspace outlined in this assessment, compared to the proposed layout and proposed floorspace submitted as part of the planning application.

3.1.4 A car park comprising 420 car parking spaces will be shared between the nine units.

3.1.5 A brief description of the proposed access arrangements is set out below, which are also shown on the site layout plan at Appendix 1:-

- Vehicular access will be provided from the northern arm of The Body Shop roundabout (Norway Lane) using the existing site accesses.
- Customers and service vehicles will access the Site via separate accesses formed with Norway Lane.

- The Norway Lane approach to the Body Shop roundabout will be subject to localised widening.
- A new sheep-pen, signalised pedestrian crossing will be provided on the eastern A259 arm of the Body Shop Roundabout.
- Pedestrian access will be provided from the footways flanking Norway Lane and also from a new direct link from the proposed signalised crossing.

3.2 Proposed Site Access Arrangements

Vehicular Access and Improvements

3.2.1 The proposed highway alterations can be seen at Appendix 2.

3.2.2 Access to the site for all motor vehicles will be from the Norway Lane arm of the Body Shop Roundabout. Norway Lane is a private road.

3.2.3 There are three points of vehicular access to the Site in total. There are two customer access. The first customer access is 50m north of the Body Shop Roundabout and another approximately 200m north of the Body Shop Roundabout, both formed with Norway Lane. The delivery vehicle access is located approximately 280m north the Body Shop Roundabout and is the third vehicle access to the site.

3.2.4 The access that is located approximately 50m north of the Body Shop Roundabout is anticipated to act as the main customer access to the site. Motor vehicles will turn right into the site at a priority junction. The arm leading into the site is the minor arm, with Norway Lane being the major arm. This access is as existing.

3.2.5 The access that is located 200m north of the Body Shop Roundabout takes the form of a simple priority junction, again with Norway Lane being the major arm. This junction is located to the northwest corner of the site and likely to primarily serve drivers accessing the northwest corner of the Site car park. This access is also as existing.

3.2.6 The third access to the site is the rear delivery access which takes the form of a large priority junction formed with Norway Lane. The access historically served large delivery vehicles travelling to and from the Body Shop Warehouse. This access is as existing.

3.2.7 Localised widening is proposed at the point where Norway Lane meets the Body Shop Roundabout. This widening is within the public highway and aims to create a wider two-lane approach that is more useable by traffic than the existing arrangement.

Non-Car Access and Improvements

3.2.8 There will be total of three points of pedestrian access to the site. The first two points of access are formed with Norway Lane. Pedestrian access is provided from Norway Lane adjacent to both the southern (main) and northern customer vehicular accesses.

3.2.9 The third point of pedestrian access is to the south/southeast of the site via the landscaped park area that adjoins the northern side of the Body Shop Roundabout. At present there is no pedestrian access into the site from this direction, hence this improves pedestrian access to the site.

3.2.10 A new signalised pedestrian crossing will be provided on the eastern A259 arm to replace the uncontrolled pedestrian crossing. The new crossing will be a staggered arrangement with a 'sheep-pen' island in the centre, meaning that pedestrians cross the two A259 carriageways separately.

3.2.11 A series of pathways and walkways within the landscaped park route pedestrians into the site, with dedicated crossing points as necessary.

3.3 Deliveries / Servicing

3.3.1 Delivery and servicing access to the site is via the existing service access formed with Norway Lane that was used by deliveries to and from the Body Shop Warehouse.

3.3.2 The proposed site layout has been assessed for vehicle manoeuvres based on a 16.5m articulated and 10m rigid vehicle. Drawings of the swept path assessment are provided at Appendix 3.

3.3.3 The track plots show that the route through the site is satisfactory and that service vehicles will be able to manoeuvre within the site, enabling them to arrive and depart in forward gear.

3.4 Road Safety Audit

3.4.1 The proposed design of the A259 signalised pedestrian crossing and the Norway Lane widening works, as well as the roadworks that are located away from the public highway, have been subject to a Stage 1 Road Safety Audit (RSA), completed by an independent, qualified Road Safety Auditor.

3.4.2 The RSA Report is provided at Appendix 4. A designer's response to the RSA is given at Appendix 5.

3.4.3 The only suggestion made in the RSA Report on the design elements located within the public highway is that the A259 40mph speed limit (from national speed limit) should be moved east of its current location such that the proposed crossing is wholly covered by the 40mph limit. During the pre-app, WSCC also identified this requirement, and designer agrees with this suggestion. It has been carried forward into the drawing at Appendix 2.

3.5 Parking

3.5.1 The proposed development provides a total of 420 car parking spaces, as follows:

• Standard Bays	331 spaces
• Active Electric Parking (EV) Bays	20 spaces
• Parent and Child Bays	28 spaces
• Disabled Bays	32 spaces
• Staff Parking to rear	9 spaces
TOTAL	**420**

3.5.2 It is noted that 62 of the 331 standard spaces would be EV passive; i.e. they have the underground infrastructure in place such that there can readily be converted into active EV spaces as demand arises.

3.5.3 As noted, the ADC SPD dated January 2020 indicates that for the A1 uses class, parking should be provided at a guideline rate of 1 space per 14sq.m. This equates to 958 car parking spaces for the development proposal of 13,423sq.m.

3.5.4 As the proposed parking level is less than indicated by the SPD, a parking assessment will be undertaken based on the trip generation characteristics set out later in this report. This approach is consistent with the SPD, which indicates that *"It is the responsibility of the developer to provide evidence that adequate facilities are provided on site for the proposed use".*

Disabled Parking

3.5.5 A total of 32 disabled parking spaces are proposed, which represents 8.2% of all non-disabled parking provision. This is in excess of the 5% indicated by Manual for Streets and therefor considered policy compliant.

Electric Vehicle Parking

3.5.6 Building Regulations require a minimum of 1 'active' EV space to be provided.

3.5.7 In addition, Building Regulations also require 20% of all remaining parking spaces to be 'passive' EV. This would result in a total 'passive' requirement for 84 spaces (419 std spaces x 0.2 = 84).

3.5.8 Total provision based on building regulations is therefore 85 spaces.

3.5.9 A total of 20 'active' EV spaces are being provided, an over provision of 19.

3.5.10 Passive spaces are EV spaces that can readily be converted to 'active' spaces as much of the physical infrastructure necessary was designed into the spaces from the outset.

3.5.11 The development is providing 62 'passive' spaces resulting in an overall provision of 82 EV spaces. This is a figure that is aligned with total Building Regulations requirements for EV spaces which is 84 spaces.

Cycle Parking

3.5.12 The proposed development provides a total of 70 cycle parking spaces in the form of covered Sheffield stands. Figure 1.3 indicates that parking provision should be 2 spaces per 100sq.m. Therefore, a development of 13,423sq.m. should provide 268 spaces

3.5.13 The figure of 273 cycle spaces is considered excessive and, similar to the car parking, cycle parking demand is anticipated to be lower than the ADC standard implies. It is suggested that cycle parking is monitored through the site's Travel Plan.

3.6 Section Conclusion

3.6.1 Suitable vehicular access will be provided to the site via the existing junctions formed with Norway Lane.

3.6.2 Pedestrian movements are accommodated within the internal site layout. A signalised crossing will be provided on the eastern A259 arm of the Body Shop Roundabout to enhance pedestrian connectivity.

3.6.3 Swept path analysis shows that the access arrangements and layout of the proposed development are suitable for the largest vehicles that are expected to use the site.

3.6.4 A car parking assessment will be undertaken to assess car parking capacity. Disabled car parking is provided for at a rate that is policy compliant. EV parking is aligned with requirements and cycle parking use will be monitored through the sites travel plan.

4.0 TRAFFIC ASSESSMENT

4.1 Introduction

4.1.1 The following traffic analysis considers firstly the baseline position of the traffic attraction of the existing uses on the Site, and secondly the traffic attraction of the proposed development.

4.1.2 The net traffic effect of the proposed development is then calculated as the difference between the existing and the proposed.

4.1.3 Due to the nature of the proposed development, a large number of its peak-hour vehicular trips will be secondary trips such as pass-by trips or linked trips – i.e. trips that are already on the local road network

4.1.4 As such, the net traffic effect of the proposed development will take into account the secondary trip types.

4.1.5 This section of the report provides details of the traffic data used for the assessment of the study area junctions. The assessment considers the effect of the proposed development traffic on the following junctions.

1) The Body Shop Roundabout
2) Golfers Lane Roundabout (aka Mill Lane Roundabout)
3) Station Road Roundabout
4) Fitzalan Roundabout (aka Worthing Road Roundabout)
5) Wick Roundabout
6) Bridge Road Roundabout

4.1.6 The above junctions were outlined to WSCC within the pre-app scoping and are as indicated at Figure 4.1 below:

Figure 4.1 – Transport Assessment Study Area

Image source: OpenStreetMap.org. N.B. Site location indicated by blue star.

4.2 Existing Traffic Flows

4.2.1 Vehicle turning-count traffic surveys were undertaken at study Junction 1 (The Body Shop Roundabout) on Thursday 11th July and Saturday 13th July 2024. The survey data can be seen at Appendix 6.

4.2.2 The inflow to the Body Shop Roundabout indicated that the weekday AM peak was 08:00 – 09:00, the weekday PM peak hour as 17:00-18:00 and the Saturday peak hour as 11:15 – 12:15.

4.2.3 Schematic diagrams showing the local road network, study junctions, and the observed baseline weekday AM, PM and Saturday peak-hour traffic flows, are provided at Appendix 7.

4.3 Assessment Year Traffic Flows

4.3.1 The assessment will be based on a future assessment year of 2030 (Application year + 5 years). Growth factors have been applied to the 2024 surveyed traffic flows (Appendix 7) to represent the future year to account for projected economic growth and local development forecasts.

4.3.2 The growth factors have been derived based on the TEMPRO database (Version 8.1) for the period between 2024 and 2030. As the development site and local study junctions are located within two Middle Super Output Areas (MSOAs) – Arun 004 and Arun 007 – an average of the growth factors for the two MSOAs has been used. The growth factors have been calculated based on the following TEMPRO parameters: -

- Result type: Trip ends by time period
- Area: "Arun 004" and "Arun 007" (average from both)
- Transport mode: Car Driver
- Trip end type: Origin/Destination
- Scenario = 'Core'
- Dataset version = 80
- Area type: All
- Road type: All
- Time period: AM (0700 – 0959), PM (1600 – 1859) and SAT (all times).

Table 4.1 – TEMPRO Growth Rates

Peak Period	2024 to 2030
	Resultant Growth (Area Average)
AM	1.0742
PM	1.0744
Sat	1.0768

4.3.3 The TEMPRO growth factors have been applied to the surveyed flows to produce the forecast 2030 base traffic flows. These are shown on schematic diagrams provided at Appendix 8.

4.4 Committed Development

4.4.1 Local committed developments (developments with planning permission but not yet constructed or occupied) will have a future traffic impact on the local highway network, but the traffic will not have been picked up in the baseline traffic surveys.

4.4.2 During pre-application discussions with WSCC, advice was sought regarding committed developments that should be specifically included within this assessment. The following developments were suggested: -

- North of Littlehampton/Hampton Park - (LU/47/11)
- North of Littlehampton Academy - (LU/299/22/PL)
- Land at Golfers Lane - (A/129/21)
- Lyminster by-pass

<u>North of Littlehampton</u>

4.4.3 The land north of Littlehampton is a large development comprising approximately 1,300 dwellings, retail floorspace, a primary school, hotel, care home and B1 employment. The scheme was granted planning permission in January 2013. At the time of writing, the development is understood to be partially implemented. Aerial photographs suggest approximately 50%-70% of the development is built.

4.4.4 A Transport Assessment, dated February 2011 was produced to accompany the planning application. A review of the Transport Assessment has not identified traffic flow diagrams or similar that could be used as a source for development flows over the study network.

4.4.5 However, Table 6.1 and 6.2 of the Transport Assessment give the change in flow attributable to the development. At the A259 arms of the Body Shop Roundabout, the percentage change in flow is indicated as being 1% and 5% for the 2016 base year.

4.4.6 As it appears as though 50%-70% of the development is built, the percentage change in 2025 would be considerably lower; notionally around 0.5% - 2.5% or less. This is a small traffic effect and is at a level where specific assessment or consideration would generally not be warranted.

4.4.7 This small, notional 0.5% - 2.5% change is at the Body Shop Roundabout, where the development would be expected to have its greatest effect. Some of the assessed development trips would be the shopping trips associated with this new housing, so allowing for both would result in some double counting.

4.4.8 Given the small traffic effect of the North Littlehampton development at the Body Shop Roundabout where the development would be expected to have its greatest traffic effect, it is being suggested that no specific allowance for the North of Littlehampton development be made as its effect on baseline/background traffic flows would be minimal.

Land at Golfers Lane

4.4.9 The Land at Golfers Lane development is a residential development of 191 dwellings. It is understood to have been in the early construction stages in 2024, when traffic surveys were carried out. The site is located to the northwest of the Mill Lane roundabout, accessed off the eastern side of Golfers Lane. The Golfers Lane site is approximately 2km east of the development site. Development Flows are given at Appendix F of the 2021 Transport Assessment.

North of Littlehampton Academy

4.4.10 The land north of Littlehampton Academy is a development of 117 dwellings. A Transport Statement, dated September 2022 was produced to accompany the planning application. Appendix G of the Transport Assessment gives weekday AM and PM development flows.

4.4.11 For both of the above committed developments, traffic has been distributed on the study area network using the following principles:

- traffic split by surveyed turning proportions at the Bodyshop Roundabout
- traffic applied through the network along the A259
- traffic from North of Littlehampton Academy which affects the Fitzalan Link Road roundabout has been split evenly between the North, East and West arms of the junction

4.4.12 The committed development traffic flows for The Golfers Lane and Land North of Littlehampton Academy above can be seen at Appendix 9.

4.4.13 The committed development flows added onto the 2030 base flows can be seen at Appendix 10.

Lyminster by-pass

4.4.14 The pre-application response indicates that Table 7.2 of the "Lyminster By-Pass Forecasting Report, version 2 – 2017 Update" can be used to gauge the change in in flow attributable to the Lyminster By-Pass being opened.

4.4.15 In Table 7.2, the link called 'A259 – Between A284 and Lyminster bypass' is located in close proximity to the site. Specifically, this link is understood to be referencing the western A259 arm of the Fitzalan Roundabout (aka Working Road Roundabout).

4.4.16 The table indicates that in the future 2034, year that this arm would see a decrease in traffic flows of between -10 and -168 vehicles, direction dependant.

4.4.17 Given the above, a simplified assessment has been undertaken whereby there is no allowance for the reduction in trips attributable to the Lyminster by-pass. Not removing trips from the study network is considered to be a robust assessment methodology as traffic flows are higher than would be expected to materialise.

4.5 Existing Site Trip Attraction

4.5.1 The pertinent question relating to the traffic effect of the proposed development is whether the proposal will result in significantly more traffic than the existing uses on the Site, and if so, whether there would be an unacceptable impact on highway safety or whether the impact on the road network would be severe.

4.5.2 The Site is currently occupied by two warehouses and offices, although the Site is not occupied/operational. Although the office building is in the process of being demolished, it is generally accepted that an allowance for the traffic it would otherwise attract should be made.

4.5.3 To understand the potential traffic attraction of this 'fallback scenario', the industry-standard TRICS database has been used.

4.5.4 The TRICS database is an industry-standard collection of traffic surveys, detailing hourly trip arrivals and departures, recorded from a variety of existing development sites using a standardised methodology.

4.5.5 Following the TRICS best practice guidance, the database has been filtered using the criteria in Table 4.2 and Table 4.3 to obtain a dataset of comparable development sites. The TRICS data has been agreed with West Sussex County Council through the pre-application scoping process.

Table 4.2 – TRICS Database Key Selection Criteria – Warehouse Existing Use

Land use and trip rate selection	
Select Land Use By:	Full list Of Active Main/Sub Land Uses
Main Land Use:	02 – EMPLOYMENT
Sub Land Use:	F – WAREHOUSING (COMMERCIAL)
Calculation Options:	TOTAL VEHICLES
Regions:	England excluding Greater London
Primary filtering	
Trip Rate Parameters:	Gross Floor Area
Floor Area Range:	1,000 – 10,000
Selected Dates:	01/01/16 – 04/10/23
Week days to include:	Weekday only
Location Types to include:	Edge of Town
Secondary Filtering	
Population < 1 mile:	<15,000
Population < 5 miles:	<250,000

Table 4.3 – TRICS Database Key Selection Criteria – Office Existing Use

Land use and trip rate selection	
Select Land Use By:	Full list Of Active Main/Sub Land Uses
Main Land Use:	02 – EMPLOYMENT
Sub Land Use:	A – OFFICE
Calculation Options:	TOTAL VEHICLES
Regions:	England excluding Greater London
Primary filtering	
Trip Rate Parameters:	Gross Floor Area
Floor Area Range:	1,000 – 5,000 (for office of 1436sqm) 2,000 – 12,000 (for office of 6220sqm)
Selected Dates:	01/01/16 – 11/11/22
Week days to include:	Weekday only
Location Types to include:	Suburban Area, Edge of Town (Edge of Town only for office of 6220sqm)

4.5.6 The resultant average vehicle trip rates (per 100sqm) during the observed peak hours, along with the equivalent average vehicle trip numbers are set out at Table 4.4. The TRICS outputs are provided at Appendix 11.

4.5.7 It should be noted that there are no Saturday survey sites available on the TRICS database for warehouse or office uses and hence trips have been assumed to be zero on a Saturday.

Table 4.4 – TRICS Output - Existing Office/Warehouse Use

	Trip Rates (per 100sqm)			Traffic Attraction		
Peak	Arrivals	Departures	Total	Arrivals	Departures	Total
Unit B5 – Warehouse (5,545sqm)						
AM (08:00-09:00)	0.204	0.05	0.254	11	3	14
PM (17:00-18:00)	0.017	0.188	0.205	1	10	11
Unit B6 – Warehouse (6,865sqm)						
AM (08:00-09:00)	0.204	0.05	0.254	14	3	17
PM (17:00-18:00)	0.017	0.188	0.205	1	13	14
Unit B6 – Office (1,436sqm)						
AM (08:00-09:00)	1.158	0.084	1.242	17	1	18
PM (17:00-18:00)	0.033	1.203	1.236	0	17	18
Unit B7 – Office (6,220sqm)						
AM (08:00-09:00)	1.187	0.077	1.264	74	5	79
PM (17:00-18:00)	0.059	1.219	1.278	4	76	79

4.5.8 The total traffic attraction for the existing use is provided at Table 4.5 below.

Table 4.5 – TRICS Trip Rates and Traffic Attraction – Existing Use

	Traffic Attraction		
Peak Hour	Arrivals	Departures	Total
AM (08:00-09:00)	116	12	128
PM (17:00-18:00)	6	116	123
Saturday (11:15 – 12:15)	N/A	N/A	N/A

4.5.9 The TRICS data shows that the site could attract 128 vehicle movements during the weekday AM peak hour and 123 vehicle movements during the weekday PM peak hours.

4.5.10 Schematic diagrams showing the Site's fallback position peak-hour traffic flows through the study junctions are provided at Appendix 12.

4.6 Proposed Development Trip Attraction

4.6.1 The industry-standard TRICS database has been used to identify the average trip generation of developments with comparable characteristics to the proposed development.

4.6.2 The TRICS database is an industry-standard collection of traffic surveys, detailing hourly trip arrivals and departures, recorded from a variety of existing development sites using a standardised methodology.

4.6.3 As noted, the two main proposed uses from a transport planning perspective are food and non-food retail. Given this, it is considered appropriate to apply a 'food-retail' based trip rate to the food retail element of the site (5,549sq.m.) and a non-food retail park trip rate to the remainder of the site (7,874.m.). These two use classes are represented in TRICS by the 'Food Superstore' and 'Retail Park Excluding Food' categories, respectively.

4.6.4 The food retail element of the site has been assessed within this Transport Assessment at 5,600sqm to allow for any minor variations in food retail floor area that may arise during the planning processes. Hence, the total assessed floor area is 13,474sq.m. Also as noted, the plant area of 270sq.m. has been omitted as it would not be expected to generate trips in its own right.

4.6.5 The breakdown of proposed floor areas and how they will be assessed with reference to the TRICS use classes is given at Table 4.6.

Table 4.6 – Floor Area Schedule & Assessed TRICS Uses Class

Unit Reference	Area (sq.m.)	Assessed Use (TRICS)
A1	1,345	Retail Park Excluding Food
	577	Food Superstore
A2	2,906	Food Superstore
A3	140	Retail Park Excluding Food
A4	929	Retail Park Excluding Food
A5	2,066	Food Superstore
A6	2,040	Retail Park Excluding Food
A7	1,027	Retail Park Excluding Food
A8	1,008	Retail Park Excluding Food
A9	507	Retail Park Excluding Food
Garden Centre	878	Retail Park Excluding Food
Manual, Food Superstore top-up	51	Food Superstore
Sub Total – Food Superstore	**5,600**	--
Sub Total - Retail Park	**7,874**	--
TOTAL Assessed Floor Area	**13,474**	--

4.6.6 Although a 'Retail Parking Including Food' category does exist in TRICS, this category has not been used because the relevance of the TRICS trip rate would depend on the TRICS sites having the same food vs non-food floor area ratio as the proposed development. This is because the food-retail element of a site is the most trip intensive, and the food retail element is often described as an 'anchor unit' and has a large effect on trips. As a result, it is considered more appropriate to specifically allow for the food and non-food areas separately with an allowance for dual trips.

4.6.7 Following the TRICS best practice guidance, the database has been filtered using the criteria set out at Table 4.7 and Table 4.8 to obtain a dataset of comparable development sites

Table 4.7 – TRICS Database Key Selection Criteria: Foodstore

Land use and trip rate selection	
Select Land Use By:	Full list Of Active Main/Sub Land Uses
Main Land Use:	01 – RETAIL
Sub Land Use:	A – FOOD SUPERSTORE
Calculation Options:	TOTAL VEHICLES
Regions:	England excluding Greater London
Primary filtering	
Trip Rate Parameters:	Gross Floor Area
Floor Area Range:	800 – 3500
Selected Dates:	01/01/00 – 17/05/23
Week days to include:	Weekday only, Saturday only
Location Types to include:	Suburban Area, Edge of Town
Secondary Filtering	
Population < 1 mile:	<100,000 (<15,000 for Sat)
Population < 5 miles:	<500,000 (<125,000 for Sat)

Table 4.8 – TRICS Database Key Selection Criteria: Retail Park : Excluding Food

Land use and trip rate selection	
Select Land Use By:	Full list Of Active Main/Sub Land Uses
Main Land Use:	RETAIL
Sub Land Use:	Retail park Excluding Food
Calculation Options:	TOTAL VEHICLES
Regions:	England excluding Greater London
Primary filtering	
Trip Rate Parameters:	Gross Floor Area
Floor Area Range:	Default
Selected Dates:	1/1/15 - 14/11/23
Week days to include:	Weekday only, Saturday only
Location Types to include:	all

4.6.8 The full TRICS outputs for the two above scenarios can be seen at Appendix 13.

4.6.9 The resultant trip rates and trips for the 'Food Superstore' element of the site (5,600sq.m.) and 'Retail Park Excluding Food' element of the site (7,874sq.m.) can be seen at Table 4.9 for the weekday AM period of 08:00-09:00, weekday PM period of 17:00-18:00 and Saturday 11:15-12:15.

Table 4.9 – Trip Rates and Trips – 'Food Superstore' & 'Retail Park Excluding Food'

'Food Superstore' Element (5,560sq.m.)						
Trip Rate per 100sq.m.				Trips		
Peak Hour	Arrival	Depart	Total	Arrival	Depart	Total
AM	0.833	0.537	1.370	114	96	210
PM	2.124	2.036	4.160	156	163	320
Sat	1.500	1.296	2.796	295	286	581
'Retail Park Excluding Food' Element (7,874sq.m.)						
Trip Rate per 100sq.m.				Trips		
Peak Hour	Arrival	Depart	Total	Arrival	Depart	Total
AM	2.042	1.707	3.749	66	42	108
PM	2.792	2.916	5.708	167	160	328
Sat	5.264	5.105	10.369	118	102	220

4.6.10 To obtain an overall trip attraction for the site, the trips to the foodstore and retail park element have been combined. The result can be seen at Table 4.10.

Table 4.10 – Trips: Proposed Development (Total – 13,474sq.m.)

Peak Period	Arrivals	Departures	Total
AM (08:00-09:00)	180	138	318
PM (17:00-18:00)	324	324	647
Sat (11:15-12:15)	413	388	801

4.7 Pass-by / Diverted / Linked Trips / Trade Diversions

4.7.1 The traffic that will be attracted to the proposed development will comprise the following trip types:-

- Pass by trips resulting from people who currently use the road adjacent to the Site for a trip involving another purpose who will visit the Site while passing.
- Diverted trips derived from people who are using the road network close to the Site for another purpose who will divert their trips to visit the Site while passing in the broad vicinity.
- Transferred trips by people who would change their destination from a competing attraction, to the proposed development.
- Linked trips undertaken by existing visitors to a specific local destination who visit the proposed development as part of their existing trip.
- Primary trips made by people who travel for the specific purpose of visiting the proposed development, but not included in the trip types above.

4.7.2 TRICS research report 14/1 titled 'Pass-by & Diverted Trips' sets out that a large variety of results have been observed for the combination of pass-by, diverted, and linked trips and that a site-by-site approach should be taken to the application of these 'secondary' trips. Specifically the TRICS 14/1 report notes that:

> *"It is recommended that for an assessment of the quantum of pass-by and diverted trips that a first principles approach is taken for each site, whereby a process is defined for the assessment of these trips and agreed by the applicant and determining authority."*

4.7.3 The commercial and academic research contained within the TRICS 14/1 report identifies levels of pass-by proportions ranging from 6% to 72%, combined levels of pass-by and diverted trip proportions ranging from 57% to 67%, and average linked trip proportions (with town centres / district centres) ranging from 46% to 60%.

4.7.4 The research is undertaken by a number of researchers and institutions, which shows (and which is logical) that some trip types will overlap others, such as 'transferred pass-by' trips.

Consideration of Secondary Trip Types

4.7.5 The principles that determine the proportion of secondary trips used within this assessment involve consideration of the Site, and the ability for the location characteristics to result in proportions of secondary trips within the ranges set out within the TRICS research. In doing so, the assessment will identify a set of proportions that are suitably robust as a means to consider the effects of the proposed development.

4.7.6 The TRICS research shows that the proportion of pass-by trips can vary significantly up to observed values of approximately 70% and is dependent on a number of factors, not limited to vehicle volumes on the roads adjacent to the site, the proximity of residences, the proximity of employment / retail, and the number of competing attractions. For simplicity, this assessment is based on a pass-by rate of 30% for both the 'Food Superstore' and 'Retail Park Excluding Food' elements of the site.

4.7.7 Likewise, the TRICS research shows that the proportion of diverted trips can vary site-to-site and again for simplicity, a diverted rate of 0% has been used. The combined Passby and diverted assumption used is therefore 30%, which is less than the combined pass-by and diverted range established within the Harries et al. (2012) research set out in TRICS 14/1.

4.7.8 The TRICS research identifies linked trip proportions in the region of c.50% and above, which is dependent upon the proximity of local retail destinations. As above, and established within the TRICS research, linked trips may include pass-by or diverted trips and so care must be taken when assigning these proportions. For simplicity 20% linked trips has been used. The 20% is applied to the 'Retail Park Excluding Food' trips only which are assumed to be linked with food retail.

4.7.9 The total proportion of secondary trips used in this assessment is therefore 30% for the Foodstore element and 50% for the 'Retail Park Excluding Food 'element. This is lower than the range identified within the TRICS research.

4.7.10 By way of summary, this assessment is based on the trip type assumptions shown at Table 4.11.

Table 4.11 – Summary of Trip Types

Trip Type	Assessed Value (%)	
	Foodstore	Retail Park Excluding Food
Primary - New	20%	50%
Primary - Transferred	50%	0
Secondary - Pass-by	30%	30%
Secondary - Linked	0%	20%

4.7.11 Secondary trips will be assigned to the study area network as follows:-

- Pass-by Trips: These trips are assigned proportionally, based on the inbound trips at The Body Shop Roundabout that are not heading to Norway Lane. On exit from the site the trips continue on their original journey. A passby rate of 30% is applied to both 'Food Superstore' and 'Retail Park Excluding Food' trips.
- Linked Trips: A trip linkage rate of 20% is applied to the 'Retail Park Excluding Food' trips only. The trip linkage is assumed to occur internally within the site. The linked trips makes an allowance for the off-site trips that have been recorded in the TRICS survey, which have at this site, due to the presence of a foodstore, are replaced by internalised linked trips.

Consideration of Primary Trip Types

4.7.12 Primary trips to the proposed development will be a combination of transferred trips from journeys (already using the study area network) to competing attractions and new trips to the study area network.

4.7.13 The assessment is based on the simplified assumption that 70% of the 'Food Superstore' trips are primary and 50% of the 'Retail Park Excluding Food' are Primary. 'Food Superstore' trips have been subdivided into 'new' and 'transferred'. 'Retail Park Excluding Food' trips are all considered to be primary 'new'.

4.7.14 'Food Superstore' trips have been categorised as 20% primary 'new' and 50% primary 'transferred'. Retail Park Excluding Food trips are all primary 'new, at 50%.

4.7.15 Primary 'transferred' trips at a total of 50% have been subdivided into three to account for the proximity of three nearby large food retailers:-

- Morrisons at Hawthorn Road, approximately 1.1km west of the site, located off the Wick Roundabout. Transferred trips from Morrisons are taken as being 15% (of 50%).
- Aldi at Rustington approximately 1.1km west of the site, located off the Golfers Lane Roundabout (aka Mill Lane Roundabout). Transferred trips from Aldi are taken as being 20% (of 50%).
- Sainsbury's at Rustington Retail Park approximately 1.7km east of the site, between the Golfers Lane Roundabout and Station Road Roundabout. Transferred trips from Sainsbury's are taken as being 15% (of 50%).

4.7.16 The distribution of primary new and primary transferred trips is based on the census population distribution of households within a nominal five-minute drive-time radius of the Site. The percentage associated with each area has been attributed an arrival and departure route to / from the development, based on logical route choice.

4.7.17 Differing trip distributions between Primary 'new' and the three foodstores considered in the Primary 'transferred' category have been used to account for their locations relative to the site and customer route choice.

4.7.18 Table 4.12 gives the Primary 'new' trip distribution.

Table 4.12 - Primary 'New' Trip Distribution

Origin / Destination	Percentage
Station Road (N)	7%
A259 East (Rustington Bypass)	8%
B2140 (S)	7%
Mill Lane (S)	2%
B2187 Worthing Road (E)	26%
B2187 Horsham Road (S)	24%
Fitzalan Road (S)	3%
Nightingale Way (N)	6%
A284 (S)	12%
A284 (N)	6%
B2187 (S)	0%
A259 Worthing Road (W)	0%
TOTAL	**100%**

4.7.19 Primary 'transferred' trips have also been distributed based on census data, although at a local level have been subject to some localised redistribution to allow for the different traffic routing to/from attributable to the location of each foodstore and the proposed development.

4.7.20 The following diagrams are provided for each trip type:

Appendix 14 – Primary New Flows – All Retail

Appendix 15 – Passby Flows – All Retail

Appendix 16 – Food Retail – Transferred Flows Morrisons

Appendix 17 – Food Retail – Transferred Flows Aldi

Appendix 18 – Food Retail – Transferred Flows Sainsbury's

4.7.21 The total level of development trips can be seen at Appendix 19. These flows are created by combining all of the appendices shown above.

4.8 Overall Net Traffic Attraction & Net Development Traffic Effect

Net Traffic Attraction

4.8.1 As set out in Section 4.1, the pertinent test is the scale of increase in traffic attraction associated with the proposed development compared that of the existing development on the Site. In other words, the difference between the fallback position and the proposed development.

4.8.2 The section above has considered linked trips, which do not materialise as off-site development trips. Linked trips should be considered in the overall net traffic attraction of the site.

4.8.3 The net traffic attraction of the proposed development is calculated by subtracting the trip numbers of the fallback position (Table 4.5) from the trip numbers of the proposed development (Table 4.10) and allowing for linked trips accordingly. The net traffic effect is given at Table 4.13.

Table 4.13 – Net Traffic Effect

Peak Period	Arrivals	Departures	Total
AM (08:00-09:00)	51	117	168
PM (17:00-18:00)	284	175	459
Sat (11:15-12:15)	389	368	757

4.8.4 The calculation of the net traffic effect shows that the proposed development could attract/generate 168 and 459 additional traffic movements during the weekday AM and PM peak hours respectively, and an additional 757 traffic movements during the Saturday peak hour.

Net Development Traffic Effect

4.8.5 The overall net traffic effect of the proposed development is calculated by taking the existing development trips (Appendix 12) and subtracting these form the proposed retail development trips (Appendix 19). This results in the net change in trips attributable to the development, or the net traffic effect at each junction over the study network. This can be seen at Appendix 20.

4.8.6 Table 4.14 summarises the net traffic effect at each junction over the study network.

Table 4.14 – Overall Net Traffic Effect (Including Internal Linkage)

Junction	AM Peak	PM Peak	Sat Peak
The Body Shop Roundabout	44	256	438
Golfers Lane Roundabout (aka Mill Lane)	-47	-25	-43
Station Road Roundabout	-10	26	51
Fitzalan Roundabout	-31	3	10
Wick Roundabout	-37	-20	-35
Bridge Road Roundabout	-6	0	-4

N.B. Some of the figures include mathematical rounding.

4.9 Traffic Flows for Assessment & Testing Purposes

4.9.1 The '2030 Do Nothing' scenario is the traffic flows scenario that would materialise on the highway, were the extant office/warehouse to be brought back into use. The 'Do Nothing' scenario is created by combining the following:-

- Appendix 10 – 2030 Base + Committed Flows
- Appendix 12 – Existing Site Use – Flows

4.9.2 The resulting '2030 Do Nothing' flows can be seen at Appendix 21.

4.9.3 The '2030 With Development' scenario gives the level of flow on the highway that occurs with the proposed development in place in the future 2030 year. Traffic flows in the '2030 With Development' scenario can be created by combining the following :-

- Appendix 10 – 2030 Base + Committed Flows
- Appendix 19 – Proposed Development flows

4.9.4 The resulting '2030 With Development flows can be seen at Appendix 22.

4.10 Parking Assessment

4.10.1 An assessment of the car parking demand at the proposed development has been undertaken using the TRICS data set given at Appendix 13.

4.10.2 The average hourly number of vehicle arrivals and departures across the whole day has been used to calculate the hourly accumulation profile of vehicles within the Site.

4.10.3 Table 4.15 shows the hourly arrival and departure numbers for the proposed Food Superstore and Retail Park Excluding Food uses, and the combined on-site accumulation.

Table 4.15 – Parking Accumulation - Weekday

	Food Superstore			Retail Park			Combined Accumulation
Hr Start	Arrivals	Departures	Accumulation	Arrivals	Departures	Accumulation	
00:00	0	0	21	0	0	0	21
01:00	0	0	21	0	0	0	21
02:00	0	0	21	0	0	0	21
03:00	0	0	21	0	0	0	21
04:00	0	0	21	0	0	0	21
05:00	8	6	23	0	0	0	23
06:00	22	9	37	11	4	7	44
07:00	77	61	53	34	29	12	65
08:00	114	96	72	66	42	35	107
09:00	156	124	104	146	110	71	176
10:00	176	153	127	162	142	91	218
11:00	190	176	141	196	180	108	249
12:00	216	210	146	222	212	118	264
13:00	190	199	138	218	223	113	251
14:00	176	184	130	185	202	96	225
15:00	178	183	125	165	169	92	217
16:00	159	174	110	162	173	82	192
17:00	156	163	103	167	160	89	192
18:00	163	181	85	149	159	79	164
19:00	124	149	60	107	129	57	116
20:00	75	95	40	43	69	31	70
21:00	51	68	22	28	38	21	43
22:00	17	30	9	9	16	14	23
23:00	14	23	0	9	12	12	12

N.B. Some of the figures include mathematical rounding.

Table 4.16 – Parking Accumulation – Saturday

	Food Superstore			Retail Park			Combined Accumulation
Hr Start	Arrivals	Departures	Accumulation	Arrivals	Departures	Accumulation	
00:00	0	0	7	0	0	20	27
01:00	0	0	7	0	0	20	27
02:00	0	0	7	0	0	20	27
03:00	0	0	7	0	0	20	27
04:00	0	0	7	0	0	20	27
05:00	13	4	16	0	0	20	36
06:00	36	21	31	3	0	23	54
07:00	82	53	60	13	6	30	90
08:00	146	110	96	37	18	49	145
09:00	219	178	137	74	48	75	212
10:00	272	239	170	102	76	101	271
11:00	293	282	182	117	99	118	300
12:00	299	299	183	122	110	130	313
13:00	281	289	174	117	116	131	305
14:00	275	278	171	118	115	134	305
15:00	263	279	154	119	122	132	286
16:00	257	278	133	92	123	101	233
17:00	224	250	106	67	95	72	179
18:00	169	202	73	38	66	44	118
19:00	116	143	47	20	43	21	68
20:00	72	88	31	8	17	13	44
21:00	43	56	18	4	10	7	25

4.10.4 The assessment shows that the accumulation peaks at 264 vehicles on a weekday and 313 on a Saturday. 420 Car Parking spaces are proposed in total. Hence, the car park has been assessed as operating within capacity.

4.11 Section Conclusions

4.11.1 The industry-standard TRICS database has been used to identify the average vehicle trip rates for the proposed development.

4.11.2 The TRICS data shows that the proposed development could attract an average of 168 vehicle movements in the weekday AM peak hour, 459 vehicle movements in the weekday PM peak hour and 757 vehicle movements in the Saturday peak hour. This includes an allowance for any internal linked trips.

4.11.3 The distribution of the proposed development traffic on the surrounding road network has been based on the prevailing local Census data, which shows that when allowance are made for trips attributable to the existing offices are warehouse, along with transferred and Passby trips, the development has a net traffic effect at the Body Shop Roundabout, of 44 trips in the AM peak, 256 trips in the PM peak and 438 trips in the Saturday peak hours respectively.

4.11.4 The assessment shows that the potential increase to traffic will be negligible or minor at all junctions within the agreed study area. The traffic effect is therefore not likely to unacceptably impact the operation of the surrounding road network in line with the vision of the proposed development.

4.11.5 The proposal therefore accords with Policy T SP1 and T DM1 of the adopted local plan and does not conflict with Paragraph 116 of the NPPF.

5.0 JUNCTION CAPACITY ASSESSMENT

5.1 Introduction

5.1.1 The assessment in Section 4.0 identifies that the net traffic effect of the proposed development is negligible at all junctions over the study network except the Body Shop Roundabout.

5.1.2 Junction capacity tests and analysis along with a collision analysis have been undertaken at the Body Shop Roundabout and also the most southern site access with Norway Lane.

5.2 Computer Modelling Software

5.2.1 Industry-standard junction capacity modelling software, appropriate to the specific study junction/s, has been used to assess the development traffic effect on their capacity and operation.

5.2.2 The ARCADY9 computer program is an industry standard computer package for modelling the operation of roundabouts. ARCADY uses the geometry of the junction combined with traffic flow information to predict capacity. The software provides a number of results in its output, the most meaningful of which is the Ratio of Flow to Capacity (RFC), where an RFC of 1.00 on any approach to the junction reflects a traffic demand equal to the theoretical capacity of that approach.

5.2.3 The PICADY9 module of the Junctions9 package is an industry standard computer package for modelling the operation of priority (give-way) junctions. PICADY uses the geometry of the junction combined with traffic flow information to predict capacity. The software provides a number of results in its output, the most meaningful of which is the Ratio of Flow to Capacity (RFC), where an RFC of 1.00 on any approach to the junction reflects a traffic demand equal to the theoretical capacity of that approach.

5.2.4 Both ARCADY and PICADY are typically operated using 'One Hour' mode which estimates the traffic profile for an hour-long period based a bell-shaped curve with a 15-minute 'Warm Up' period before, and a 15-minute 'Cool Down' period either side of the 60-minute peak-hour. This simulates the robust scenario of a peak within the peak hour.

5.3 Capacity Analysis

Body Shop Roundabout – With Development Modelling

5.3.1 The ARCADY9 computer program has been used to assess the operation of the Body Shop Roundabout.

5.3.2 The operation of the junction has been assessed using the 'With Development' Flows given at Appendix 22.

5.3.3 The geometries used in the ARCADY model can be seen at Appendix 23. It is noted that the 'With Development' assessment uses slightly revised geometries on the Norway Lane arm to reflect the localised improvements on this arm. Appendix 23 contains ARCADY geometries for the roundabout 'as-is' and also 'post-improvement'.

5.3.4 The results of the ARCADY tests are summarised at Table 5.1. The full ARCADY output can be seen at Appendix 24.

Table 5.1 – ARCADY Summary – Body Shop Roundabout

	AM					PM					SAT				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2030 Base + Proposed Development														
Arm A	D7	0.5	9.18	0.32	A	D8	1.2	11.28	0.56	B	D9	1.0	10.06	0.51	B
Arm B		1.5	3.85	0.60	A		1.8	4.51	0.64	A		1.5	3.89	0.61	A
Arm C		1.7	8.79	0.64	A		2.3	11.81	0.71	B		1.4	8.52	0.59	A
Arm D		0.9	5.84	0.48	A		1.1	6.81	0.52	A		1.1	6.81	0.53	A
Arm E		3.4	7.37	0.78	A		2.3	5.21	0.70	A		1.8	4.48	0.65	A

5.3.5 Table 5.1 shows that the Body Shop Roundabout has been assessed as operating within capacity for all scenarios, with the addition of development traffic.

Norway Lane/Site Access – With Development Modelling

5.3.6 The PICADY9 computer program has been used to assess the operation of the more southern Site access/Norway Lane junction using the 'With Development' traffic flows at Appendix 22.

5.3.7 It is noted that in order to present a highly robust PICADY modelling scenario, all traffic leaving the site has been assumed to exit the site via the more northern access; this is shown on the 'With Development' traffic flows. This is a highly robust modelling scenario as it results in all traffic leaving the site opposing all traffic turning right in to the site. In turn, this artificially inflates the right-in queue/delay/RFC. This robust modelling approach seeks to offer reassurance to that there is suitable separation between the site access and the Body Shop Roundabout to accommodate any queuing right-turn traffic.

5.3.8 There is approximately 50m of separation between the Norway Lane/site access junction and the Body Shop Roundabout. This distance could accommodate approximately 8 vehicles.

5.3.9 The results of the PICADY tests are summarised at Table 5.2. The full PICADY output can be seen at Appendix 24.

Table 5.2 – PICADY Summary – Site Access Junction.

	AM					PM					SAT				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	Norway Lane / Norway Lane Access - 2030 Base + ComDev + PropDev														
Stream B-C	D7	0.0	0.00	0.00	A	D8	0.0	6.35	0.03	A	D9	**0.0**	**0.00**	**0.00**	**A**
Stream B-A		0.0	0.00	0.00	A		0.0	11.57	0.01	B		**0.0**	**0.00**	**0.00**	**A**
Stream C-AB		0.6	9.44	0.38	A		1.6	16.07	0.61	C		**3.7**	**32.41**	**0.80**	**D**

5.3.10 The PICADY assessment at Table 5.2 shows that the site access junction is anticipated to operate within capacity. The C-AB movement represents the right turn movement into the site. The maximum mean queue is indicated as being 3.7 vehicles. A queue of this length could be accommodated on Norway Lane without blocking back onto the Body Shop Roundabout.

5.4 Effect on Road Safety

5.4.1 Section 2.7 reviews the collision records from the most recent five years available. It concludes that there does not appear to be any particular pattern of collisions. The section notes how the western A259 arm of the Body Shop Roundabout has been subject to a highway improvement scheme. This scheme is expected to reduce collision levels relative to that which would otherwise exist.

5.4.2 The capacity assessment of the Body Shop Roundabout indicates that the junction will operate within capacity in the 2030 'With Development' scenarios.

5.4.3 The development includes localised widening of the Norway Lane approach arm to the Body Shop Roundabout as well as provision of a signalised crossing for pedestrians on the A259, allowing pedestrians to cross the A259 when traffic is stopped. At present, pedestrians have to cross in traffic gaps.

5.4.4 The findings of the Stage 1 RSA confirm that the proposed highway improvements do not have any safety issues. The RSA suggests relocating the 40mph speed limit, which will be included as part of the works.

5.4.5 The effect of the proposed development traffic is not likely to materially worsen the occurrence or materially affect the pattern of collisions at the Body Shop Roundabout.

5.5 Section Conclusions

5.5.1 The capacity assessment shows that the Body Shop Roundabout will operate within capacity for all peak periods.

5.5.2 There does not appear to be any particular pattern within the recent collision records, and the effect of the proposed development traffic is not likely to materially worsen the occurrence or materially affect the pattern of collisions at the Body Shop Roundabout.

5.5.3 Overall, the scale of residual impact cannot be considered to be severe when viewed in the context of the NPPF planning test (NPPF paragraph 116), and the proposal satisfies Local Plan policies T-SP1 and T-DM1.

5.5.4 The proposed development also complies with the NPPF vision led approach.

5.5.5 Overall therefore, the traffic effect of the proposed development is acceptable.

6.0 SUMMARY AND CONCLUSIONS

6.1 Summary

6.1.1 Connect Consultants Limited is a firm of transport planning and highway design consultants that have been instructed by Hallway Properties Limited in relation to a proposed retail led, mixed-use development at Watersmead Business Park in Littlehampton, West Sussex.

6.1.2 The proposal is for a retail-led mixed-use development to replace the existing Body Shop Offices and two warehouses that are on site. The development comprises 9 units of varying size and use. The total gross floor area used for assessment purposes is 13,474sq.m.

6.1.3 The Site is surrounded by a pedestrian network that includes a number of crossing facilities, and a residential catchment within walking distance.

6.1.4 The area local to the Site is conducive to cycling, and there are good opportunities for customers and staff to make their journeys by cycle.

6.1.5 The bus stops local to the Site are served by frequent bus services, which provide access to / from a variety of destinations.

6.1.6 Littlehampton rail station is also within cycling distance of the site; some longer journeys to/from the proposed development can be made by train, with the connection between the station and the Site being made by bike, taxi, bus, or car-share.

6.1.7 The proposal site also has a prominent location relative to the local highway network, and the recent local collision records indicate that there is no existing road safety problem in the vicinity of the Site.

6.1.8 Overall, the Site has a good level of accessibility by all relevant transport modes in line with the development's vision.

6.1.9 Pedestrian movements will be accommodated within the internal site layout.

6.1.10 Swept path analysis shows that the access arrangements and layout of the proposed development are suitable for the largest vehicles that are expected to use the site.

6.1.11 A parking assessment has been undertaken and demonstrates that the proposed provision is sufficient to meet the anticipated demand.

6.1.12 The industry-standard TRICS database has been used to identify the average vehicle trip rates for the proposed development.

6.1.13 The net traffic effect of the development has been shown to be 168, two-way movements in the AM, 459 two-way movements in the in the weekday PM and 757, two-way movements on a Saturday.

6.1.14 When allowance are made for trips attributable to the existing offices and warehouse, along with transferred and Passby trips, the on the prevailing local Census data, which shows that the Body Shop Roundabout, which is the junction where all development traffic could be the most concentrated, could experience an average of 44, 256, and 438 additional vehicle movements during the weekday AM, PM and Saturday peak hours respectively.

6.1.15 The assessment shows that the potential increase to traffic will be negligible at all other junctions within the agreed study area.

6.1.16 The capacity assessment shows that the Body Shop Roundabout will operate within capacity for all peak periods.

6.1.17 There does not appear to be any particular pattern within the recent collision records, and the effect of the proposed development traffic is not likely to materially worsen the occurrence or materially affect the pattern of collisions at the Body Shop Roundabout.

6.2 Conclusions

6.2.1 The proposal is shown to accord with Policy T SP1 and T DM1 of the adopted local plan and with Paragraphs 115 and 117 of the NPPF.

6.2.2 Overall, the scale of residual impact cannot be considered to be severe when viewed in the context of the NPPF planning test (NPPF paragraph 116). The proposals are also in line with the development's vision.

6.2.3 There are no highways or transport reasons to refuse the planning application.

Appendix 1

SITE SPECIFIC HAZARDS

IN ACCORDANCE WITH THE REQUIREMENTS OF THE CDM REGULATIONS 2015 THE FOLLOWING SIGNIFICANT RESIDUAL HAZARDS HAVE NOT BEEN DESIGNED OUT OF THIS PROJECT AND MUST BE TAKEN INTO CONSIDERATION BY CONTRACTORS PLANNING TO UNDERTAKE THE WORKS SHOWN ON THIS DRAWING:

SCALE 1:500

0m 5 10 15 20 25 30

N

LEGEND:

- OWNERSHIP BOUNDARY
- PLANNING BOUNDARY (4.0 HECTARES)
- CAT U TREES, REFER TO FPCR ENVIRONMENT AND DESIGN LTD TREE SURVEY PLAN
- CAT B TREES, REFER TO FPCR ENVIRONMENT AND DESIGN LTD TREE SURVEY PLAN
- CAT C TREES, REFER TO FPCR ENVIRONMENT AND DESIGN LTD TREE SURVEY PLAN
- DASHED RED LINE DENOTES EXTENTS OF FORMER BUILDINGS
- DENOTES BUILDING
- DENOTES LANDSCAPING
- DENOTES PAVING
- DENOTES ASPHALT ROAD
- DENOTES FOOTPATH IN RESIN BOUND GRAVEL
- DENOTES FOOTPATH IN TARMAC
- DENOTES HISTORY TRAIL AROUND THE SITE REFER TO DRAWING '11631-LH-HISTORY-TRAIL' FOR FURTHER INFORMATION
- DENOTES ACTIVE EV BAYS
- DENOTES PASSIVE EV BAYS FOR FUTURE CONNECTIONS
- DENOTES PERMEABLE SURFACE FOR WHOLE PARKING BAY AREA
- BENCHES
- WASTE BINS

NOTES:

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL CONSULTANTS AND SPECIALIST DRAWINGS, AND SPECIFICATIONS.

OWNERSHIP BOUNDARY BASED UPON HM LAND REGISTRY TITLE PLAN PROVIDED BY THE CLIENT.

THIS DRAWING IS BASED ON:

1) TOPOGRAPHICAL SURVEY INFORMATION PROVIDED BY: CMS LTD DRAWING REF: "CMS-205-07" DATE: JUNE 2024.

2) OS INFORMATION

3) TREE SURVEY BY: FPCR ENVIRONMENT AND DESIGN LTD DRAWING REF: "12641-T-01 A" DATE: JUNE 2024.

4) FLOOR PLANS SURVEY BY: CMS LTD DRAWING REF: "CMS-205-01,02,03,04" DATE: JUNE 2024.

PROPOSED LEVELS AND FINISHED FLOOR LEVELS TO BE AGREED WITH DRAINAGE AND STRUCTURAL ENGINEER.

DIMENSIONS GIVEN ON THIS DRAING ARE APPROXIMATE ONLY AND MUST BE CHECKED ON SITE FOR ALL PURPOSES.

REFER TO LANDSCAPE ARCHITECT'S PROPOSALS.

REFER TO HIGHWAYS ENGINEER'S PROPOSALS.

SCHEDULE OF ACCOMMODATION:

UNIT A1:	1,722 SQ.M. (18,535 SQ.FT.)
UNIT A2:	2,414 SQ.M. (25,986 SQ.FT.)
UNIT A3:	140 SQ.M. (1,500 SQ.FT.)
UNIT A4:	929 SQ.M. (10,000 SQ.FT.)
UNIT A5:	2,066 SQ.M. (22,240 SQ.FT.)
UNIT A6:	1,020 SQ.M. (10,979 SQ.FT.)
UNIT A7:	1,027 SQ.M. (11,057 SQ.FT.)
UNIT A8:	508 SQ.M. (5,468 SQ.FT.)
UNIT A9:	507 SQ.M. (5,457 SQ.FT.)
TOTAL:	10,333 SQ.M. (111,222 SQ.FT.)

CAR PARKING SCHEDULE

STANDARD BAYS : 331
ACCESSIBLE BAYS : 32
PARENT AND CHILD BAYS: 28
ELECTRIC VEHICLE BAYS : 20

STAFF PARKING: 9

TOTAL BAYS : 420

MOTORCYCLE PARKING: 12

CYCLE PARKING: 70 SPACES

REV.	DATE	NOTES	INIT.
E	16.04.25	UNIT A5 TROLLEY BAY, PARKING NO. & LEGEND UPDATE	EDD
D	14.04.25	GENERAL AMENDMENTS	EDD
C	04.04.25	SITE PLAN UPDATED	EDD
B	26.03.25	SITE PLAN UPDATED	EDD/ AM
A	20.03.25	SITE PLAN UPDATED	EDD

CLIENT / PROJECT

HALLWAY PROPERTIES LIMITED
LAND AT NORWAY LANE
LITTLEHAMPTON

DRAWING TITLE

PROPOSED SITE PLAN

STATUS

PLANNING

DATE	DRAWN	SCALE @ A1
28/02/25	EDD	1:500

PROJECT NUMBER	UNIT / BLOCK	CI / SFB CODE	TYPE & NUMBER	REVISION LETTER
11631			PL108	E

DRAWING NO.

Site Location Plans	L	GA Plans	P	Elevations	E
Sections	S	Details	D	Prefix; Colour	C

THE RATCLIFFE GROVES PARTNERSHIP

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105 MANCHESTER ROAD
BURY LANCASHIRE BL9 0TD
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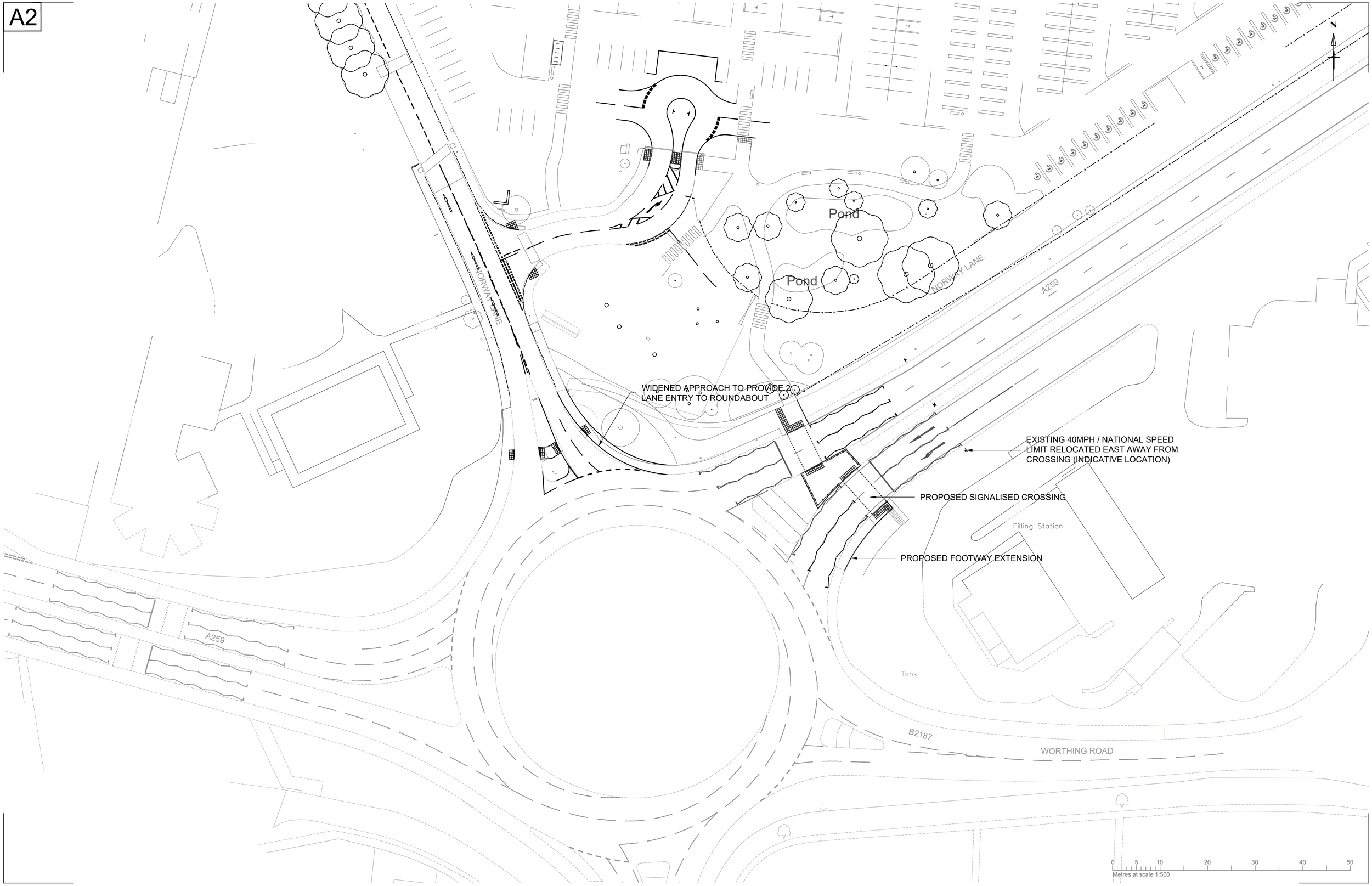
www.rgp.uk.com

LONDON
19 BEDFORD ROW
LONDON WC1R 4EB
T. 020 7600 6666 E. london@rgp.uk.com

RGP architects

Appendix 2

A2



connect CONSULTANTS
CONNECT CONSULTANTS LTD
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CHIPPING SODBURY,
BRISTOL.
BS37 6AG
Tel: 01454 320 220
Fax: 01454 320 099
Web: www.connect-consultants.com
Email: bristol@connect-consultants.com

rev.	amendment	by	date
-	-	-	-

client: HALLWAY PROPERTIES LTD

project: WATERSMEAD BUSINESS PARK
LITTLEHAMPTON

title: PROPOSED HIGHWAY IMPROVEMENTS AND SITE ACCESS ARRANGEMENT

date	drawn by	checked by
MARCH 2025	T.A.S	N.P.B

scale	status
1:500	PLANNING

drawing number: 24084- 010 - A

rev.:

Appendix 3

A2

N

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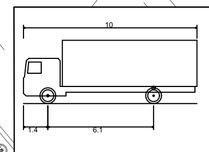
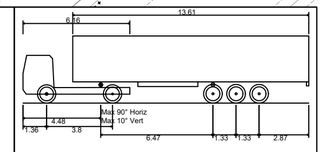
Metres at scale 1:500

MOTORCYCLE ONLY



FTA Design 13/18 Tonne Rigid Vehicle (2016)

Overall Length	10.000m
Overall Width	2.550m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m
Steering Restriction	90%
Clearance Offset	1.000m



FTA Design Articulated Vehicle (2016)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m
Steering Restriction	90%
Clearance Offset	1.000m

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safecontractor APPROVED

QUALITY MANAGEMENT SYSTEM
ISO 9001 : 2015 FS 594947

rev.	amendment	by	date
-	-		

client: HALLWAY PROPERTIES LIMITED

project: WATERSMEAD BUSINESS PARK
LITTLEHAMPTON

title: SWEPT PATH ANALYSIS
VARIOUS VEHICLES

date	drawn by	checked by
APRIL 2025	T.A.S	N.P.B

scale	status
1:500	PLANNING

drawing number: 24084 - TR001 - A

rev.

Appendix 4

WATERMEAD BUSINESS PARK LITTLEHAMPTON

PROPOSED HIGHWAY IMPROVEMENTS AND ACCESSS ARRANGEMENTS

Stage 1 Road Safety Audit

March 2025

IG-JC-2025-4673-RSA1.1

Report title:	Stage 1 RSA Watermead Business Park Littlehampton Proposed Highway Improvements and Access Arrangements
Date:	05/03/2025
Document reference and revision:	IG-JC-2025-4673-RSA1.1
Prepared by:	The Safety Forum Ltd
On behalf of:	Connect Consultants Ltd/ West Sussex County Council

PO Box 831, Godalming, Surrey, GU7 9HT [redacted]

Registered in England No.04514601. Registered office: Shackleford Suite, Mill Pool House, Mill Lane, Godalming, Surrey GU7 1EY

Revision Status	Prepared by: (Name)	Checked by: (Name)	Approved by: (Signature)	Date Approved:
1	Ian Gittens	John Aldridge	[redacted]	05/03/25
Designer's Response				
Authority's Response				
Audit Response				

Client:	
Connect Consultants Ltd	The Safety Forum Ltd
78 Broad Street, Chipping Sodbury Bristol, BS37 6AG	PO Box 831 Godalming Surrey GU7 9HT
	Date: 05/03/25

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 This report results from a Stage 1 Road Safety Audit (RSA) carried out on proposed highway improvements and access arrangements at Watermead Business Park in Littlehampton.

1.2 The highway proposals include:

a. Introducing a traffic signal-controlled staggered toucan crossing, across the A259 near the disused Body Shop Distribution Centre in Norway Lane.

b. Un-controlled pedestrian crossing facilities on Norway Lane.

c. New road markings on Norway Lane, including a right turning lane into the distribution centre.

d. Relaying the existing road markings on the roundabout, Norway Lane and the A259, across the traffic signal controlled toucan crossing.

1.3 The Stage 1 RSA was carried out at the request of Connect Consultants Ltd/West Sussex County Council.

1.4 The Road Safety Audit Brief was supplied by Connect Consultants Ltd. The overseeing organisation is West Sussex County Council. The RSA Brief was accepted by the Audit Team as adequate to complete the RSA.

1.5 The Audit was carried out between 14th and 18th February 2025 by consultants working on behalf of The Safety Forum Limited. The Audit Team, which is established from The Safety Forum Ltd and independent of the project design team, has had no involvement with the project.

The Auditors were:

Ian Gittens– Team Leader
(CEng, BEng(Hons), MICE, MCIHT, MSoRSA, Certificate of Competency in RSA)

John Aldridge – Team Member
(MSc BA (Hons), MCIHT, MIHE, Certificate of Competency in RSA)

1.6 The report has been prepared in accordance with General Principles and Scheme Governance General Information, GG 119, Road Safety Audit (Formerly HD 19/15).

1.7 The Audit consisted of a desktop study and a site visit. The site visit was carried out on 14th February 2025 between 14:15 and 15:00 hours by all members of the Audit Team together. The weather was dry and sunny and the road surface was dry. Traffic conditions were high on the A259 during the site visit.

1.8 Issues relating to the health & safety of operatives constructing, operating or maintaining the highway are not covered by Road Safety Audit. Only issues relating to the design and construction of facilities for highway maintenance that may potentially contribute to a Road Safety Matter are considered by the Road Safety Audit process.

Road Safety Audit is not a technical check that the design conforms to Standards and/or best practice guidance. Design Organisations are responsible for ensuring that their designs have been subjected to the appropriate design reviews (including, where applicable, Walking, Cycling & Horse Riding Assessment & Review) prior to Road Safety Audit.

Road Safety Audit is not a check that the scheme has been constructed in accordance with the design.

Whilst reference is made to certain design standards, where safety may be compromised by a reduction in standard, this report is not intended to provide a design check. The Auditors have only reported on matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme or the appropriateness of the design. Consequently, the Auditors accept no responsibility for the design or construction of the scheme.

1.9 The recommendations in this report are aimed at addressing the road safety problems; however there may be other alternative acceptable ways to overcome a specific problem, when other practical issues are considered. The recommendations contained herein do not absolve the Designer of his/her responsibilities.

1.10 The Auditors would be pleased to discuss the acceptability of alternative solutions to problems identified during the Audit, and would encourage the Designer to consult them on this matter.

1.11 The Overseeing Organisation response to the RSA should be formally recorded and reported to the Designer and the RSA Team so that a record of the Audit process is contained in the *As Built* design pack to be provided and retained by the Overseeing Organisation on final completion.

1.12 All problems identified in this Road Safety Audit Report are indicated on a location plan in Appendix A

2.0 ITEMS CONSIDERED

2.1 The Road Safety Audit was undertaken on the scheme detailed in the following Connect Consultants Ltd documentation.

Drawing No.	Rev	Title
-	-	Road Safety Audit Brief
24084-SK20250106.1	-	Proposed Highway Improvements and Site Access Arrangements

2.2 No departure from standards or other information was submitted to the Audit Team.

3.0 MATTERS ARISING FROM THIS STAGE 1 AUDIT.

3.1 PROBLEM

LOCATION: A259 Roundabout north-east exit and entry at location of proposed staggered signal-controlled toucan crossing.

SUMMARY: Vehicles were observed exiting the roundabout onto the A259 eastbound at a high speed.

Vehicles were observed exiting the roundabout at a very high speed, making it challenging for pedestrians and other vulnerable road users to cross safely. The introduction of a toucan crossing on the exit lane could lead to vehicles disobeying the lights and coming into conflict with pedestrians crossing the A259.

RECOMMENDATION

It is recommended that the existing 40-mph speed limit on the A259 is extended on the entry and exit lanes to the toucan crossing to encourage vehicles to slow down.

4.0 MATTERS ARISING FROM THIS STAGE 1 AUDIT OUTSIDE THE SCOPE OF THE PUBLIC HIGHWAY.

4.1 PROBLEM

LOCATION: Norway Lane.

SUMMARY: Right turning lane insufficient length for a vehicle to wait leading to shunt type collisions.

The right turning lane on Norway Lane into the disused Body Shop Distribution Centre is too small for a large vehicle to wait without over-hanging the through traffic lane. This could lead to shunt type collisions.

RECOMMENDATION

It is recommended that the right turning lane is removed and all vehicles wait in the inbound lane when turning right.

4.2 PROBLEM

LOCATION: Norway Lane.

SUMMARY: The proposed layout is insufficient to accommodate large vehicles turning into and out of the parking area.

The proposed layout of the turning head on Norway Lane into the car parking area appears to include a tight radius which may be challenging for larger vehicles to turn safely without reversing into the path of on-coming vehicles.

RECOMMENDATION

It is recommended that a swept path analysis is undertaken for the proposed new development to make sure all vehicles that will be using the turning area on the approach to the parking can be accommodated.

5.0 AUDIT TEAM STATEMENT

5.1 We certify that this audit has been carried out in accordance with GG 119.

AUDIT TEAM LEADER
Name: Ian Gittens
Position: Road Safety Auditor
The Safety Forum Ltd
PO Box 831
Godalming
Surrey
GU7 9HT

Signed: [redacted]

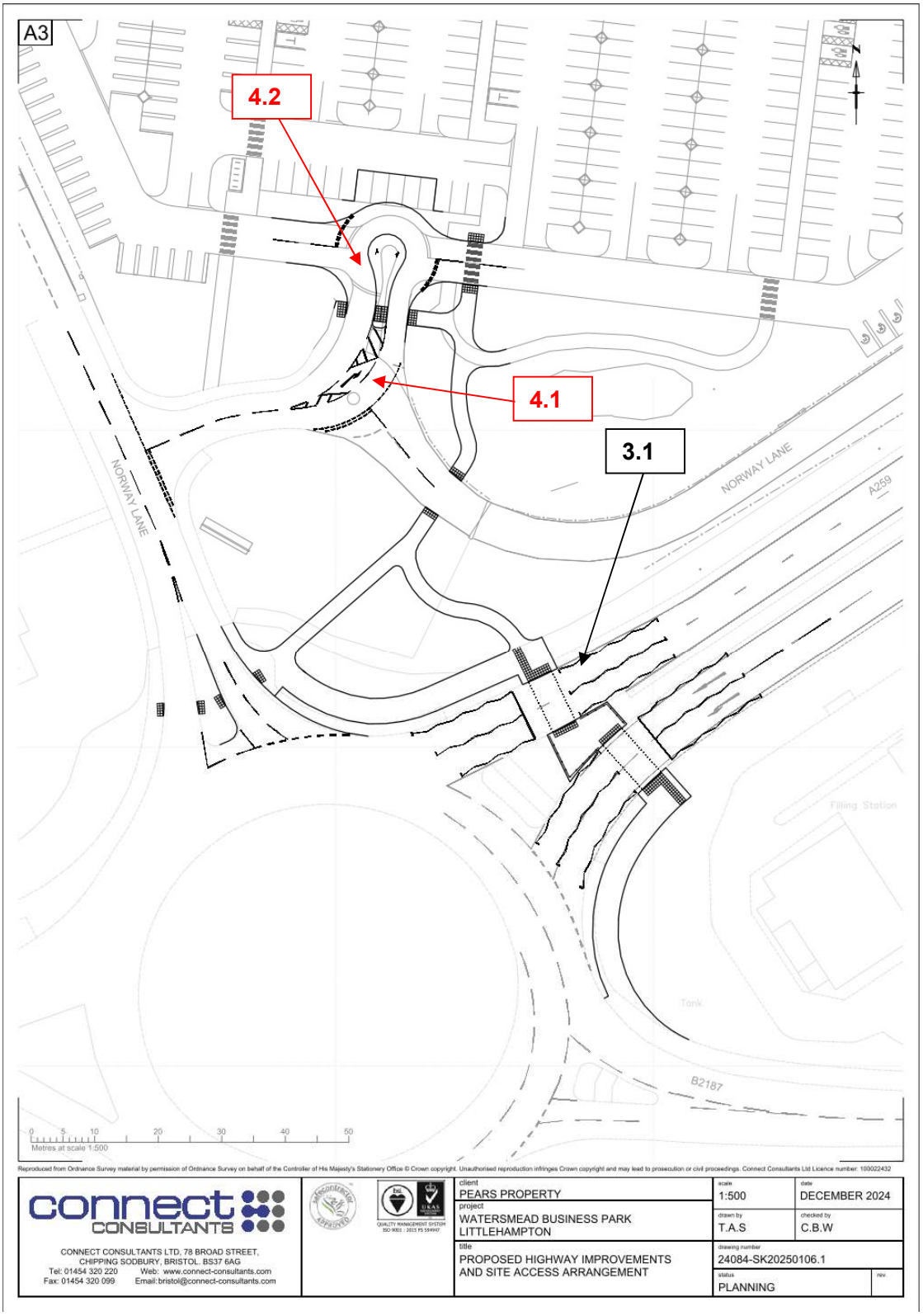
Date: 20th February 2025

AUDIT TEAM MEMBER
Name: John Aldridge
Position: Road Safety Auditor
The Safety Forum Ltd
PO Box 831
Godalming
Surrey
GU7 9HT

Signed: [redacted]

Date: 20th February 2025

APPENDIX A: LOCATION PLAN


A3
4.2
4.1
3.1
NORWAY LANE
NORWAY LANE
A259
B2187
Filling Station
Tank
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Metres at scale 1:500
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CONNECT CONSULTANTS LTD, 78 BROAD STREET, CHIPPING SODBURY, BRISTOL. BS37 6AG
Tel: 01454 320 220 Web: www.connect-consultants.com
Fax: 01454 320 099 Email:bristol@connect-consultants.com
client PEARS PROPERTY
project WATERSMEAD BUSINESS PARK LITTLEHAMPTON
title PROPOSED HIGHWAY IMPROVEMENTS AND SITE ACCESS ARRANGEMENT
scale 1:500
date DECEMBER 2024
drawn by T.A.S
checked by C.B.W
drawing number 24084-SK20250106.1
status PLANNING
rev.

Appendix 5

PROPOSED MIXED-USE RETAIL-LED DEVELOPMENT
WATERSMEAD BUSINESS PARK, LITTLEHAMPTON, WEST SUSSEX
RESPONSE TO STAGE 1 ROAD SAFETY AUDIT DATED MARCH 2025
2ND APRIL 2025

1.0 Introduction

1.1 This designer's response has been produced as a response to a Stage 1 Road Safety Audit (RSA1) produced by The Safety Forum for a mixed use development on the Watersmead Business Park in Littlehampton.

1.2 The RSA is dated March 2025

1.3 An audit brief was issued to The Safety Forum prior to the RSA being undertaken.

Matters Arising from the Stage 1 Audit

LOCATION: A259 Roundabout north-east exit and entry at location of proposed staggered signal-controlled toucan crossing.

SUMMARY: Vehicles were observed exiting the roundabout onto the A259 eastbound at a high speed.

Vehicles were observed exiting the roundabout at a very high speed, making it challenging for pedestrians and other vulnerable road users to cross safely. The introduction of a toucan crossing on the exit lane could lead to vehicles disobeying the lights and coming into conflict with pedestrians crossing the A259.

RECOMMENDATION

It is recommended that the existing 40-mph speed limit on the A259 is extended on the entry and exit lanes to the toucan crossing to encourage vehicles to slow down.

Designers Response

1.4 Point is accepted. Revised drawings to show the 40mph speed limit extended east, such that the 40mph speed limit covers the crossing, have been produced. Exact location of 40mph extents to be agreed with highways.

Matters Arising from the Stage 1 Audit, Outside the Scope of the Public Highway

LOCATION: Norway Lane.

SUMMARY: Right turning lane insufficient length for a vehicle to wait leading to shunt type collisions. The right turning lane on Norway Lane into the disused Body Shop Distribution Centre is too small for a large vehicle to wait without over-hanging the through traffic lane. This could lead to shunt type collisions.

RECOMMENDATION It is recommended that the right turning lane is removed and all vehicles wait in the inbound lane when turning right.

Designers Response

1.5 The level of right-turning traffic is anticipated to be small. There is no reason to assume that shunt type collisions would occur as drivers waiting/slowing for right turning vehicle infront is a commonplace occurrence, regardless of whether the vehicle fits partially or wholly within any right turn lane.

LOCATION: Norway Lane.

SUMMARY: The proposed layout is insufficient to accommodate large vehicles turning into and out of the parking area. The proposed layout of the turning head on Norway Lane into the car parking area appears to include a tight radius which may be challenging for larger vehicles to turn safely without reversing into the path of on-coming vehicles.

RECOMMENDATION It is recommended that a swept path analysis is undertaken for the proposed new development to make sure all vehicles that will be using the turning area on the approach to the parking can be accommodated.

Designers Response

1.6 The car parking area is intended to be used by car and van-sized vehicles only; those that would fit in a standard car parking space.

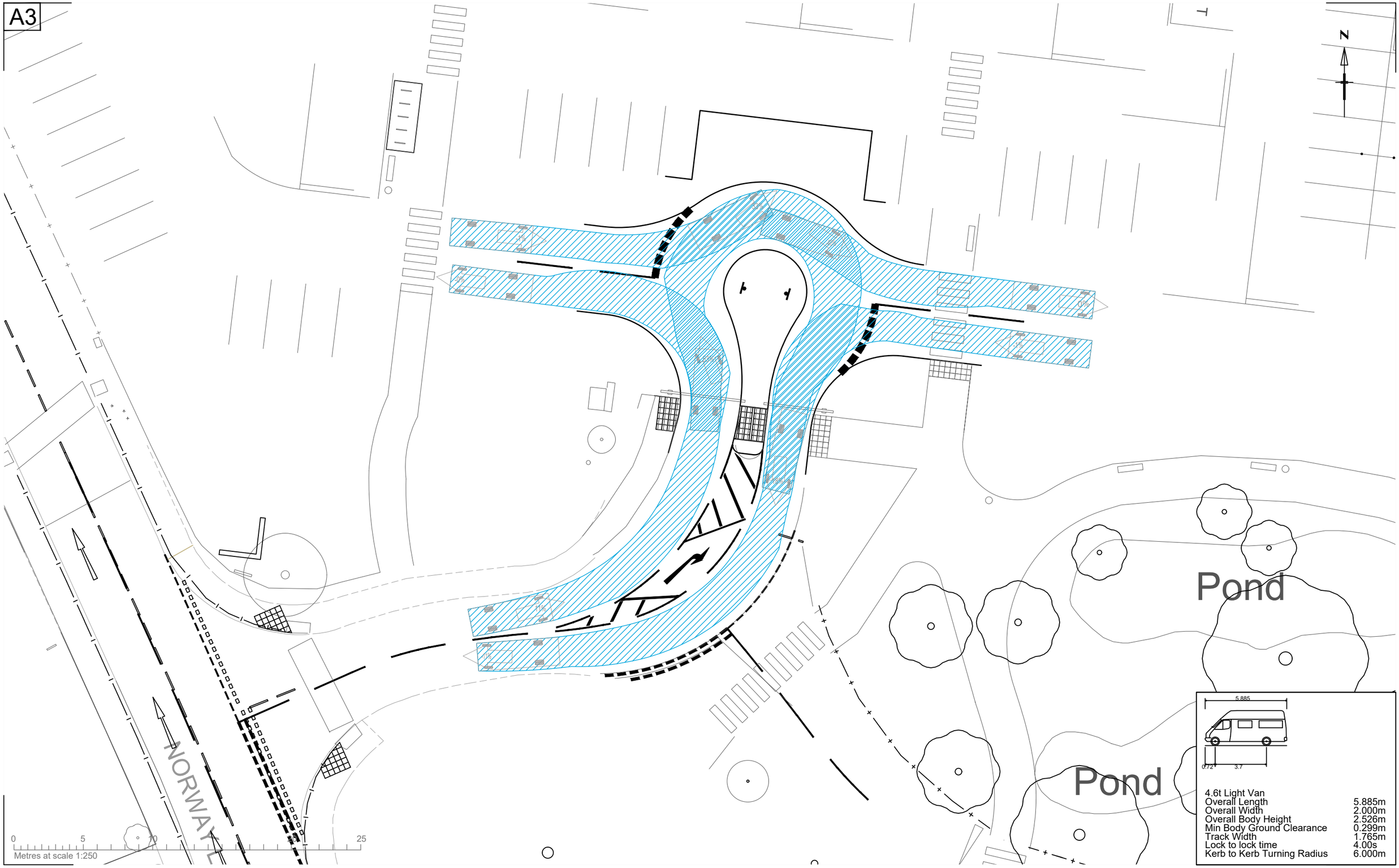
1.7 A swept path analysis of a large van turning in and out of the parking area is shown at **Appendix 1** of this designers response.

Enclosures:

Appendix 1 – Swept Path Analysis – Large van tuning in/out of car parking area.

Designer Response - Appendix 1

A3



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Fax: 01454 320 099 Email:bristol@connect-consultants.com

client
HALLWAY PROPERTY LIMITED

project
WATERSMEAD BUSINESS PARK
LITTLEHAMPTON

title
PROPOSED SITE ACCESS IMPROVEMENTS
SWEPT PATH ANALYSIS
4.5 TONNE RIGID VEHICLE

date	drawn by	checked by
APRIL 2025	C.P	J.C
scale: 1:250	status: PLANNING	
drawing number: 24084-SK20250402.1	rev.	